



Enabling an Intelligent Planet

製品カタログ 2022-2023

Embedded IoT Solutions

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エンベデッド IoT について

時代の最先端をリードするコンピュータラインナップ

アドバンテックの豊富なボード、コンピュータ、周辺機器のラインナップは、AI や IoT の実装が加速する産業機器システムにおいて、スピード感が求められる研究開発・プロトタイプ開発から、商品化設計、長期安定供給が求められる量産段階まで、お客様のビジネスのライフサイクルに寄り添った柔軟なサポート体制とともにお求めいただけます。時代が求めるエッジ AI や IoT に関するテクノロジーに対応し、エッジコンピューティングやクラウド活用とお客様システムへの組込みを容易とする統合型のエッジ・インテリジェンス・サーバー (EIS) や、組込まれたデバイス類の遠隔管理を容易とする DeviceOn、WISE-PaaS ソフトウェアプラットフォーム、組込みセキュリティソリューション、エッジ AI アプリの開発を効率化するための Edge AI Suite など、Time To Market などのづくりを支援するためのソリューションもご提案いたします。



+ 組み込みテクノロジーをリード

組み込み市場のパイオニア、リーダーとして、アドバンテックはつねに付加価値のある組み込みソフトウェアサービスの研究開発を続け、組み込みテクノロジーや革新的なフォーム・ファクターをリードしています。

+ 地域密着型組み込みサービスチーム

あらゆる組み込みアプリケーションの要求に応えるため、アドバンテックでは地域密着型のサービスチームを採用し、地域に特化した専門知識、デザインインサービス、顧客サポートを提供しています。

+ エコシステム・パートナーシップ

アドバンテックは Intel, Microsoft, Arm, AMD, NXP, TI など最先端の産業パートナーと提携し、最新のテクノロジー、包括的な製品供給を行っています。

+ エンベデッドデザインインサービスから IoT インテグレーションまでのワンストップモデル

ボード、システム、ソフトウェア、ディスプレイ、周辺機器の統合をワンストップでご提供します。さらにエッジ・コンピューティングからクラウドサービスまで統合された IoT ソリューションを実現し、IoT ソリューションビジネスの開発、グローバルな運用の支援を行います。

エンベデッドデザインインサービス

組み込みデザイン、サービスにおけるワールドワイドリーダーシップ

アドバンテックは、ボード、システム、ソフトウェア、ディスプレイ、周辺機器などを統合したワンストップサービスモデルを提供しています。このモデルは、AIやIoTの展開を加速するために、顧客中心のデザインインサービスを使用しています。また、プロの組み込みパートナーとの協同することで、システム統合に必要な時間とリソースを削減することが期待できます。当社は、お客様がエンドアプリケーションソフトウェアの統合に活用できる最新の組み込み技術と付加価値の高いソフトウェアを提供します。私たちの包括的な周辺機器の範囲は、互換性と寿命の問題を心配することからお客様を解放します。アドバンテックのデザインインサービスは、複雑な統合の難しさを排除する付加価値の高いサービスを提供します。

組み込みソフトウェアサービス



Windows 10 IoT buntu yocto

- 組み込み BIOS
- 組み込み LTS OS (長期サポート OS)
- SUSI API と組み込みロックダウンユーティリティ
- iManager 3.0

エッジ AI



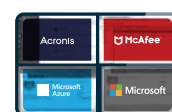
- Vision AI で事前学習データを迅速に活用
- AI をすぐに展開して利用可能
- Windows & Ubuntu をサポート

デバイスマネジメント



- リモート管理
- アップデート管理
- データの視覚化
- 監視・制御
- アラートとアクション
- IT/OT トータルセキュリティ

ソフトウェア & クラウド統合



- Acronis バックアップ & リカバリ
- McAfee IoT セキュリティ
- Windows IoT
- 世界でデストリビュート
- Azure 統合やご相談サービス



+ 統合型 IoT ソリューション

センサーノードやゲートウェイからエッジ・インテリジェンス・ソリューション、クラウドサービスまでを網羅する統合型 IoT ソリューションを提供することで、アドバンテックは IoT バリューチェーンやエコシステムを促進してきました。これにより、お客様は、WISE-PaaS ソフトウェアサービス、組み込み BIOS/OS サービス、ソフトウェア API やユーティリティサービスなどのアドバンテックのプロフェッショナルサービスを活用した IoT アプリケーションの開発を行っていただけます。

+ エンベデッドボード

アドバンテックの周辺機器（ストレージ、ワイヤレスデバイス、タッチモジュール、ディスプレイなど）やソフトウェア・ターンキー・ソリューションを使用すると産業用 PC アプリケーションに革新的な選択肢が生まれ、アドバンテックのボードや SW との併用が可能となります。

+ エンベデッドシステム

アドバンテックはデジタルサイネージ、車載、鉄道、ゲームなどの用途に向け、オールインワンのファンレスシステム、構成しやすい組み込み PC、統合済ソフトウェアサービスを伴う特定産業向けソリューションを提供しています。これにより、お客様は多様なアプリケーションを迅速に実行でき、さらにその利点を最大限に利用できます。

+ 周辺機器

アドバンテックの周辺機器（ストレージ、ワイヤレスデバイス、タッチモジュール、ディスプレイなど）やソフトウェア・ターンキー・ソリューションを使用すると産業用 PC アプリケーションに革新的な選択肢が生まれ、アドバンテックのボードやソフトウェアとの併用が可能となります。

+ デザインインサービス

合理化されたデザインインサービスは、デザインイン段階でエンジニアリング要求が満たされることを確実にし、設計と統合サイクルの短縮やそれによって不確実性とリスクを最小限に抑えることができるなどの顕著な利点をもたらします。本サービスには、拡張高温対応や堅牢化ソリューションなども含まれます。

WISE-DeviceOn - デバイス管理ソフトウェア

WISE-DeviceOn



WISE-DeviceOn											
Introduction	RAS管理、リモート・システム保守を可能とするIoT管理ソフトウェア										
Highlighted Features	<ul style="list-style-type: none"> • リモート監視と制御: デバイスのCPU温度、ファン速度、電圧などのハードウェアステータスを監視。さらに、遠隔地からデバイスの電源オン/オフ制御、リアルタイムでのトラブル対応が可能に。 • データ取得・分析と管理: 対象ハードウェアが不安定な電圧あるいは内蔵ハードディスクの故障を示すときには、システムはステータスを事前に検出し、関係スタッフに予知保全とアップデートを実行するようアラート通知。 • ソフトウェア管理およびアップデート (OTA): ミッションクリティカルなデバイスにおけるソフトウェアアップデートをリモートで行います。これにより、手作業での個々のデバイスソフトウェア更新の負担が軽減。 • マルチクラウドプラットフォームの統合: さまざまな生産現場を横断しての管理が可能なクラウド統合を実現。 										
Application Extension	<table border="1"> <thead> <tr> <th>DeviceOn/iEdge</th> <th>DeviceOn/CommBridge</th> <th>DeviceOn/Kiosk*</th> </tr> </thead> <tbody> <tr> <td>Enabling Equipment-to-intelligence and Optimized Management</td> <td>Industrial Application for Device Networking and Edge Computing</td> <td>Kiosk Device Operation Management Software</td> </tr> </tbody> </table>	DeviceOn/iEdge	DeviceOn/CommBridge	DeviceOn/Kiosk*	Enabling Equipment-to-intelligence and Optimized Management	Industrial Application for Device Networking and Edge Computing	Kiosk Device Operation Management Software				
DeviceOn/iEdge	DeviceOn/CommBridge	DeviceOn/Kiosk*									
Enabling Equipment-to-intelligence and Optimized Management	Industrial Application for Device Networking and Edge Computing	Kiosk Device Operation Management Software									
System Requirements	<p>DeviceOn for Azure: Standard Edition: Minimum VM tier: D2sV4 (2 Cores 8GB memory) Enterprise Edition: Azure IoT Hub (S2) Azure Stream Analytics (Std. 1 unit) Event Hub (Basic, 1 million events) Service Bus (Prem. 1 daily message unit) Azure Database for PostgreSQL (5 GB storage) Azure Cosmos DB (Standard, 200 GB transactional) Virtual Machines (1 E2s, 2 vCPU 16 GB memory)</p> <p>Standalone Server: Intel® Core™ i5 2.3 GHz CPU or above, 8GB RAM</p> <ul style="list-style-type: none"> • 25 GB root partition for the system • 100 GB data storage partition (for documents and indexing) • OS: Windows Server 2012/2012 R2 64-bit, Windows Server 2016/2019 Standard 64-bit, Windows 10 Enterprise 2016 LTSC/LTSC 64-bit, Windows 10 Enterprise/Professional (1809) 64-bit, Windows 8/8.1 64-bit, Windows 7 SP1 64-bit <p>Device/Agent:</p> <ul style="list-style-type: none"> • Advantech HW with SUSI driver 3.02/4.0 support (or above), which is required for HWM (Hardware Monitoring Management) function to work normally • OS: Windows 10 32-bit/64-bit, Windows 7 SP1 32-bit/64-bit, Ubuntu 16.04/18.04/20.04, CentOS 7/7.6/8.0, Android 6.0, Yocto 										
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Learn more: <https://blog.advantech.co.jp/topics/eiot/16659>

WISE-DeviceOn - デバイス管理ソフトウェア

WISE-DeviceOn



WISE-DeviceOn				
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Application Extension	DeviceOn/ePaper ePaper Device Operation Management Software	DeviceOn/SQ Manager SSD and Memory Health Management	DeviceOn/Display Remote control and monitoring for industrial displays	IT/OT Total Security This solution is based on the DeviceOn platform. It integrates security technologies from different aspects of IT and OT to defend against ransomware and cyber attacks.
System Requirements	<p>DeviceOn for Azure: Standard Edition: Minimum VM tier: D2sv4 (2 Cores 8GB memory) Enterprise Edition: Azure IoT Hub (S2) Azure Stream Analytics (Std. 1 unit) Event Hub (Basic, 1 million events) Service Bus (Prem. 1 daily message unit) Azure Database for PostgreSQL (5 GB storage) Azure Cosmos DB (Standard, 200 GB transactional) Virtual Machines (1 E2s, 2 vCPU 16 GB memory)</p> <p>Standalone Server: Intel® Core™ i5 2.3 GHz CPU or above, 8GB RAM • 25 GB root partition for the system • 100 GB data storage partition (for documents and indexing) • OS: Windows Server 2012/2012 R2 64-bit, Windows Server 2016/2019 Standard 64-bit, Windows 10 Enterprise 2016 LTSC/LTSC 64-bit, Windows 10 Enterprise/Professional (1809) 64-bit, Windows 8/8.1 64-bit, Windows 7 SP1 64-bit</p> <p>Device/Agent: • Advantech HW with SUSI driver 3.02/4.0 support (or above), which is required for HWM (Hardware Monitoring Management) function to work normally • OS: Windows 10 32-bit/64-bit, Windows 7 SP1 32-bit/64-bit, Ubuntu 16.04/18.04/20.04, CentOS 7/7.6/8.0, Android 6.0, Yocto</p>			
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Learn more: <https://blog.advantech.co.jp/topics/eiot/16659>

Microsoft IoTソリューション

Windows Embedded and Windows IoT



シリーズ名	Windows 11 IoT Enterprise	Windows 10 IoT Enterprise	Windows Embedded Standard	Windows Embedded Enterprise	Windows Embedded Industry and POSReady
製品	<ul style="list-style-type: none"> Windows 11 IoT Enterprise 	<ul style="list-style-type: none"> Windows 10 IoT Enterprise LTSC Windows 10 IoT Enterprise SAC 	<ul style="list-style-type: none"> Windows Embedded Standard 8 Windows Embedded Standard 7 	<ul style="list-style-type: none"> Windows Embedded 8.1 Industry Pro Windows 8.1 pro for embedded system Windows 7 pro/ultimate for embedded system 	<ul style="list-style-type: none"> Windows 8.1 Industry pro retail POSReady 7 POSReady2009
概要	<p>Windows 11 IoT Enterprise は、IoT向けに進化した次世代のWindowsです。今日のクラウドとエッジのハイブリッドな世界をサポートするように設計されており、これまでで最も信頼性が高く、安全で、接続性が高く、パフォーマンスの高いWindowsオペレーティングシステムを目指しています。</p>	<p>Windows 10 IoT Enterprise は、特定のアプリケーションと周辺機器のセットにロックダウンされた専用デバイスを作成するための特別な機能が備わったフルバージョンのWindows 10です。</p>	<p>Windows Embedded Standard は、コンポーネント化された形式でWindowsのパワーを提供するオペレーティングシステムおよび開発プラットフォームです。信頼性が高く正確な機能をデバイスに提供するためのカスタムオペレーティングシステムイメージを迅速に構築します。</p>	<p>Windows Embedded Enterprise 製品は、専用のハードウェアとアプリケーションソフトウェアで構成される組み込みソリューションでの使用を目的としたフル機能のWindowsデスクトップオペレーティングシステムです。</p>	<p>Windows Embedded POSReady は、Windows テクノロジーを元にリテールおよびホスピタリティ業界向けに最適化された使いやすいポイント・オブ・サービスプラットフォームです。</p>
メリット	<ul style="list-style-type: none"> 本OSは、Windows上でLinux GUI アプリが利用できるようにするWindows Subsystem for Linux GUI (WSLg) をサポートします。 より優れた接続性を提供するために、USB4とWi-Fi 6Eをサポートします。 リリースから36か月のサポートライフサイクルを提供します。 	<ul style="list-style-type: none"> Win32 および UWP アプリによる豊富なユーザーエクスペリエンス。 デスクトップ版と同様の導入容易性、管理性、サービス。 IoT向けのユーザーエクスペリエンスを提供するロックダウン機能を備えた使い慣れたインターフェイス。 	<ul style="list-style-type: none"> コンポーネント化されたオペレーティングシステムにより、必要な機能を選択できます。 カスタムブランディングにより、最初から最後まで独自のカスタムエクスペリエンスを提供できます。 ロックダウン機能により、予測可能なカスタマーエクスペリエンスを確保できます。 	<ul style="list-style-type: none"> フル機能のWindows を利用した高度なクロスプラットフォームアプリケーション互換性を提供します。 マルチタッチとKinect for Windows により、没入感のある自然なユーザーエクスペリエンスを提供します。 	<ul style="list-style-type: none"> プラグ・アンド・プレイ機能を搭載し、リテール向け周辺機器を簡単に実装 リテール市場で必要とされるテクノロジーと、標準的なリテールアプリケーションおよびデバイス周辺機器を完全にサポート
最小ハードウェア要件	<ul style="list-style-type: none"> x86互換で64ビット、2コア以上、1GHz以上CPUプロセッサまたはSoC 4GB以上のシステムメモリ 64GB以上の空きストレージ容量 TPM 2.0 WDDM 2.0 ドライバーに対応するDirectX 12またはそれ以降のバージョンと互換性があること カラーチャネル 8ビット以上の高解像度 (720p) ディスプレイ 	<ul style="list-style-type: none"> x86 / AMD64 プロセッサ 1GHz以上の動作周波数 1GBのシステムメモリ (64ビットの場合は2GB以上を推奨) 32ビットの場合は16GBのストレージ空き容量 (64ビットの場合は20GB以上) DirectX 9以降とWDDM 1.0ドライバー 	<p>Windows Embedded Standard 8:</p> <ul style="list-style-type: none"> 32ビットまたは64ビットのプロセッサ 1GHz以上の動作周波数 1GBのシステムメモリ (64ビットの場合は2GBを推奨) 8GBのストレージ空き容量 <p>Windows Embedded Standard 7:</p> <ul style="list-style-type: none"> 動作周波数1GHz以上のx86 / AMD64 プロセッサ 512MBのシステムメモリ (AMD64には1GBを推奨) 1GB以上のストレージ空き容量 (4GB以上を推奨) 	<ul style="list-style-type: none"> x86 / AMD64 プロセッサ 1GHz以上の動作周波数 1GBのシステムメモリ (64ビットの場合は2GB) 16GBのストレージ空き容量 (64ビットの場合は20GB) 	<ul style="list-style-type: none"> x86 / AMD64 プロセッサ 1GHz以上の32ビット(x86)または64ビット(x64)プロセッサ 32ビットの場合は1GB、64ビットの場合は2GB以上のシステムメモリ POSReady 7の場合は16GBのストレージ空き容量、POSReady 2009の場合は520MB以上のストレージ空き容量

シリーズ	Windows Embedded Compact	Windows Server IoT	Microsoft SQL Server IoT
製品名	<ul style="list-style-type: none"> Windows Embedded Compact 2013 Windows Embedded Compact 7 	<ul style="list-style-type: none"> Windows Server IoT 2022 Windows Server IoT 2019 Server 2016 for embedded system 	<ul style="list-style-type: none"> Microsoft SQL Server IoT 2019 Microsoft SQL Server 2017 IoT SQL Server 2016 for Embedded System
概要	<p>Windows Embedded Compact は、特定業種向け小型デバイス用として力を発揮するコンポーネント化されたスマートフットプリントのリアルタイムOSです。</p>	<p>Windows Server IoT は、エンタープライズグレードの管理性とセキュリティをIoTソリューションに提供する、フルバージョンのWindows Serverです。</p>	<p>Microsoft SQL Server IoT は、専用サーバークラス・エッジデバイス向けに用意されたSQL Server と同等のバイナリ製品です。</p>
メリット	<ul style="list-style-type: none"> リアルタイムパフォーマンスとARM / x86アーキテクチャとの互換性を必要とする特殊な小型デバイス向けのOS センサー to クラウド連携を行うインテリジェントシステムアプリケーション向けのプラットフォーム 	<ul style="list-style-type: none"> 多数の「モノ」からデータを集約 貴重なビジネス・インサイトを発見するため、非常に大規模なデータベースの保存および分析が可能 強化されたセキュリティ機能 Azure IoT Edge によって管理されるAzure IoT ホスティング・コンテナを活用可能 	<ul style="list-style-type: none"> インテリジェントな機能を活用して、多数のものから集約されたデータを分析 データ保護、アクセス制御、監視と警告、およびセキュリティ管理機能を実装 SQL Server を任意のプラットフォーム、任意の開発言語で実行可能
最小ハードウェア要件	<ul style="list-style-type: none"> 2.4 GHz CPU, 1 GB RAM (2013 では 2 GB)、1280x1040 ディスプレイ (2013 では 1024 x 768) 100 GB の空きストレージディスク容量 	<ul style="list-style-type: none"> 1.4 GHz以上の64ビットプロセッサ 最小: 512 MB のシステムメモリ 最小: 32 GB の空き容量 毎秒 1 ギガビット以上のスループットが可能なイーサネットアダプタ 1024 x 768 ディスプレイ 	<ul style="list-style-type: none"> x64 プロセッサ 1.4 GHz 以上の動作周波数 1 GB のシステムメモリ 最小: 6 GB の空きストレージ容量

Microsoft IoTソリューション

Microsoft Azure Cloud



	Azure Services
製品の位置付け	Azure リソースは、無制限のコンピューティングとストレージを提供するだけでなく、メンテナンスと管理のコストを削減しながら利益を高める便利なサービスも提供します。
アプリケーションシナリオ	<ul style="list-style-type: none">データのバックアップと災害復旧Web アプリケーションと電子商取引のホスティングさまざまなダッシュボードフォーマット/パターンの提供自動化ランブック、CI/CD 開発AI とビッグデータ分析スマートシティ/ビル/工場アプリケーション認証と承認によるセキュリティ管理輸送と物流向けIoT
ゲートウェイ上のエッジコンピューティングパッケージ	Azure IoT Edge Azure PnP Certification (プラグ&プレイ)
アドバンテックと連携するメリット	アドバンテックは、ユーザーに対する次のような利点を生み出すために、ハードウェアとクラウド・ソフトウェアサービスを提供します <ul style="list-style-type: none">プロアクティブな容量計画、パフォーマンスとコストの最適化包括的な設計特化したIoT ソリューションコンサルティングおよび技術サービスハイブリッド・クラウドの導入さまざまなセキュリティおよび安全ソリューション

Acronis/McAfee

Acronis



Scan and Reach us

Backup & Recovery					
製品	• Acronis True Image	• Acronis True Image OEM version (Personal/ HD/ Data Protection/ OEM for windows Server)	• Acronis Cyber Backup	• Acronis Snap Deploy	• Acronis Cyber Protect Cloud
概要	Acronis True Image は、信頼性の高いバックアップと、ランサムウェアやクリプトジャッキング攻撃に対する実績のある統合された AI ベースの防御を組み合わせて、簡単に効率のかつ安全なサイバー保護を提供します。	Acronis OEMソリューションは、OEMパートナー向けの製品です。Acronis True Image OEMエディションは、Acronis True Image の機能が制限されたサブセットです。これらは特定の機能向けに設計されており、OEMのニーズと予算に合わせて価格設定されています。OEM/パートナーは、不要な機能に対して料金を支払いいただく必要はありません。	あらゆる規模の企業向けで、世界で最も簡単かつ最速のデータ保護ソフトウェアです。オンプレミス・データとリモート データ、プライベート・クラウドとパブリック・クラウド、モバイル デバイスをカバーします。	Acronis Snap Deploy を使用すると、オペレーティングシステム、構成、ファイル、およびアプリケーションを含む標準構成のディスクイメージを正確に作成し、そのイメージを1つの簡単な手順で複数のコンピュータに同時に展開できます。	1. あらゆるインシデントから、あらゆるデバイス上のアプリケーション、システム、およびデータを迅速かつ確実に復旧します。 2. ランサムウェアやクリプトマイナーを含むマルウェアに対するフルスタックの次世代 AI/ML ベース保護 3. ITリソースを節約する、包括的かつシンプルなエンドポイント管理ツールキット
メリット	<ul style="list-style-type: none"> • 簡単: 直感的なユーザーインターフェイス。2クリックでバックアップ • 効率的: オールインワンの保護ミラー イメージング、ディスククローン作成、ブート メディアビルダなど。他社よりも最大10倍高速であることが証明されています。 • セキュア: ランサムウェアとクリプトジャッキングに対してAI ベースの防御を行う唯一の個人用バックアップ。影響を受けたファイルを自動的に復元。 	<ul style="list-style-type: none"> • ランサムウェアと積極的に戦う唯一のバックアップソリューション • フル ディスク イメージ、フル ディスク バックアップ専用の機能、ファイル/フォルダバックアップ、およびスケジューリング • OS、アプリケーション、設定を含むすべてのシステムをリモートで簡単に工場出荷時の状態に復元できるため、サポートコストを削減できます。 	<ul style="list-style-type: none"> • ローカルディスク、ネットワークストレージ、クラウドを含むさまざまなストレージデバイスにバックアップを保存 • Windows とLinuxシステムを異なるハードウェア(ベアメタルの物理、仮想、またはクラウド環境など)に復元することにより、コストのかかるダウンタイムを最小限に抑えます。 • カスタマイズ可能なダッシュボードを使用してインフラストラクチャを迅速に把握し、行動に移すまでの時間を短縮し、問題を迅速に解決します。 	<ul style="list-style-type: none"> • マス・プロビジョニング - 単一のディスクイメージを複数のマシンに迅速に展開 • 稼働中のマシンへの展開 - ネットワークまたは CD から個々のマシンを手動で起動することなく、稼働中の Windows マシンへの展開を開始します。 • マルチキャスト展開 - 何千台ものマシンを1台の時と同じくらい迅速かつ簡単に展開できます。 	<ul style="list-style-type: none"> • オンボーディングの簡素化 •ゼロデイ・マルウェアとランサムウェアからの保護 • コンプライアンスとフォレンジック調査 • マルウェア攻撃後の回復 • すべての主要ファイルの保護 • 一元化されたパッチ適用 • 新たな脅威への自動対応 • 計画的および計画外のダウンタイムを最小限に抑える
最小ハードウェア要件	<ul style="list-style-type: none"> • プロセッサ Pentium 1GHz以上 • 1GBのRAM • 3.5GBストレージ空き容量 • プータブルメディア作成用のCD-RW/DVD-RWドライブまたはUSBドライブ(約600 MBの空き容量必要) • 1024x768以上の画面解像度・マウスまたはその他のポインティングデバイス(推奨) 	<ul style="list-style-type: none"> • プロセッサ Pentium 1GHz以上 • 1GBのRAM • 3.5GBストレージ空き容量 • プータブルメディア作成用のCD-RW/DVD-RWドライブまたはUSBドライブ(約600 MBの空き容量必要) • 1024x768以上の画面解像度 • マウス/その他のポインティングデバイス(推奨) 	<ul style="list-style-type: none"> • プロセッサ Pentium 1GHz以上 • 1GB以上のストレージ空き容量 • プータブルメディア作成用のCD-RW/DVD-RWドライブまたはUSBドライブ • 1024x768以上の画面解像度 	<ul style="list-style-type: none"> • プロセッサ Pentium 1GHz以上 • 1.5GB以上のストレージ空き容量 • プータブルメディア作成用のCD-RW/DVD-RWドライブまたはUSBドライブ • 1024x768以上の画面解像度 	<ul style="list-style-type: none"> • Aronis Cyber Protect Cloud は、Web ベースのアプリケーションである SaaS としてサービスを提供しているため、サーバー側に特定のハードウェア要件はありません。 • クライアントの場合 (エージェントのインストール) <ul style="list-style-type: none"> - プロセッサ - Pentium 1 GHz 以上 - 1.5 GB ストレージ空き容量 - プータブルメディア作成用の CD-RW/DVD-RW ドライブまたは USB ドライブ

Trellix McAfee™



Scan and Reach us

Security			
製品	• Trellix (McAfee) ePO	• Trellix (McAfee) Application Control • Trellix (McAfee) Embedded Control • Trellix (McAfee) Integrity Control	• Trellix (McAfee) Endpoint Security 10
概要	Trellix (McAfee) ePolicy Orchestrator は、エンドポイント、ネットワーク、およびデータの管理を統合します。これは、接続されたデバイスに組み込みセキュリティを展開および構成するための管理ツールです。	Trellix (McAfee) ホワイトリスト・テクノロジーは、オーバーヘッドの少ないシステム保護に最適です。システムパフォーマンスに影響を与えることなく、ネットワークアクセスのないスタンドアロンモードでも同様に効果的です。	Trellix (McAfee) のブラックリスト・テクノロジーは、複数のエンドポイント防御テクノロジーがリアルタイムで通信し、新しい高度な脅威を分析して連携できるようにする新しいフレームワークを導入します。
メリット	<ul style="list-style-type: none"> • 管理対象クライアントのデータを監視および報告する中央セキュリティ管理 • セキュリティポリシーのリモート展開 • さまざまな業種のアプリケーションを満たす追加の Trellix (McAfee) モジュール • 分析レポートを含むダッシュボード 	<ul style="list-style-type: none"> • 許可されていないアプリケーションの動作と変更の試行をブロック • ポリシー外からの変更の試みをブロック • ファイルの整合性とファイルの変更を監視 	<ul style="list-style-type: none"> • 新しい高度なマルウェア スキャン機能をいくつ搭載し、新たな標的型攻撃から防御 • ユーザーが悪意のある、または許可されていない Web サイトを閲覧できないように保護 • 悪意のあるインバウンドおよびアウトバウンドネットワークトラフィックを阻止
最小ハードウェア要件	<ul style="list-style-type: none"> • 64 ビット Intel Pentium D 以上 • 動作周波数 2.66GHz 以上 • 4 コア以上 (推奨) • ストレージに 20GB の空き容量 • 利用可能な 8GB の RAM 	<ul style="list-style-type: none"> • プロセッサは x86-64 / AMD64 アーキテクチャをサポート • 1GB RAM (64 ビットの場合は 2GB) • 100MB のストレージ空き容量 • システムにインストールされている TCP/IP プロトコル 	<ul style="list-style-type: none"> • Windows 7: 1.4GHz 以上、2GB の RAM • Windows 10: 2 GHz 以上、3GB の RAM • 1GB のストレージ空き容量

Linux/組み込みBIOS/API

Ubuntu



製品	Ubuntu Desktop	Ubuntu Core
概要	Ubuntu デスクトップは、何年にもわたり進化をとげてきた、世界中の何千もの開発チームにとって不可欠なOSです。最も信頼性が高く、安全で、デスクトップで使用するための多様な環境を提供する Ubuntu は、比類のない自由と制御を可能にします。	Ubuntu Core は、IoT ネイティブの組み込みシステム向けに最適化された Ubuntu のバージョンです。Ubuntu は、汎用コンピューティング向けの最新かつ最高のオープンソースソフトウェアを提供しますが、Ubuntu Core には、単一目的のアプライアンス用に選択したパッケージとバイナリのみが含まれています。
メリット	<ul style="list-style-type: none"> • 本格的なグラフィック UI OS • より深く幅広いレベルの開発を支援するSDKにより、Ubuntu Desktopは AI、マシンラーニング、およびディープラーニングに適したプラットフォームになっています。 • プラットフォーム間で一貫した OS エクスペリエンスを提供。ユーザーは、サーバー、クラウド、および IoT デバイスで行っているのとまったく同じ基盤となる OS をデスクトップで使用できます。 • Ubuntu Desktop LTS リリースは、Canonical によって 5 年間サポートされ、バグ修正、セキュリティ更新、およびハードウェアの有効化が行われます。 	<ul style="list-style-type: none"> • 軽量のコマンドライン OS • IoT センサー デバイス用に最適化されています。 • Ubuntu Core は、スナップ上に構築されたコンテナ OS。スナップを使用する組み込みシステムは、セキュリティ、不変性、およびモジュール管理や構成管理などの煩わしさから解放されます。 • ソフトウェアはOTAで更新され、失敗した場合は自動でロールバックを実行します。
最小ハードウェア要件	<ul style="list-style-type: none"> • 2GHz デュアル コア プロセッサ以上 • 4GB のシステム メモリ • 12 GB のストレージ空き容量 • 32 ビット / 64 ビット、x86 / ARM 	<ul style="list-style-type: none"> • 500Mhz シングル コア プロセッサ • 256MBのRAM、512MBのストレージ • 32 ビット / 64 ビット、x86 / ARM

組み込みBIOS/APIs

組み込み BIOS からソフトウェア API まで、アドバンテックは、幅広いサービスを提供します。

セキュリティ、ファームウェア BIOS、および BIOS スイートを含む、組み込み BIOS サービス		
セキュリティ	ファームウェア BIOS	BIOS スイート
セキュア・フラッシュ	コンサルティング・サービス	DMIエディタ
セキュア・ブート	BIOSスペックレビュー	BIOS設定の変更
ブート・ガード	顧客専用ロゴ/設定	ロゴの変更
TPM/TCM	カスタム BIOS	フラッシュ・ツール
暗号化ストレージ	ブート時間のチューニング	診断

ソフトウェアAPI

Secure (安全)、Unified (統合化された)、Smart Interface (スマートなインターフェイス) = SUSI API は、開発を促進し、Advantech プラットフォームに付加価値を提供する、インテリジェントで統合されたインターフェイス			
システム保護	デバイス・モニタリング	I/O コントロール	アプリケーション拡張
システム データを保護し、システムパフォーマンスを保護する	さらなる管理のためのデバイスデータの監視と検出	デバイス制御のための I/Oへのアクセスと管理	アプリケーション開発のための外部モジュールまたはデバイスへのアクセス
データセキュリティ	スマート・ファン	GPIO	PoE
ウォッチドッグ・タイマ	ハードウェア・モニタリング	SMBus/I2C	加速度センサ
温度に対する保護	システム情報	輝度とバックライトのON/OFF	インテリジェント・ディスプレイ
システム・スロットリング		Canbus	ヴァーチャルCOM

コンピュータオンモジュール - SOM



Model Name		SOM-C350	SOM-D580	SOM-E780
Form Factor		COM-HPC Size C	COM-HPC Size D	COM-HPC Size E
Pin-out Type		COM-HPC Client	COM-HPC Server	COM-HPC Server (Proprietary)
Processor System	CPU	Intel® next generation desktop CPU (socket)	Intel® next generation Xeon® D HCC CPU	AMD EPYC 7003 CPU (socket)
	Base Frequency	3.6-2.1GHz	2.1-1.8GHz	3.0-2.0GHz
	Processor Core	16/12/6/4/2	20/16/12/8/4	64/32/24/16
	LLC	30/25/18/12/6/4MB	30/25/20/15MB	256/128MB
	CPU TDP	65/35W	118/100/80/77/65W	225/180/155W
	Chipset	Intel® next generation desktop PCH	-	-
Memory	Technology	DDR5 4800	DDR4 3200	DDR4 3200
	ECC Support	ECC and non-ECC	ECC and non-ECC	ECC and non-ECC
	Max. Capacity	128GB	512GB	512GB
	Socket	4 x 262P SODIMM	4 x 288P LRDIMM	4 x 288P LRDIMM
Graphics	Controller	Intel® UHD Graphics 770	-	-
	Max. Frequency	1.35-1.55GHz	-	-
	eDP	1	-	-
	DDI (HDMI/DVI/DisplayPort)	3	-	-
	Multiple Displays	Quad-Display	-	-
Expansion	PCIe x16	1 (Gen5)	2 (Gen4)	4 (Gen4)
	PCIe x8	-	2 (Gen3)	1 (Gen4)
	PCIe x4	-	-	1 (Gen4)
	PCIe x1	16 Gen4 + 10 Gen3	-	2 (Gen4)
	PCIe_BMC	1 (optional)	1	1
	eSPI	1	1	N/A; Support LPC
Serial Bus	SMBus	1	1	1
	I2C Bus	2	2	2
	IPMB	-	1	1
Ethernet	Controller	2 x Intel® I225	Intel® I225	Intel® I225
	GbE Speed	2.5G	2.5G	2.5G
	25Gb Ethernet	-	4 x 25Gb or 8 x 10Gb	-
I/O	SATA	2	2	2
	USB 3.2 Gen 2x2 (20Gbps)	4	-	-
	USB 3.2 Gen 2 (10Gbps)	-	-	-
	USB 3.2 Gen 1 (5Gbps)	-	4	4
	USB 2.0	8	4	4
	Audio	Soundwire/HD Audio	-	-
	BOOT_SPI	1	1	1
	GP_SPI	-	-	-
	GPIO	12	12	12
	Watchdog	1	1	1
	COM Port	2 (2-wire)	2 (2-wire)	2 (2-wire)
	Onboard Storage	-	-	-
	TPM	TPM2.0	TPM2.0	TPM2.0
Power	Power Type	ATX: Vin, VSB; AT: Vin	ATX: Vin, VSB; AT: Vin	ATX: Vin, VSB; AT: Vin
	Supply Voltage	Vin: 11.4-12.6V VSB: 4.75-5.25V	Vin: 11.4-12.6V VSB: 4.75-5.25V	Vin: 11.4-12.6V VSB: 4.75-5.25V
	Power Consumption Max.	TBD	TBD	TBD
	Power Consumption Idle	TBD	TBD	TBD
Environment	Operating Temp.	0 ~ 60 °C	0 ~ 60 °C	0 ~ 60 °C
	Extended Temp.(Optional)	-	-40 ~ 85 °C	-
Mechanical	Dimensions	160 x 120 mm	160 x 160 mm	200 x 160 mm

コンピュータオンモジュール - SOM

NEW



Model Name		SOM-5993	SOM-5962	SOM-9590	SOM-5992
Form Factor		COM Express Basic	COM Express Basic	COM Express Basic	COM Express Basic
Pin-out Type		COM R3.0 Type 7	COM R3.0 Type 7	COM R3.0 Type 7	COM R3.0 Type 7
Processor System	CPU	Intel® next generation Xeon® D LCC CPU	Intel® Atom Processor C3000 Series	Intel® Xeon Processor D-1539	Intel® Xeon Processor D-1500 Series
	Base Frequency	2.3-1.6GHz	2.2-1.5GHz	1.6GHz	2.2-1.3GHz
	Processor Core	10/8/4	16/12/8/4/2	8	16/12/8/6/4/2
	LLC	15/12/6MB	16/12/8/4MB	12MB	24/12/9/6/3MB
	CPU TDP	69/59/52/50/39W	31/25/17/16/11.5/8.5W	35W	45/35/25W
	Chipset	-	-	-	-
Memory	Technology	DDR4 2933	DDR4 2400/2133/1866	DDR4 2133	DDR4 2400/2133/1866
	ECC Support	ECC and non-ECC	ECC and non-ECC	ECC	ECC and non-ECC
	Max. Capacity	128GB	128GB	32GB	128GB
	Socket	4 x 260P SODIMM	4 x 260P SODIMM	-	4 x 260P SODIMM
Graphics	Controller	-	-	-	-
	Max. Frequency	-	-	-	-
	VGA	-	-	-	-
	LCD (TTL/LVDS/eDP)	-	-	-	-
	DDI (HDMI/DVI/DisplayPort)	-	-	-	-
	Multiple Displays	-	-	-	-
Expansion	PCIe x16	1 (Gen4)	-	1	1
	PCIe x8	1 (Gen3)	Up to 2 (depends on SKU)	1	1
	PCIe x4	2 (Gen3)	1	-	-
	PCIe x1	-	-	7 (max. 8 if remove GbE)	7 (max. 8 if remove GbE)
	LPC	1	1	1	1
Serial Bus	SMBus	1	1	1	1
	I2C Bus	1	1	1	1
	CAN Bus	Optional	-	-	-
Ethernet	Controller	Intel® I210	Intel® I210	Intel® I210	Intel® I210
	GbE Speed	10/100/1000Mbps	10/100/1000Mbps	10/100/1000Mbps	10/100/1000Mbps
	10Gb Ethernet	4	4 (10G/2.5G by SKU)	2	2
I/O	SATA	2	2	2	2
	USB 3.2 Gen 2 (10Gbps)	-	-	-	-
	USB 3.2 Gen 1 (5Gbps)	4	4	4	4
	USB 2.0	4	4	4	4
	Audio	-	-	-	-
	SPI Bus	1	1	1	1
	GPIO	8	8	8	8
	SDIO (GPIO pin shared)	-	-	-	-
	Watchdog	1	1	1	1
	COM Port	2 (2-wire)	2 (2-wire)	2 (2-wire)	2 (2-wire)
	Onboard Storage	-	eMMC	SATA SSD	-
	TPM	TPM2.0	TPM2.0	TPM2.0	TPM2.0
	Power	Power Type	ATX: Vin, VSB; AT: Vin	ATX: Vin, VSB, AT: Vin	ATX: Vin, VSB, AT: Vin
Supply Voltage		Vin: 8.55-12.6V VSB: 4.75-5.25V	Vin: 8.5-20V VSB: 4.75-5.25V	Vin: 8.5-20V VSB: 4.75-5.25V	Vin: 8.5-20V VSB: 4.75-5.25V
Power Consumption Max.		TBD	32.6W	45.56W	55.5W
Power Consumption Idle		TBD	11.8W	12.75W	13.77W
Environment	Operating Temp.	0 ~ 60 °C	0 ~ 60 °C	0 ~ 60 °C	0 ~ 60 °C
	Extended Temp.(Optional)	-40 ~ 85 °C	-40 ~ 85 °C	-40 ~ 85 °C	-40 ~ 85 °C
Mechanical	Dimensions	125 mm x 95 mm	125 x 95 mm	125 x 95 mm	125 x 95mm

コンピュータオンモジュール - SOM

NEW


Model Name		SOM-5883	SOM-5899	SOM-5898	SOM-5897	SOM-5871
Form Factor		COM Express Basic	COM Express Basic	COM Express Basic	COM Express Basic	COM Express Basic
Pin-out Type		COM R3.0 Type 6	COM R3.0 Type 6	COM R2.1 Type 6	COM R2.1 Type 6	COM R3.0 Type 6
Processor System	CPU	Intel® 11th Gen. H Series (Tiger Lake-H)	Intel® 9th/8th Gen. Core i7/i5/i3/Xeon/Celeron	Intel® 7th Gen. Core i7/i5/i3/ Xeon	Intel® 6th Gen. Core i7/i5/i3/Xeon/Celeron	AMD Ryzen™ V1000
	Base Frequency	2.6-1.5GHz	3.0-1.6GHz	3.0-2.1 GHz	2.8-1.9GHz	3.35-2.0GHz
	Processor Core	8/6/4/2	6/4/2	4/2	4/2	4/2
	LLC	24/12/8MB	12/9/8/6/2MB	8/6/3MB	8/6/3/2MB	2/1MB
	CPU TDP	45/35/25W	45/35/25W	45/35/25W	45/35/25W	35-54/12-25W
	Chipset	Intel® QM580E/RM590E	Intel® CM246/QM370/HM370	Intel® QM175/CM238	Intel® QM170/CM236	-
Memory	Technology	DDR4 3200	DDR4 2666/2400/2133	DDR4 2400/2133	DDR4 2133/1866	DDR4 3200/2400
	ECC Support	ECC and non-ECC	ECC (Xeon only)	ECC (Xeon only)	ECC (Xeon only)	ECC and non-ECC
	Max. Capacity	128GB	96GB	32GB	32GB	32GB
	Socket	4 x 260P SODIMM	3 x 260P SODIMM	2 x 260P SODIMM	2 x 260P SODIMM	2 x 260P SODIMM
Graphics	Controller	Intel® Iris® Xe Graphics	Intel® UHD Graphics 610/630/P630	Intel® HD Graphics 630/P630	Intel® HD Graphics 510/530/P530/P580	AMD Vega GPU
	Max. Frequency	1350-1250MHz	1.15GHz	1GHz-350MHz	1.05GHz-950MHz	1.3-1.0GHz
	VGA	1	1	1	1	1
	LCD (TTL/LVDS/eDP)	LVDS 2-CH 18/24-bit eDP (optional)	LVDS 2-CH 18/24-bit eDP (optional)	LVDS 2-CH 18/24-bit eDP (optional)	LVDS 2-CH 18/24-bit eDP (optional)	LVDS 2-CH 18/24-bit eDP (optional)
	DDI (HDMI/DVI/DisplayPort)	3	2; up to 3 if remove VGA	2; up to 3 if remove VGA	2; up to 3 if remove VGA	2; up to 3 if remove VGA
	Multiple Displays	Quad-Display	Triple-Display	Triple-Display	Triple-Display	Quad-Display
Expansion	PCIe x16	1 (Gen4)	1	1	1	-
	PCIe x8	-	-	-	-	1
	PCIe x4	-	-	-	-	-
	PCIe x1	8 (Gen3)	8	8	8	6
	LPC	1	1	1	1	1
Serial Bus	SMBus	1	1	1	1	1
	I2C Bus	1	1	1	1	1
	CAN Bus	Optional	Optional	-	-	Optional
Ethernet	Controller	Intel® I225	Intel® I219LM	Intel® I219LM	Intel® I219LM	Intel® I210
	GbE Speed	2.5G	10/100/1000Mbps	10/100/1000Mbps	10/100/1000Mbps	10/100/1000Mbps
	10Gb Ethernet	-	-	-	-	-
I/O	SATA	4	4	4	4	2
	USB 3.2 Gen 2 (10Gbps)	4	4	-	-	-
	USB 3.2 Gen 1 (5Gbps)	-	-	4	4	3
	USB 2.0	8	8	8	8	8
	Audio	HD Audio	HD Audio	HD Audio	HD Audio	HD Audio
	SPI Bus	1	1	1	1	1
	GPIO	8	8	8	8	8
	SDIO (GPIO pin shared)	-	Optional	-	-	-
	Watchdog	1	1	1	1	1
	COM Port	2 (2-wire)	2 (2-wire)	2 (2-wire)	2 (2-wire)	2 (2-wire)
	Onboard Storage	NVMe SSD	-	-	-	-
	TPM	TPM2.0	TPM2.0	TPM2.0	Optional	TPM2.0
	Power	Power Type	ATX: Vin, VSB; AT: Vin	ATX: Vin, VSB; AT: Vin	ATX: Vin, VSB; AT: Vin	ATX: Vin, VSB, AT: Vin
Supply Voltage		Vin: 8.5-20V VSB: 4.75-5.25V	Vin: 8.5-20V VSB: 4.75-5.25V	Vin: 8.5-20V VSB: 4.75-5.25V	Vin: 8.5-20V VSB: 4.75-5.25V	Vin: 8.5-20V VSB: 4.75-5.25V
Power Consumption Max.		TBD	44.63W	48.1W	43.3W	67.12 W
Power Consumption Idle		TBD	6.89W	6.77W	5.23W	15 W
Environment	Operating Temp.	0 ~ 60 °C	0 ~ 60 °C	0 ~ 60° C	0 ~ 60 °C	0 ~ 60 °C
	Extended Temp.(Optional)	-40 ~ 85 °C	-40 ~ 85 °C	-40 ~ 85 °C	-40 ~ 85 °C	-40 ~ 85 °C (only on V1404I)
Mechanical	Dimensions	125 x 95mm	125 x 95mm	125 x 95mm	125 x 95mm	125 x 95mm

コンピュータオンモジュール - SOM

NEW

NEW



Model Name	SOM-6883	SOM-6872	SOM-6882	SOM-6898	SOM-6897	
Form Factor	COM Express Compact	COM Express Compact	COM Express Compact	COM Express Compact	COM Express Compact	
Pin-out Type	COM R3.0 Type 6	COM R3.0 Type 6	COM R3.0 Type 6	COM R2.1 Type 6	COM R2.1 Type 6	
Processor System	CPU	Intel® 11th Gen. U Series (Tiger Lake-UP3)	AMD Ryzen™ V2000	Intel® 8th Gen. Core i7/i5/i3/Celeron	Intel® 7th Gen. Core i7/i5/i3/Celeron	Intel® 6th Gen. Core i7/i5/i3/Celeron
	Base Frequency	2.2-1.5GHz	3.0-1.7GHz	2.2-1.6GHz	2.8-2.2GHz	2.6-2.0GHz
	Processor Core	4/2	8/6	4/2	2	2
	LLC	12/8/6/4MB	8MB	8/6/4/2MB	4/3/2MB	4/3/2MB
	CPU TDP	28/15/12W	35-54/10-25W	15W	15W	15W
	Chipset	-	-	-	-	-
Memory	Technology	DDR4 3200 (1CH on board)	DDR4 3200	DDR4 2400	DDR4 2133	DDR3L 1600
	ECC Support	IBECC support by Specific CPU SKUs	ECC and non-ECC	-	-	-
	Max. Capacity	48GB	64GB	64GB	32GB	16GB
	Socket	1 x 260P SODIMM	2 x 260P SODIMM	2 x 260P SODIMM	2 x 260P SODIMM	2 x 204P SODIMM
Graphics	Controller	Intel® Iris® Xe Graphics/ Intel® UHD Graphics	AMD Radeon Graphics Vega GPU	Intel® UHD Graphics 620/610	Intel® HD Graphics 620/610	Intel® HD Graphics 520/510
	Max. Frequency	1.35-1.25GHz	1.6GHz	1.15-1.0 GHz	1.15-0.9 GHz	1.15-0.9GHz
	VGA	1	1	1	1	1
	LCD (TTL/LVDS/eDP)	LVDS 2-CH 18/24-bit eDP (optional)	LVDS 2-CH 18/24-bit eDP (optional)	LVDS 2-CH 18/24-bit eDP (optional)	LVDS 2-CH 18/24-bit eDP (optional)	LVDS 2-CH 18/24-bit eDP (optional)
	DDI (HDMI/DVI/DisplayPort)	2; up to 3 if remove VGA	2; up to 3 if remove VGA	2; up to 3 if remove VGA	2; up to 3 if remove VGA	2; up to 3 if remove VGA
	Multiple Displays	Quad-Display	Quad-Display	Triple-Display	Triple-Display	Triple-Display
Expansion	PCIe x16	-	-	-	-	-
	PCIe x8	-	1	-	-	-
	PCIe x4	1 (if remove NVMe)	-	-	-	-
	PCIe x1	5 (max. 6 if remove GbE)	8	8	8	8
	LPC	1	1	1	1	1
Serial Bus	SMBus	1	1	1	1	1
	I2C Bus	1	1	1	1	1
	CAN Bus	Optional	Optional	-	-	-
Ethernet	Controller	Intel® I225	Intel® I210	Intel® I219LM	Intel® I219LM	Intel® I219LM
	GbE Speed	2.5G	10/100/1000Mbps	10/100/1000Mbps	10/100/1000Mbps	10/100/1000Mbps
	10Gb Ethernet	-	-	-	-	-
I/O	SATA	2	2	2; up to 3 if remove PCIe x1	2; up to 3 if remove PCIe x1	2; up to 3 if remove PCIe x1
	USB 3.2 Gen 2 (10Gbps)	4	4	-	-	-
	USB 3.2 Gen 1 (5Gbps)	-	-	4	4	4
	USB 2.0	8	8	8	8	8
	Audio	HD Audio	HD Audio	HD Audio	HD Audio	HD Audio
	SPI Bus	1	1	1	1	1
	GPIO	8	8	8	8	8
	SDIO (GPIO pin shared)	-	-	Optional	1	1
	Watchdog	1	1	1	1	1
	COM Port	2 (2-wire)	2 (2-wire)	2 (2-wire)	2 (2-wire)	2 (2-wire)
	Onboard Storage	NVMe SSD	-	eMMC	eMMC	-
TPM	TPM2.0	TPM2.0	TPM2.0	Optional	Optional	
Power	Power Type	ATX: Vin, VSB; AT: Vin	ATX: Vin, VSB; AT: Vin	ATX/ATX: Vin	ATX: Vin, VSB; AT: Vin	ATX: Vin, VSB, AT: Vin
	Supply Voltage	Vin: 8.5-20V VSB: 4.75-5.25V	Vin: 8.5-20V VSB: 4.75-5.25V	Vin: 8.5-20V VSB: 4.75-5.25V	Vin: 8.5-20V VSB: 4.75-5.25V	Vin: 8.5-20V VSB: 4.75-5.25V
	Power Consumption Max.	55.742W	73.25W	59.721W	24.61W	20.73W
	Power Consumption Idle	7.834W	4.798W	4.204W	4.16W	4.12W
Environment	Operating Temp.	0 ~ 60 °C	0 ~ 60 °C	0 ~ 60 °C	0 ~ 60 °C	0 ~ 60 °C
	Extended Temp. (Optional)	-40 ~ 85 °C	-	-40 ~ 85 °C	-40 ~ 85 °C	-40 ~ 85 °C
Mechanical	Dimensions	95 x 95 mm	95 x 95 mm	95 x 95 mm	95 x 95 mm	95 x 95 mm

コンピュータオンモジュール - SOM

NEW



NEW



NEW



Model Name		SOM-6832	SOM-6869	SOM-6867	SOM-7532	SOM-7583
Form Factor		COM Express Compact	COM Express Compact	COM Express Compact	COM Express Mini	COM Express Mini
Pin-out Type		COM R3.0 Type 6	COM R2.1 Type 6	COM R2.1 Type 6	COM R3.1 Type 10	COM R3.0 Type 10
Processor System	CPU	Intel® Atom/Pentium/Celeron x6000 Series (Elkhart Lake)	Intel® Atom E3900 & Pentium/Celeron N series	Intel® Atom E3800 & Celeron N/J series	Intel® Atom/Pentium/Celeron x6000 Series (Elkhart Lake)	Intel® 11th Gen. U Series (Tiger Lake-UP3)
	Base Frequency	2.0-1.0GHz	1.6-1.1GHz	2.0-1.19GHz	2.0-1.0GHz	2.2-1.5GHz
	Processor Core	4/2	4/2	4/2	4/2	4/2
	LLC	1.5MB	2MB	2/1MB	1.5MB	12/8/6/4MB
	CPU TDP	12/10/9/7.5/6.5/6/4.5W	6/6/12/9.5/6.5/10W	10 - 6W	12/10/9/7.5/6.5/6/4.5W	28/15/12W
	Chipset	-	-	-	-	-
Memory	Technology	DDR4 3200	ECC: DDR3L 1600; Non-ECC: DDR3L 1866	DDR3L 1333	DDR4 3200	LPDDR4X up to 4267MT/s
	ECC Support	IBECC support by Specific CPU SKUs	A1: non-ECC; B1: ECC	-	IBECC support by Specific CPU SKUs	IBECC support by Specific CPU SKUs
	Max. Capacity	32GB	8GB	8GB	32GB	16GB
	Socket	2 x 260P SODIMM	2 x 204P SODIMM	2 x 204P SODIMM	-	-
Graphics	Controller	Intel® UHD Graphics	Intel® HD Graphics	Intel® HD Graphics	Intel® UHD Graphics	Intel® Iris® Xe Graphics
	Max. Frequency	800-750MHz	750-550MHz	854-792MHz	800-750MHz	1350-1250MHz
	VGA	-	1	1	-	-
	LCD (TTL/LVDS/eDP)	LVDS 2-CH 18/24-bit eDP (optional)	LVDS 2-CH 18/24-bit eDP (optional)	LVDS 2-CH 18/24-bit -	LVDS 2-CH 18/24-bit eDP(optional)	No LVDS; eDP only -
	DDI (HDMI/DVI/DisplayPort)	2	1; up to 2 if remove VGA	1; up to 2 if remove LVDS	1	1
	Multiple Displays	Triple-Display	Triple-Display	Dual-Display	Triple-Display	Dual-Display
Expansion	PCIe x16	-	-	-	-	-
	PCIe x8	-	-	-	-	-
	PCIe x4	-	-	-	-	-
	PCIe x1	6	5	3 (max. 4 if remove GbE)	6	4
	LPC	1	1	1	1	1
Serial Bus	SMBus	1	1	1	1	1
	I2C Bus	1	1	1	2	1
	CAN Bus	Optional	Optional	-	Optional	-
Ethernet	Controller	Maxlinear GPY215	Intel® I210	Intel® I210	Intel® I225	Intel® I225
	GbE Speed	2.5G	10/100/1000Mbps	10/100/1000Mbps	2.5G	2.5G
	10Gb Ethernet	-	-	-	-	-
I/O	SATA	2	2	2	2	2
	USB 3.2 Gen 2 (10Gbps)	2; up to 4 if remove PCIe	-	-	2	2
	USB 3.2 Gen 1 (5Gbps)	-	2	1	-	-
	USB 2.0	8	8	8	8	8
	Audio	HD Audio	HD Audio	HD Audio	HD Audio	HD Audio
	SPI Bus	1	1	1	1	1
	GPIO	8	8	8	8	8
	SDIO (GPIO pin shared)	-	Optional	-	-	-
	Watchdog	1	1	1	1	1
	COM Port	2 (2-wire)	2 (2-wire)	2 (2-wire)	2	2 (2-wire)
	Onboard Storage	eMMC	-	SATA SSD	eMMC	NVMe SSD
TPM	TPM2.0	TPM2.0	-	TPM2.0	Intel fTPM	
Power	Power Type	ATX: Vin, VSB; AT: Vin	ATX: Vin, VSB; AT: Vin	ATX: Vin, VSB, AT: Vin	ATX: Vin, VSB; AT: Vin	ATX: Vin, VSB; AT: Vin
	Supply Voltage	Vin: 8.5-20V VSB: 4.75-5.25V	Vin: 8.5-20V VSB: 4.75-5.25V	Vin: 8.5-20V VSB: 4.75-5.25V	Vin: 4.75-20V VSB: 4.75-5.25V	Vin: 4.75-20V VSB: 4.75-5.25V
	Power Consumption Max.	TBD	14.76W	15.36W	TBD	TBD
	Power Consumption Idle	TBD	4.46W	9.48W	TBD	TBD
Environment	Operating Temp.	0 ~ 60 °C	0 ~ 60 °C	0 ~ 60 °C	0 ~ 60 °C	0 ~ 60 °C
	Extended Temp. (Optional)	-40 ~ 85 °C	-40 ~ 85 °C	-40 ~ 85 °C	-40 ~ 85 °C	-40 ~ 85 °C
Mechanical	Dimensions	95 x 95 mm	95 x 95 mm	95 x 95 mm	84 x 55 mm	84 x 55 mm

コンピュータオンモジュール - SOM

NEW



Model Name		SOM-7569	SOM-2532	SOM-2569	SOM-3569	SOM-3567
Form Factor		COM Express Mini	SMARC	SMARC	QSeven	Qseven
Pin-out Type		COM R2.1 Type 10	SMARC 2.1.1	SMARC 2.0/2.1	QSeven 2.1	Qseven 2.1
Processor System	CPU	Intel® Atom E3900 & Pentium/Celeron N series	Intel® Atom/Pentium/Celeron x6000 Series (Elkhart Lake)	Intel® Atom E3900 & Pentium/Celeron N series	Intel® Atom E3900 & Pentium/Celeron N series	Intel® Atom E3800 & Celeron N/J series
	Base Frequency	1.6-1.1GHz	2.0-1.0GHz	2.5-1.8GHz	1.6-1.1GHz	2.0-1.33GHz
	Processor Core	4/2	4/2	4/2	4/2	4/2/1
	LLC	2MB	1.5MB	2MB	2MB	2MB/1MB/512KB
	CPU TDP	12/9.5/6.5/6W	12/10/9/7.5/6.5/6/4.5W	12/9/6.5/6W	12/9/6.5/6W	10/8/6/5/4.3/3W
	Chipset	-	-	-	-	-
Memory	Technology	DDR3L 1866/1600	LPDDR4 3200	LPDDR4 2400	LPDDR4 2400	DDR3L 1333/1066
	ECC Support	ECC and non-ECC	IB ECC support by Specific CPU SKUs	-	-	-
	Max. Capacity	8GB	16GB	8GB	8GB	8GB
	Socket	-	-	-	-	-
Graphics	Controller	Intel® HD Graphics	Intel® UHD Graphics	Intel® HD Graphics 505/500	Intel® HD Graphics	Intel® HD Graphics
	Max. Frequency	750-550MHz	800-750MHz	750-550MHz	750-550MHz	854-750MHz
	VGA	-	-	-	-	-
	LCD (TTL/LVDS/eDP)	LVDS 1-CH 18/24-bit eDP(Optional)	LVDS 2-CH 18/24-bit eDP (optional)	LVDS 2-CH 18/24-bit eDP (optional)	LVDS 2-CH 18/24-bit eDP (optional)	LVDS 2-CH 18/24-bit
	DDI (HDMI/DVI/DisplayPort)	1	2	2	1	1
	Multiple Displays	Dual-Display	Triple-Display	Triple-Display	Dual-Display	Dual-Display
Expansion	PCIe x16	-	-	-	-	-
	PCIe x8	-	-	-	-	-
	PCIe x4	-	-	-	-	-
	PCIe x1	4	4	4 (max. 5 if remove GbE)	4	3 (max. 4 if remove GbE)
	LPC	1	N/A; Support eSPI	-	1	1
Serial Bus	SMBus	1	-	1	1	1
	I2C Bus	1	1	1	1	1
	CAN Bus	Optional	2	Optional	Optional	-
Ethernet	Controller	Intel® I210	2 x Marvell 88E1512	2 x Intel® I210	Intel® I210	Intel® I210
	GbE Speed	10/100/1000Mbps	10/100/1000Mbps	10/100/1000Mbps	10/100/1000Mbps	10/100/1000Mbps
	10Gb Ethernet	-	-	-	-	-
I/O	SATA	2	1	1	2	2
	USB 3.2 Gen 2 (10Gbps)	-	2	-	-	-
	USB 3.2 Gen 1 (5Gbps)	2	-	2	2	1
	USB 2.0	8	6	6	8	6
	Audio	HD Audio	1 x HD Audio/ up to 2 x I2S	1 x HD Audio/ up to 2 x I2S	HD Audio	HD Audio
	SPI Bus	1	1	1	1	1
	GPIO	8	14	12	-	-
	SDIO (GPIO pin shared)	Optional	-	1	1	-
	Watchdog	1	1	1	1	1
	COM Port	2 (2-wire)	4 (2 x 4-wire / 2 x 2-wire)	4 (2 x 4-wire / 2 x 2-wire)	2 (2 x 4-wire, 1 on MFG pins)	2 (2 x 4-wire, 1 on MFG pins)
	Onboard Storage	eMMC	eMMC	eMMC	eMMC	eMMC
	TPM	TPM2.0	TPM2.0	TPM2.0	TPM2.0	-
	Power	Power Type	ATX: Vin, VSB; AT: Vin	ATX/AT: Vin	ATX/ATX: Vin	ATX: Vin, VSB, AT: Vin
Supply Voltage		Vin: 4.75-20V VSB: 4.75-5.25V	Vin: 4.75-5.25V	Vin: 4.75-5.25V	Vin: 4.75-5.25V VSB: 4.75-5.25V	Vin: 4.75-5.25V VSB: 4.75-5.25V
Power Consumption Max.		14.73W (E3950)	TBD	14.11W	9.1W	7.53W
Power Consumption Idle		4.68W (E3950)	TBD	3.45W	2.82W	3.28W
Environment	Operating Temp.	0 ~ 60 °C	0 ~ 60 °C	0 ~ 60 °C	0 ~ 60 °C	0 ~ 60 °C
	Extended Temp. (Optional)	-40 ~ 85 °C	-40 ~ 85 °C	-40 ~ 85 °C	-40 ~ 85 °C	-40 ~ 85 °C
Mechanical	Dimensions	84 x 55 mm	82 x 50 mm	82 x 50 mm	70 x 70 mm	70 x 70 mm

シングルボードコンピュータ - MIO

4.0" SBC



NEW

3.5" SBC



NEW



NEW



NEW

2.5" SBC



NEW

Model Name		MIO-4370	MIO-5377	MIO-5376	MIO-5352	MIO-2364	
Form-Factor		4" MIO-Compact	3.5" MIO-Compact	3.5" MIO-Compact	3.5" MIO-Compact	MIO Extension 2.5" Pico-ITX	
Processor System	CPU	i9-12900TE/i7-12700TE/i5-12500TE/i3-12100TE	i7-1270PE, i7-1265UE, i5-1245UE, i3-1215UE, 7305E	AMD Ryzen R2314/2514	x6425E/ x6413E/ x6211E	i3-N305/ N97/ x7221E	
	# of Cores	4 ~ 16	1P+4E~4P+8E	4	2 ~ 4	8/4/2	
	# of Threads	8 ~ 24	5~16	4 ~ 8	2 ~ 4	8/4/2	
	Max. Turbo Frequency	4.0GHz ~ 4.8GHz	4.7GHz	3.7GHz	3.0GHz	3.8GHz / 3.6GHz /3.2GHz	
	Base Frequency	1.1GHz ~ 2.1GHz	1.0GHz	2.1GHz	1.3GHz ~ 2.0GHz	TBU	
	Last Level Cache (LLC)	12MB~30MB	8MB	2MB	1.5MB	6MB/ 6MB/ 6MB	
	CPU TDP (Watt)	35W	15W~28W	12W~25W	6W~12W	15W/ 12W/ 6W	
Memory	BIOS	AMI UEFI 256Mb	AMI UEFI 256Mb	AMI UEFI 256Mb	AMI UEFI 256Mb	AMI UEFI 256Mb	
	Technology	DDR5-4800 MHz	DDR5 4800MT/s	DDR4-2667MHz	DDR4 3200MT/s	DDR5-4800	
	Max. Capacity	32GB	64GB	32GB	32GB	Up to 16GB	
	# of Channels	1	2	2	2	1	
	# of Sockets	1	2	2	1	1	
ECC Support	Support	-	-	Support	-		
Graphics	Chipset	Integrated SoC	Integrated SoC	-	Integrated SoC	Integrated SoC	
	Controller	Intel® UHD Graphics	Intel Iris Xe Graphics	AMD Radeon Graphics	Intel® UHD Graphics for 10th Gen Intel® Processors	Intel® UHD Graphics	
	3D Accelerator	DX12, OGL4.5, OCL2.1	DX12, OGL4.0, OCL1.2	-	DX12, OGL4.5, OCL1.2, Vulkan 1.1	DX12, OGL4.0, OCL1.2	
	VGA	-	-	-	-	-	
	LFP	LVDS	-	18/24-bit, up to 1920 x 1200	18/24-bit, up to 1920 x 1080	18/24-bit LVDS	18/24-bit LVDS 1920 x 1080
		eDP	5120 x 3200@60Hz, 24bpp	-	-	-	-
	HDMI1	HDMI1.2, 1920 x 1200@60Hz, 24bpp	HDMI 2.0b, up to 4096 x 2160 @60Hz, 24bpp	HDMI 2.0, 4096 x 2160@60Hz, 24bpp	HDMI 2.0, 4096 x 2160@60Hz, 24bpp	HDMI1.4b 3840x2160@30Hz	
	HDMI2	HDMI1.2, 1920 x 1200@60Hz, 24bpp	-	-	-	-	
	DisplayPort1	-	DP1.4a, up to 4096 x 2160@60Hz, 36bpp	DP1.4/ DP++, 4096 x 2160 x 36bpp@60Hz, 36bpp	DP1.4/ DP++, 4096 x 2160 x 36bpp@60Hz, 36bpp	-	
	# of Display Pipe (Multi-Display)	3	4	3	2	2	
Ethernet	LAN1	i225	i219	i226	i225	i225LM	
	LAN2	i225	i226	i226	i225	-	
SATA	# of Ports	-	1	1	1	1	
	Speed	-	Gen3 (6.0GT/s)	Gen3 (6.0GT/s)	Gen3 (6.0GT/s)	Gen3 (6.0GT/s)	
USB	USB3.1	4	4 (10 Gbps)	2(external), 2 (internal)	2(external), 2 (internal)	2	
	USB3.0	-	-	-	-	-	
	USB2.0	2 (internal)	2	2 (internal)	2 (internal)	2	
UART	RS-232/422/485	2	2	2	2	2	
	RS-232	-	2	2 (4-wire)	2 (4-wire)	-	
Serial Bus	I2C Bus	1	3	1	1	Share w/ SMBus	
	SMBus	Opt. to SMBus	Opt. to SMBus	Opt. to I2C	Opt. to I2C	1	
Audio	CANBus	1	2	1	1	-	
	CODEC	ALC888	ALC888	ALC888	ALC888	ALC888S	
	Amplifier	-	-	-	-	-	
Storage	GPIO (DIO)	8-bit	8-bit	8-bit	8-bit	8-bit	
	mSATA	-	-	-	-	-	
	eMMC	-	-	-	-	-	
	SATA SSD	-	-	-	-	-	
Expansion	M.2 E-Key 2230	1 (PCIex1, USB2.0)	PCIex1, USB2.0	PCIe, USB2.0	PCIe, USB2.0	PCIe x1, USB2.0	
	M.2 B-Key 3042	Opt. with SIM slot (PCIex1, USB2.0)	PCIex1, USB2.0, SATA	USB3.2/2.0, PCIe	USB3.2/2.0, PCIe	USB2.0	
	M.2 B/M-Key 2280	-	PCIex1	-	-	USB3.0	
	M.2 M-Key 2242	-	-	-	-	-	
	M.2 M-Key 2280	-	-	-	-	SATA, PCIe x1	
	mini-PCIe	2 (PCIe Gen.4x4)	NVMe (PCIex4)	NVMe (PCIex4), SATA	NVMe (PCIex4), SATA	-	
	PC/104	-	-	-	-	-	
	PCI104	-	-	-	-	-	
PC/104-Plus	-	-	-	-	-		
Others	MIOe (PCIe/PCIe Bifurcation/USB2.0/USB3.0/LPC/eSPI/SMBus/Line-out/Power Supply)	-	-	-	-	-	
	TPM	fTPM support by Intel® Platform Trust Technology Discrete TPM2.0 (*optional)	TPM2.0 (Infineon SLB 9670)	TPM2.0 (Infineon SLB 9670)	TPM2.0 (Infineon SLB 9670)	fTPM support by Intel® Platform Trust Technology Discrete TPM2.0 (*optional)	
	Fan	Smart Fan 0.3A@12V	-	Smart Fan, 1A@12V	Fan (12V)	Smart Fan 0.3A@12V	
Power	WatchDog Timer	65536 Level, 0~65535 sec	65536 Level, 0~65535 sec	65536 Level, 0~65535 sec	65536 Level, 0~65535 sec	65536 Level, 0~65535 sec	
Power	Power Type	AT, ATX	AT, ATX	AT, ATX	AT, ATX	AT, ATX	
	Power Supply Voltage	12V	12~24V	12V	12/24V Selectable	12V	
	Connector	Wafer 2P 3.96mm	Wafer 2P 3.96mm	Wafer 2P 3.96mm	Wafer 2P 3.96mm	Wafer 2P 3.96mm	
	Power Management	ACPI	ACPI	ACPI	ACPI	ACPI	
	Power Consumption (Idle)	TBU	9.35W (12V), 11.60 (24V)	23.388 W	E3950: 8.59 W (12V) E3950: 8.81 W (24V)	TBU	
Power Consumption (Full Load)	TBU	26.69W (12V), 28.7W (24V)	9.029 W	E3950: 26.27 W (12V) E3950: 26.51 W (24V)	TBU		
Thermal	Fan or Fanless	Active (Fan Base)/ Passive (Fan-less)	Passive (Fan-less)	Active (Fan Base)	Passive (Fan-less)	Active (Fan Base)/ Passive (Fan-less)	
Environment	Operating Temperature (air flow 0.7 m/sec)	0 ~ 60 °C	Extend: -40 ~ 85 °C	0 ~ 60 °C Extend: -40 ~ 85 °C	0 ~ 60 °C Extend: -40 ~ 85 °C	0 ~ 60 °C	
	Storage Temperature	-40~85°C	-40~85°C	-40~85°C	-40~85°C	-40~85°C	
	Relative Humidity (Operating)	40 °C @ 95% RH Non-Condensing	40 °C @ 95% RH Non-Condensing	40 °C @ 95% RH Non-Condensing	40 °C @ 95% RH Non-Condensing	40 °C @ 95% RH Non-Condensing	
	Relative Humidity (Storage)	-40 °C ~ 85 °C and 60 °C @ 95% RH Non-Condensing	-40 °C ~ 85 °C and 60 °C @ 95% RH Non-Condensing	-40 °C ~ 85 °C and 60 °C @ 95% RH Non-Condensing	-40 °C ~ 85 °C and 60 °C @ 95% RH Non-Condensing	-40 °C ~ 85 °C and 60 °C @ 95% RH Non-Condensing	
Certification	EMC	CE/FCC Class B	CE/FCC Class B	CE/FCC Class B	CE/FCC Class B	CE/FCC Class B	
	Safety Certifications	-	-	-	-	-	

シングルボードコンピュータ - MIO

3.5" Pico-ITX



NEW



Model Name		MIO-5375	MIO-5152	MIO-5393	MIO-5391	
Form-Factor		3.5" MI/O-Compact	3.5" MI/O-Compact	3.5" MI/O-Compact	3.5" MI/O-Compact	
Processor System	CPU	i3-1115G4E/ i5-1145G7E/ i7-1185G7E/ i7-1185GRE	N6210/J6412/x6425E	i5-8400H/i7-9850HL / i7-9850HE/ E-2276ME	i3-7102E/ i5-7442EQ/ i7-7820EQ/ E3-1505MV6	
	# of Cores	4 ~ 8	2 ~ 4	4 ~ 6	2 ~ 4	
	# of Threads	4 ~ 8	2 ~ 4	8 ~ 12	4 ~ 8	
	Max. Turbo Frequency	3.90GHz ~ 4.40GHz	2.6GHz ~ 3.0GHz	4.1 GHz ~ 4.5GHz	2.90GHz ~ 4.00GHz	
	Base Frequency	1.50GHz ~ 3.0GHz	1.2GHz ~ 2.0GHz	1.9 GHz ~ 2.8 GHz	2.10GHz ~ 3.00GHz	
	Last Level Cache (LLC)	8MB~8MB	-	8MB ~12MB	3MB~8MB	
	CPU TDP (Watt)	15W~28W	-	25W~45W	25W~45W	
Memory	BIOS	AMI EFI 256Mb	AMI UEFI 256Mb	AMI UEFI 256Mb	AMI UEFI 128Mb	
	Technology	DDR4-3200MHz	DDR4-3200MHz	DDR4-2400MHz	DDR4-2400MHz	
	Max. Capacity	64GB	32GB	32GB (64GB*)	32GB (64GB*)	
	# of Channels	2	1	2	2	
	# of Sockets	2	1	2	2	
ECC Support	-	-	Support	Support		
Graphics	Chipset	Integrated GFX		Intel Gen.9LP	Intel Gen.9LP	
	Controller	Integrated GFX Intel® UHD Graphics 630		Intel® UHD Graphics P630	Intel® HD Graphics P630	
	3D Accelerator	DX12, OGL4.0, OCL1.2		DX3D 2015/11.2, OGL5.0, OCL2.1/2.0/1.2	DX3D 2015/11.2, OGL5.0, OCL2.1/2.0/1.2	
	VGA	-		-	1920 x 1200 @ 60Hz	
	LFP	LVDS	48-bit, 1920 x 1200 @ 60Hz		18/24-bit, up to 1920 x 1200	48-bit, 1920 x 1200 @ 60Hz
		eDP	Opt. eDP1.4 3840 x 2160@60Hz, 30bpp 4096 x 2304@60Hz, 24bpp		-	-
	HDMI1	HDMI1.4, 4096 x 2304@30Hz, 24bpp		HDMI 2.0, 4096 x 2160@60Hz, 24bpp	HDMI1.4, 4096 x 2304@30Hz, 24bpp	HDMI1.4, 4096 x 2304@30Hz, 24bpp
	HDMI2	-		-	-	HDMI1.4, 4096 x 2304@30Hz, 24bpp
	DisplayPort1	HDMI2.0, 4096 x 2304@60Hz, 24bpp		DP1.4a, 4096 x 2160 x 36bpp@60Hz, 36bpp	DP1.2 3840 x 2160@60Hz, 30bpp 4096 x 2304@60Hz, 24bpp	-
	# of Display Pipe (Multi-Display)	4		3	3 (w/ MIOe)	3
I/O	Ethernet	LAN1	Intel i219LM	RTL8111H	Intel i219	Intel i219LM
		LAN2	Intel i210	RTL8111H	Intel i210	Intel i210IT
	SATA	# of Ports	1	1	2	2
		Speed	Gen3 (6.0GT/s)	Gen3 (6.0GT/s)	Gen3 (6.0GT/s)	Gen3 (6.0GT/s)
	USB	USB3.1	4	4 (10 Gbps)	4 (10 Gbps)	-
		USB3.0	-	-	-	4 (5.0 Gb/s)
		USB2.0	2 (internal)	2 (Internal)	2 (Internal)	2
	UART	RS-232/422/485	2	2	2	2
		RS-232	2 (4-wire)	4	-	Optional 2 Ports to GPIO
	Serial Bus	I2C Bus	1	1	1	Option to SMBus, 100K/400K
		SMBus	1	Opt. to I2C	1	1
		CANBus	1	-	1	-
Audio	CODEC	Realtek ALC888S	Realtek ALC888S	Realtek ALC888S	Realtek ALC888S	
	Amplifier	-	-	-	-	
GPIO (DIO)	8-bit		8-bit	16-bit	16-bit	
Storage	mSATA	-	-	-	F/S mSATA (SATA, USB2.0)	
	eMMC	-	-	-	-	
	SATA SSD	-	-	-	-	
	M.2 E-Key 2230	PCIe, USB2.0	PCIe x1, USB2.0	PCIe x1, USB2.0	PCIe (x1/x2), USB2.0	
M.2 B-Key 3042	USB2.0	opt. to E-Key, PCIe x1, USB2.0	-	-		
M.2 B/M-Key 2280	-	-	PCIe x2, SATA, USB2.0	-		
M.2 M-Key 2242	-	SATA	-	-		
M.2 M-Key 2280	NVMe (PCIex4), opt. SATA	-	Option to M.2 B/M-Key 2280 (PCIex4, USB2.0)	-		
mini-PCIe	-	-	-	Option to mSATA (PCIex1, USB2.0)		
PC/104	-	-	-	-		
PCI104	-	-	-	-		
PC/104-Plus	-	-	-	-		
MIOe (PCIe/PCIe Bifurcation/USB2.0/USB3.0/LPC/eSPI/SMBus/Line-out/Power Supply)	Support	-	Support	Support		
Others	TPM	TPM2.0 AES-256	TPM2.0 (NPCT750AABYX)	TPM2.0 (SLB9670XQ2.0 FW7.63/SPI)	TPM2.0 (SLB9665XQ2.0 FW5.62)	
	Fan	1 x SMART Fan, 4-wire	4-Wire Smart Fan	4-Wire Smart Fan	4-Wire Smart Fan	
	WatchDog Timer	Support	1 ~ 255 sec	65536 Level, Minute or Second	65536 Level, Minute or Second	
Power	Power Type	AT, ATX	AT, ATX	AT, ATX	AT, ATX	
	Power Supply Voltage	12V~24V	12V	12V	12V	
	Connector	2X2 ATX Connector	ATX 2x2pin 90D	ATX 2x2 90D, Optional 180D, DC-Jack	ATX 2x2 90D, Optional 180D, DC-Jack	
	Power Management	ACPI	ACPI	ACPI	ACPI	
	Power Consumption (Idle)	19.2W	21.39W	11.55W	TBU	
	Power Consumption (Full Load)	46.8W	7.31W	44.55W/ 74.44W/ 95.38W/ 102.75W	TBU	
Thermal	Fan or Fanless	Active (Fan Base)/ Passive (Fan-less)	Fanless	Active (Fan Base)/ Passive (Fan-less)	Active (Fan Base)/ Passive (Fan-less)	
	Operating Temperature (air flow 0.7 m/sec)	0 ~ 60 °C Extend: -40 ~ 85 °C	0~60C	0 ~ 60 °C Extend: -40 ~ 85 °C	0 ~ 60 °C Extend: -40 ~ 85 °C	
Environment	Storage Temperature	-40~85C	-40~85C	-40~85C	-40~85C	
	Relative Humidity (Operating)	40 °C @ 95% RH Non-Condensing	40 °C @ 95% RH Non-Condensing	40 °C @ 95% RH Non-Condensing	40 °C @ 95% RH Non-Condensing	
	Relative Humidity (Storage)	-40 °C ~ 85 °C and 60 °C @ 95% RH Non-Condensing	-40 °C ~ 85 °C and 60 °C @ 95% RH Non-Condensing	-40 °C ~ 85 °C and 60 °C @ 95% RH Non-Condensing	-40 °C ~ 85 °C and 60 °C @ 95% RH Non-Condensing	
Certification	EMC	CE/FCC Class B	CE/FCC Class B	CE/FCC Class B	CE/FCC Class B	
	Safety Certifications	-	-	-	-	

シングルボードコンピュータ - MIO

3.5" Pico-ITX



Model Name		MIO-5373	MIO-5272	MIO-5350	MIO-5251	MIO-5850	
Form-Factor		3.5" MI/O-Compact	3.5" MI/O-Compact	3.5" MI/O-Compact	3.5" MI/O-Compact	3.5" MI/O-Compact	
Processor System	CPU	i7-8665UE/i5-8365UE/i3-8145UE/Celeron 4305U*	i7-7600U/ i5-6300U/ i3-6100U	N4200/ N3350/ E3930/ E3940/ E3950	J1900/ E3845/ E3825	J1900/ E3825	
	# of Cores			4/ 2/ 4/ 4/ 2	4/4/2	4/ 2	
	# of Threads			2 ~ 4	4/4/2	4/ 2	
	Max. Turbo Frequency	3.90GHz ~ 4.40GHz	3.0GHz ~ 3.40GHz	2.5GHz/ 2.4GHz/ 2GHz/ 1.8GHz/ 1.8GHz	2.42GHz / - / -	2.42GHz / -	
	Base Frequency	1.60GHz ~ 2.20GHz	2.30GHz ~ 2.80GHz	1.1GHz/ 1.1GHz/ 1.6GHz/ 1.6GHz/ 1.3GHz	2.00GHz/ 1.9GHz/ 1.33GHz	2.00GHz/ 1.33GHz	
	Last Level Cache (LLC)	4MB~8MB	3MB~4MB	2MB/ 2MB/ 2MB/ 2MB/ 2MB	2MB/ 2MB/ 1MB	2MB/ 1MB	
	CPU TDP (Watt)	15W	15W	6W/ 6W/ 12W/ 9.5W/ 6.5W	10W/ 10W/ 6W	10W/ 6W	
Memory	BIOS	AMI UEFI 256Mb		AMI UEFI 64 Mb	AMI UEFI 64Mbit	AMI UEFI 64Mbit	
	Technology	DDR4-2400MHz	DDR3L-1600MHz	DDR3L 1867MHz	DDR3L-1333/ 1066MHz	DDR3L-1333/ 1066MHz	
	Max. Capacity	32GB (64GB*)	16GB	16GB	Up to 8GB	Up to 8GB	
	# of Channels	2	2	1	1	1	
	# of Sockets	2	2	1	1	1	
Graphics	ECC Support	-	-	-	-	-	
	Chipset	Intel Gen.9	Integrated SoC	Integrated SoC	Integrated SoC	Integrated SoC	
	Controller	Intel® UHD Graphics 620	Intel® HD Graphics 620	Intel Gen9 graphic engine	Intel® HD Graphics for Z3700 Series	Intel® HD Graphics for Z3700 Series	
	3D Accelerator	Direct3D 2015, OpenGL4.5, OpenCL2.1	Direct3D 2015, OpenGL4.5, OpenCL2.1	Direct3D 2015, OpenGL4.5, OpenCL2.1	DX11, OGL3.2, OCL1.2	DX11, OGL3.0, OCL1.2	
	VGA	-	1920 x 1200 @ 60Hz	1920 x 1200 @ 60Hz	Up to 2560 x 1600 @ 60Hz	Up to 2560 x 1600 @ 60Hz	
	LFP	LVDS	48-bit, 1920 x 1200 @ 60Hz	48-bit, 1920 x 1200	48-bit, 1920 x 1200	48-bit, 1920 x 1200	48-bit, 1920 x 1200
		eDP	Opt. eDP1.4 3840 x 2160@60Hz, 30bpp 4096 x 2304@60Hz, 24bpp	-	Opt. eDP1.4, 4096 x 2160@30Hz	Opt. 2560 x 1600 @ 60Hz	Opt. 2560 x 1600 @ 60Hz
	HDMI1	HDMI1.4 4096 x 2160@24Hz, 24bpp	HDMI1.4 4096 x 2160@24Hz, 24bpp	HDMI1.4b 3840x2160@30Hz	HDMI1.4a 1920 x 1080 @ 60Hz	HDMI1.4a, 1920x1200x24bpp @60Hz	
	HDMI2	-	-	-	-	-	
	DisplayPort1	DP1.2 3840 x 2160@60Hz, 30bpp 4096 x 2304@60Hz, 24bpp	-	Opt. DP1.2a 4096x2260@60Hz	Opt. to HDMI, up to 2560 x 1600 @ 60Hz	-	
# of Display Pipe (Multi-Display)	3	3	3	2	2		
I/O	Ethernet	LAN1	i219	i219	i210AT	i210AT	
		LAN2	i210IT	i210IT	i210AT	i210AT	
	# of Ports	LAN	1, option 2 to NVMe	2	1, opt. 2	1	1
		SATA	Gen3 (6.0GT/s)	Gen3 (6.0GT/s)	Gen3 (6.0GT/s)	Gen2 (3.0 Gb/s)	Gen2 (3.0 Gb/s)
	USB	USB3.1	4 (10GT/s)	-	-	-	-
		USB3.0	-	2 (5.0 Gb/s)	2 (5.0 Gb/s)	1	1
	UART	USB2.0	2	4	4	4	4
		RS-232/422/485	2	2	2	2	2
	Serial Bus	RS-232	Optional 2 Ports to GPIO	-	2	2	2
		I2C Bus	1	Option to SMBus	Opt. with SMBus, 100K/400K	Opt. to SMBus	Opt. to SMBus
	Audio	SMBus	1	1	Support	1	1
		CANBus	1	-	-	-	-
	GPIO (DIO)	CODEC Amplifier	Realtek ALC888S	Realtek ALC888S	Realtek ALC888S	Realtek ALC888S	Realtek ALC888S
mSATA		16-bit	8-bit	8-bit	8-bit	16-bit	
Storage	eMMC	-	F/S mSATA (SATA, USB2.0)	F/S mSATA (SATA, USB2.0)	F/S (SATA, USB2.0, SMBus)	F/S (SATA, USB2.0, SMBus)	
	SATA SSD	32GB	-	-	-	On board 32GB Opt. up to 64GB	
Expansion	M.2 E-Key 2230	-	-	-	-	-	
	M.2 B-Key 3042	PCIe x1, USB2.0	-	PCIe, USB2.0	-	Opt to mini-PCIe (PCIex1, USB2.0)	
	M.2 B/M-Key 2280	-	-	-	-	-	
	M.2 M-Key 2242	SATA, USB2.0	-	-	-	-	
	M.2 M-Key 2280	-	-	-	-	-	
	M.2 M-Key 2280	Option to M.2 B/M-Key 2280 (PCIex4, USB2.0)	-	-	-	-	
	mini-PCIe	-	1 x F/S (PCIex1, USB2.0), Opt. 2nd to mSATA	-	F/S (PCIex1, USB2.0, SMBus)	F/S (PCIex1, USB2.0)	
Others	PC/104	-	-	-	-	-	
	PC/104-Plus	-	-	-	-	-	
Power	MIOe (PCIe/PCIe Bifurcation/USB2.0/USB3.0/LPC/eSPI/SMBus/Line-out/Power Supply)	Support	Support	Support	Support	-	
	TPM	TPM2.0 (SLB9670XQ2.0FW7.63)	Option SLB9665XQ2.0 FW 5.00	Opt. TPM2.0 (SLB9665TT2.0)	-	-	
	Fan	4-Wire Smart Fan	3-wire Smart Fan	-	Fan (12V)	Fan (12V)	
	WatchDog Timer	65536 Level, Minute or Second	65536 Level, Minute or Second	65536 Level, Minute or Second	65536 Level, Minute or Second	65536 Level, Minute or Second	
	Power Type	AT, ATX	AT, ATX	AT, ATX	AT, ATX	AT, ATX	
Power	Power Supply Voltage	12~24V	12V	12V	12V	12V	
	Connector	ATX 2x2 90D, Optional 180D, DC-Jack	ATX 2x2 90D, Optional 180D, DC-Jack	ATX 2x2 90D, Optional 180D, DC-Jack	ATX 2x2 90D, Optional 180D, DC-Jack	Phoenix 1x2	
	Power Management	ACPI	ACPI	ACPI	ACPI	ACPI	
	Power Consumption (Idle)	6.61W@12V; 7.42W@24V	6.46W@12V	0.4A@12V	0.62A@12V	Check test report (DS need update)	
Thermal	Power Consumption (Full Load)	30.10W@12V; 33.33W@24V	22.03W@12V	1.26A@12V	1.16A@12V	Check test report (DS need update)	
	Fan or Fanless	Active (Fan Base)/ Passive (Fan-less)	Passive (Fan-less)	Passive (Fan-less)	Passive (Fan-less)	Passive (Fan-less)	
Environment	Operating Temperature (air flow 0.7 m/sec)	0 ~ 60 °C Extend: -40 ~ 85 °C	0 ~ 60 °C Extend: -40 ~ 85 °C	0 ~ 60 °C; Extend: -40 ~ 85 °C	0 ~ 60 °C Extend: -40 ~ 85 °C	0 ~ 60 °C Extend: -40 ~ 85 °C	
	Storage Temperature	-40 ~ 85 °C	-40 ~ 85 °C	-40 ~ 85 °C	-40 ~ 85 °C	-40 ~ 85 °C	
	Relative Humidity (Operating)	40 °C @ 95% RH Non-Condensing	40 °C @ 95% RH Non-Condensing	40 °C @ 95% RH Non-Condensing	40 °C @ 95% RH Non-Condensing	40 °C @ 95% RH Non-Condensing	
	Relative Humidity (Storage)	-40 °C ~ 85 °C and 60 °C @ 95% RH Non-Condensing	-40 °C ~ 85 °C and 60 °C @ 95% RH Non-Condensing	-40 °C ~ 85 °C and 60 °C @ 95% RH Non-Condensing	-40 °C ~ 85 °C and 60 °C @ 95% RH Non-Condensing	-40 °C ~ 85 °C and 60 °C @ 95% RH Non-Condensing	
Certification	EMC	CE/FCC Class B	CE/FCC Class B	CE/FCC Class B	CE/FCC Class B	CE/FCC Class B	
	Safety Certifications	-	-	-	-	-	

シングルボードコンピュータ - MIO

2.5" Pico-ITX



Model Name		MIO-2363	MIO-2375	MIO-2361	MIO-2360	
Form-Factor		MIO Extension 2.5" Pico-ITX	MIO Extension 2.5" Pico-ITX	MIO Extension 2.5" Pico-ITX	MIO Extension 2.5" Pico-ITX	
Processor System	CPU	x6425E/ x6413E/ x6211E	i7-1185G7E/ i7-1185GRE/ i5-1145G7E/ i3-1115G4E	E3950/ E3940/ E3930/ N4200/ N3350	E3940/ E3930/ N4200/ N3350	
	# of Cores	4/ 4/ 2	4/ 4/ 4/ 2	4/ 4/ 2/ 4/ 2	4/ 2/ 4/ 2	
	# of Threads	4/ 4/ 2	8/ 8/ 8/ 4	4/ 4/ 2/ 4/ 2	4/ 2/ 4/ 2	
	Max. Turbo Frequency	3.0GHz / 3.0GHz / 3.0GHz	4.40GHz/ 4.40GHz/ 4.10GHz/ 3.90GHz	2.00GHz/ 1.8GHz/ 1.8GHz/ 2.50GHz/ 2.4GHz	1.8GHz/ 1.8GHz/ 2.50GHz/ 2.4GHz	
	Base Frequency	2.0GHz/ 1.5GHz/ 1.3GHz	1.80GHz/ 1.80GHz/ 1.50GHz/ 2.20GHz	1.6GHz/ 1.6GHz/ 1.3GHz/ 1.1GHz/ 1.1GHz	1.6GHz/ 1.3GHz/ 1.1GHz/ 1.1GHz	
	Last Level Cache (LLC)	1.5MB/ 1.5MB/ 1.5MB	12MB/ 12MB/ 8MB/ 6MB	2MB/ 2MB/ 2MB/ 2MB/ 2MB	2MB/ 2MB/ 2MB/ 2MB	
CPU TDP (Watt)	12W/ 9W/ 6W	15W/ 15W/ 15W/ 15W	12W/ 9W/ 6W/ 6W/ 6W	9W/ 6W/ 6W/ 6W		
BIOS	AMI UEFI 256Mb	AMI UEFI 256Mb	AMI UEFI 64Mbit	AMI UEFI 64Mbit		
Memory	Technology	LPDDR4x-3733/ 3200/ 3200	LPDDR4x-4267	LPDDR4-2400	DDR3L-1867	
	Max. Capacity	up to 8GB	Onboard 16GB	Onboard 4GB	Up to 8GB	
	# of Channels	2	2	2	1	
	# of Sockets	-	-	-	1	
	ECC Support	Support	-	-	-	
Graphics	Chipset	Integrated SoC	Integrated SoC	Integrated SoC	Integrated SoC	
	Controller	Intel® UHD Graphics for 10th Gen Intel® Processors	Intel® Iris® Xe Graphics	Intel® HD Graphics 505	Intel® HD Graphics 505	
	3D Accelerator	DX12, OGL4.5, OCL1.2, Vulkan 1.1	DX12, OGL4.0, OCL2.0	DX12, OGL4.3, OCL2.0	DX12, OGL4.3, OCL2.0	
	VGA	-	-	-	1920 x 1200 @ 60Hz	
	LFP	LVDS	18/24-bit LVDS	-	48-bit, 1920 x 1200	24-bit, 1440 x 900
		eDP	-	eDP1.4 HBR3, up to 4096x2304x36bpp@60Hz; with DSC 7680x4320x30bpp@60 Hz	-	-
	HDMI1	3840 x 2160 @ 30Hz	-	HDMI 1.4b, 3840x2160x24bpp @30Hz	HDMI1.4b 3840x2160@30Hz	
	HDMI2	-	-	-	-	
	DisplayPort1	-	x DP1.4 (DP+++), up to 4096x2304x36bpp@60Hz; with DSC 7680x4320x30bpp@60 Hz	-	-	
	# of Display Pipe (Multi-Display)	2	2	2	2 (3 with MIOe)	
I/O	Ethernet	LAN1	i210IT	i219	i210IT	i210AT
		LAN2	i210IT	i210	i210IT	-
	SATA	# of Ports	-	1	1	1
		Speed	-	Gen3 (6.0GT/s)	Gen3 (6.0GT/s)	Gen3 (6.0GT/s)
	USB	USB3.1	2	2	2	-
		USB3.0	-	-	2	2 (5.0 Gb/s)
		USB2.0	2	2	2	2
	UART	RS-232/422/485	2	1	2	2
		RS-232	-	1	-	-
	Serial Bus	I2C Bus	1	1	Option to SMBus	Option to SMBus (Intel LPSS)
		SMBus	-	Optional	1	1
		CANBus	-	-	-	-
	Audio	CODEC	ALC888S	ALC888S	ALC888S	ALC888S
Amplifier		-	-	-	-	
GPIO (DIO)	8-bit	4-bit	8-bit	8-bit		
Storage	mSATA	-	-	Option to mini-PCIe	H/S (SATA, USB2.0)	
	eMMC	128GB/ 64GB/ 64GB	-	32GB	-	
	SATA SSD	-	-	-	-	
Expansion	M.2 E-Key 2230	PCIe x1, USB2.0	PCIe x2, USB2.0	PCIe x1, USB2.0	-	
	M.2 B-Key 3042	SATA, USB2.0, opt to PCIe x1	SATA, USB2.0	-	-	
	M.2 B/M-Key 2280	-	-	-	-	
	M.2 M-Key 2242	-	PCIe x2	-	-	
	M.2 M-Key 2280	-	-	-	-	
	mini-PCIe	-	-	F/S (PCIex1, USB2.0)	F/S (PCIex1, USB2.0)	
	PC/104	-	-	-	-	
	PC/104-Plus	-	-	-	-	
MIOe (PCIe/PCIe Bifurcation/ USB2.0/USB3.0/LPC/eSPI/ SMBus/Line-out/Power Supply)	-	-	-	Support		
Others	TPM	TPM2.0 (Infineon SLB 9670)	TPM2.0 (Infineon SLB 9670)	TPM2.0 (Infineon SLB 9670)	-	
	Fan	-	Smart Fan, 1A@12V	Fan (12V)	-	
	WatchDog Timer	65536 Level, 0~65535 sec	65536 Level, 0~65535 sec	65536 Level, 0~65535 sec	1~255 sec	
Power	Power Type	AT, ATX	AT, ATX	AT, ATX	AT, ATX	
	Power Supply Voltage	12~24V	12V	12/24V Selectable	12V	
	Connector	Wafer 2P 3.96mm	Wafer 2P 3.96mm	Wafer 2P 3.96mm	Wafer 2P 3.96mm	
	Power Management	ACPI	ACPI	ACPI	ACPI	
	Power Consumption (Idle)	9.35W (12V), 11.60 (24V)	23.388 W	E3950: 8.59 W (12V) N3350: 8.81 W (12V) E3950: 8.81 W (24V)	N4200: 4.89 W (12V) N3350: 4.61 W (12V) E3940: 5.39W (12V)	
Power Consumption (Full Load)	26.69W (12V), 28.7W (24V)	9.029 W	E3950: 26.27 W (12V) N3350: 26.51 W (24V) E3950: 26.51 W (24V)	N4200: 12.90 W (12V) N3350: 12.78 W (12V) E3940: 13.55W (12V)		
Thermal	Fan or Fanless	Passive (Fan-less)	Active (Fan Base)	Passive (Fan-less)	Passive (Fan-less)	
	Operating Temperature (air flow 0.7 m/sec)	Extend: -40 ~ 85 °C	0 ~ 60 °C Extend: -40 ~ 85 °C	0 ~ 60 °C Extend: -40 ~ 85 °C	0 ~ 60 °C Extend: -40 ~ 85 °C	
	Storage Temperature	-40 ~ 85 °C	-40 ~ 85 °C	-40 ~ 85 °C	-40 ~ 85 °C	
	Relative Humidity (Operating)	40 °C @ 95% RH Non-Condensing	40 °C @ 95% RH Non-Condensing	40 °C @ 95% RH Non-Condensing	40 °C @ 95% RH Non-Condensing	
Environment	Relative Humidity (Storage)	-40 °C ~ 85 °C and 60 °C @ 95% RH Non-Condensing	-40 °C ~ 85 °C and 60 °C @ 95% RH Non-Condensing	-40 °C ~ 85 °C and 60 °C @ 95% RH Non-Condensing	-40 °C ~ 85 °C and 60 °C @ 95% RH Non-Condensing	
	Relative Humidity (Storage)	-40 °C ~ 85 °C and 60 °C @ 95% RH Non-Condensing	-40 °C ~ 85 °C and 60 °C @ 95% RH Non-Condensing	-40 °C ~ 85 °C and 60 °C @ 95% RH Non-Condensing	-40 °C ~ 85 °C and 60 °C @ 95% RH Non-Condensing	
Certification	EMC	CE/FCC Class B	CE/FCC Class B	CE/FCC Class B	CE/FCC Class B	
	Safety Certifications	-	-	-	-	

シングルボードコンピュータ - MIO

2.5" Pico-ITX

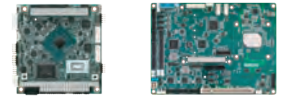


Model Name		MIO-2263	MIO-3360	MIO-3260	
Form-Factor		MIO Extension 2.5" Pico-ITX	MIO Extension 2.5" Pico-ITX	MIO Extension 2.5" Pico-ITX	
Processor System	CPU	J1900/ E3825	N4200/ N3350	E3825/ N2930	
	# of Cores	4/ 2	4/ 2	4/ 2	
	# of Threads	4/ 2	4/ 2	4/ 2	
	Max. Turbo Frequency	2.42GHz / -	2.50GHz/ 2.40GHz	2.42 GHz/ -	
	Base Frequency	2.0GHz/ 1.33GHz	1.10GHz/ 1.10GHz	2.0 GHz/1.33 GHz	
	Last Level Cache (LLC)	2MB/ 1MB	2MB/ 2MB	2MB/ 1MB	
	CPU TDP (Watt)	10W/ 6W	6W/ 6W	7.5W/ 6W	
BIOS	AMI UEFI 64Mbit	AMI UEFI 64Mbit	AMI UEFI 64Mbit		
Memory	Technology	DDR3L-1333/ DDR3L-1066	DDR3L-1867	DDR3L 1333/ 1066 MHz	
	Max. Capacity	Up to 8GB	Up to 8GB	Up to 8GB	
	# of Channels	1	1	1	
	# of Sockets	1	1	1	
	ECC Support	-	-	-	
Graphics	Chipset	Integrated SoC	Integrated SoC	Integrated SoC	
	Controller	Intel® HD Graphics Z3700 Series	Intel® HD Graphics 505	Intel Gen7 graphic engine	
	3D Accelerator	DX11, OGL3.0, OCL1.2, OGLS2.0	DX12, OGL4.3, OCL2.0	DX11, OGL3.0, OCL1.1, OGLS2.0	
	VGA	Up to 2560 x 1600 @ 60Hz	1920 x 1200 @ 60Hz	Up to 2560 x 1600 @ 60Hz	
	LFP	LVDS	24-bit, 1440 x 900	48-bit, 1920 x 1200	1920 x 1200 @ 60Hz
		eDP	-	Opt. eDP1.3, 3840 x 2160@60Hz	-
	HDMI1	Opt. to VGA	HDMI 1.4b, 3840x2160x24bpp @30Hz	-	
	HDMI2	-	-	-	
	DisplayPort1	-	Option HDMI	Option HDMI	
	# of Display Pipe (Multi-Display)	3 (2 with MIOe)	2	2	
I/O	Ethernet	LAN1	i210AT	i210IT	
		LAN2	-	-	
	SATA	# of Ports	1	-	1
		Speed	Gen2 (3.0 Gb/s)	Gen3 (6.0GT/s)	Gen2 (3.0 Gb/s)
	USB	USB3.1	-	-	-
		USB3.0	1	1	1(from MIOe)
		USB2.0	3	4	4 (internal)
	UART	RS-232/422/485	1	2	2
		RS-232	1	-	-
	Serial Bus	I2C Bus	-	1	1
		SMBus	Support	1	1
		CANBus	-	-	-
	Audio	CODEC	ALC888S	ALC888S	ALC888S
Amplifier		-	-	-	
GPIO (DIO)	8-bit	8-bit	8-bit		
Storage	mSATA	H/S (SATA, SMBus, no USB2.0)	H/S (SATA, USB2.0)	F/S (SATA, USB2.0)	
	eMMC	-	-	-	
	SATA SSD	-	-	-	
Expansion	M.2 E-Key 2230	-	-	-	
	M.2 B-Key 3042	-	-	-	
	M.2 B/M-Key 2280	-	-	-	
	M.2 M-Key 2242	-	-	-	
	M.2 M-Key 2280	-	-	-	
	mini-PCIe	H/S (PCIex1, USB2.0, SMBus)	Opt. to mSATA, (PCIex1, USB2.0)	Opt. to mSATA, (PCIex1, USB2.0)	
	PC/104	-	-	-	
	PCI104	-	-	-	
	PC/104-Plus	-	-	-	
MIOe (PCIe/PCIe Bifurcation/USB2.0/USB3.0/LPC/eSPI/SMBus/Line-out/Power Supply)	Support	Support	Support		
Others	TPM	-	-	-	
	Fan	12V Only	-	-	
	WatchDog Timer	1~255 sec	65536 Level, Minute or Second	1~255 sec	
Power	Power Type	AT, ATX	AT, ATX	AT, ATX	
	Power Supply Voltage	12V	12V	12V	
	Connector	Wafer 2P 3.96mm	"ATX 2x2 90D, Optional 180D, DC-Jack"	From 64pin connector A	
	Power Management	ACPI	ACPI	ACPI	
	Power Consumption (Idle)	J1900: 0.86@12V E3825: 0.59@12V	0.37 @ 12V (4.48W)	E3825: 4.47W N2930: 5.08W	
	Power Consumption (Full Load)	J1900: 1.04@12V E3825: 0.76@12V	1.44 @ 12V (17.38W)	E3835: 7.13W N2930: 5.08W	
Thermal	Fan or Fanless	Passive (Fan-less)	Passive (Fan-less)	Passive (Fan-less)	
	Operating Temperature (air flow 0.7 m/sec)	0 ~ 60 °C Extend: -40 ~ 85 °C	0 ~ 60 °C	0 ~ 60 °C Extend: -40 ~ 85 °C	
Environment	Storage Temperature	-40 ~ 85 °C	-40 ~ 85 °C	-40 ~ 85 °C	
	Relative Humidity (Operating)	40 °C @ 95% RH Non-Condensing	40 °C @ 95% RH Non-Condensing	40 °C @ 95% RH Non-Condensing	
	Relative Humidity (Storage)	-40 °C ~ 85 °C and 60 °C @ 95% RH Non-Condensing	-40 °C ~ 85 °C and 60 °C @ 95% RH Non-Condensing	-40 °C ~ 85 °C and 60 °C @ 95% RH Non-Condensing	
Certification	EMC	CE/FCC Class B	CE/FCC Class B	CE/FCC Class B	
	Safety Certifications	-	-	-	

シングルボードコンピュータ - PCM

3.5" SBC

PC104 CPUモジュール



Model Name		PCM-9366	PCM-9310	PCM-9365	
Form-Factor		3.5" Single Board Computers	3.5" Single Board Computers	3.5" Single Board Computers	
Processor System	CPU	N4200/ E3950/ N3350	N3160/ N3060 / X5-E8000	N2930/ E3825	
	# of Cores	4/ 4/ 2	4/ 2/ 4	4/ 2	
	# of Threads	4/4/2	4/2/4	4/ 2	
	Max. Turbo Frequency	2.5GHz /2.0GHz /2.4GHz	2.24GHz /2.48GHz /2.00GHz	2.16GHz / -	
	Base Frequency	1.1GHz/ 1.6GHz/ 1.1GHz	1.6GHz/ 1.6GHz/ 1.04GHz	1.83GHz/ 1.33GHz	
	Last Level Cache (LLC)	2MB/ 2MB/ 2MB	2MB/ 2MB/ 2MB	2MB/ 1MB	
	CPU TDP (Watt)	6W/ 12W/ 6W	6W/ 6W/ 5W	7.5W/ 6W	
BIOS		AMI UEFI 64Mbit	AMI UEFI 64Mbit	AMI UEFI 64Mbit	
Memory	Technology	DDR3L-1867MHz	DDR3L-1600	DDR3L-1333/ DDR3L-1066	
	Max. Capacity	Up to 8GB	Up to 8GB	On board Up to 4GB	
	# of Channels	1	1	1	
	# of Sockets	1	1	-	
	ECC Support	-	-	-	
Graphics	Chipset	Integrated SoC	Integrated SoC	Integrated SoC	
	Controller	Intel® HD Graphics 505	Intel® HD Graphics 400	Intel® HD Graphics Z3700 Series	
	3D Accelerator	DX12, OGL4.3, OCL2.0	DX11.1, OGL4.2, OCL1.2	DX11, OGL3.0, OCL1.2, OGL2.0	
	VGA	Up to 2560 x 1600 @ 60Hz	1920 x 1200	2560 x 1600 @ 60Hz	
	LFP	LVDS	48-bit, 1920 x 1200	48-bit, 1920 x 1200	48-bit, 1920 x 1200
		eDP	Opt. eDP1.3, 3840 x 2160@60Hz	Opt. eDP1.3, 2560x1440x24bpp@60Hz	Opt. eDP1.3, 2560x1440x24bpp@60Hz
	HDMI1	HDMI1.4a, 1920x1200x24bpp @60Hz	HDMI 1.4b, 3840x2160x24bpp@30Hz or 2560x1600x24bpp @30Hz	HDMI 1.4b, 3840x2160x24bpp@30Hz or 2560x1600x24bpp @30Hz	
	HDMI2	-	-	-	
	DisplayPort1	-	-	-	
	# of Display Pipe (Multi-Display)	2	2	2	
I/O	Ethernet	LAN1	i210IT	RTL8111	RTL8111E
		LAN2	i210IT	RTL8111	RTL8111E
	SATA	# of Ports	1	1, opt. 2 to mSATA	1
		Speed	Gen3 (6.0GT/s)	Gen3 (6.0GT/s), opt. port with Gen2	Gen2 (3.0 Gb/s)
	USB	USB3.1	-	-	-
		USB3.0	2	2 (5 Gb/s)	1 (5 Gb/s)
		USB2.0	4	4	5
	UART	RS-232/422/485	2	2	1
		RS-232	2	2	3
		Serial Bus	I2C Bus	Option to SMBus	Option to SMBus (simulated)
	Audio	SMBus	1 (option with I2C)	1	1 (IT8528)
		CANBus	2	-	-
GPIO (DIO)	CODEC	ALC888	ALC892	ALC898	
	Amplifier	-	-	-	
Storage	mSATA	F/S (SATA, USB2.0, SMBus)	F/S (SATA, USB2.0)	F/S (SATA, USB2.0)	
	eMMC	-	-	-	
Expansion	SATA SSD	-	-	-	
	M.2 E-Key 2230	PCIe x1, USB2.0	-	-	
	M.2 B-Key 3042	-	-	-	
	M.2 B/M-Key 2280	-	-	-	
	M.2 M-Key 2242	-	-	-	
	M.2 M-Key 2280	-	-	-	
	mini-PCIe	Opt. to mSATA (PCIex1, USB2.0)	F/S (PCIex1, USB2.0), opt. 2nd to mSATA	F/S (PCIex1, USB2.0)	
	PC/104	-	-	-	
Others	PCI104	-	-	-	
	PCI104-Plus	-	-	-	
	MIOe (PCIe/PCIe Bifurcation/USB2.0/USB3.0/LPC/eSPI/SMBus/Line-out/Power Supply)	-	-	-	
	TPM	Optional (SLB9665XQ2.0 FW 5.00)	Optional TPM2.0 (SLB9665XQ2.0 FW5.00)	Optional TPM2.0 (SLB9665XQ2.0 FW5.00)	
Power	Fan	-	Fan (12V)	-	
	WatchDog Timer	65536 Level, Minute or Second	65536 Level, Minute or Second	65536 Level, Minute or Second	
	Power Type	AT, ATX	AT/ATX	AT, ATX	
	Power Supply Voltage	9-36V	12V	12V	
Thermal	Connector	Phoenix 1x2	ATX 2x2 90D, Optional 180D, DC-Jack	ATX 2x2 180D, Optional 90D	
	Power Management	ACPI	ACPI	ACPI	
	Power Consumption (Idle)	0.55A@12V	0.58A@12V	0.51@12V	
	Power Consumption (Full Load)	1.4A@12V	1.03A@12V	0.75@12V	
	Fan or Fanless	Passive (Fan-less)	Passive (Fan-less)	Passive (Fan-less)	
Environment	Operating Temperature (air flow 0.7 m/sec)	0 ~ 60 °C	0 ~ 60 °C	0 ~ 60 °C Extend: -40 ~ 85 °C	
	Storage Temperature	-40 ~ 85 °C	-40 ~ 85 °C	-40 ~ 85 °C	
	Relative Humidity (Operating)	40 °C @ 95% RH Non-Condensing	40 °C @ 95% RH N on-Condensing	40 °C @ 95% RH Non-Condensing	
	Relative Humidity (Storage)	-40 °C ~ 85 °C and 60 °C @ 95% RH Non-Condensing	-40 °C ~ 85 °C and 60 °C @ 95% RH Non-Condensing	-40 °C ~ 85 °C and 60 °C @ 95% RH Non-Condensing	
Certification	EMC	CE/FCC Class B	CE/FCC Class B	CE/FCC Class B	
	Safety Certifications	-	-	-	

Model Name		PCM-3365	PCM-9563	
Form-Factor		PC/104	5.25"	
Processor System	CPU	E3845/ E3825/ N2930	N4200/ N3350	
	# of Cores	4/ 4/ 2	4/ 2	
	# of Threads	4/ 4/ 2	4/ 2	
	Max. Turbo Frequency	- / - / 2.16 GHz	2.50GHz/ 2.40GHz	
	Base Frequency	1.91GHz/1.33 GHz/ 1.83GHz	1.10GHz/ 1.10GHz	
	Last Level Cache (LLC)	2MB/ 1MB/ 2MB	2MB/ 2MB	
	CPU TDP (Watt)	10W/ 6W/ 7.5W	6W/ 6W	
BIOS		AMI UEFI 64Mbit	AMI EFI 16Mbit	
Memory	Technology	DDR3L 1333/ 1066 MHz	DDR3L 1867MHz	
	Max. Capacity	Up to 8GB	Up to 8GB	
	# of Channels	1	1	
	# of Sockets	1	1	
	ECC Support	-	-	
Graphics	Chipset	Integrated SoC	Integrated SoC	
	Controller	Intel Gen7 graphic engine	Intel Gen9 graphic engine	
	3D Accelerator	DX11, OGL3.2, OCL1.1	DX11, OGL3.2, OCL1.1	
	VGA	Up to 2560 x 1600 @ 60Hz	1920 x 1200	
	LFP	LVDS	1920 x 1200 @ 60Hz	48-bit, 1920 x 1200 @ 60Hz
		eDP	-	v1.4 (1920x1200@60Hz)
	HDMI1	HDMI1.4a, 1920x1200x24bpp @60Hz	HDMI1.4a, 1920x1200x24bpp @30Hz	
	HDMI2	-	-	
	DisplayPort1	-	DP 1.2a (1920 x 1200 @60Hz) / HDMI1.4a, (1920x1200x24bpp @30Hz)	
	# of Display Pipe (Multi-Display)	2	2	
I/O	Ethernet	LAN1	i210IT	i210
		LAN2	-	i210, (3rd LAN support by request)
	SATA	# of Ports	1	2 (2nd support by request)
		Speed	Gen2 (3.0 Gb/s)	Gen3 (6.0 Gb/s)
	USB	USB3.1	-	-
		USB3.0	-	2
		USB2.0	6	6
	UART	RS-232/422/485	1	2
		RS-232	2	4
		Serial Bus	I2C Bus	Option to SMBus
	Audio	SMBus	Support	Support
		CANBus	-	-
GPIO (DIO)	CODEC	Intel High Definition audio interface (requires an audio extension module P/N: PCE-SAO1-00A1E)	Realtek ALC888S	
	Amplifier	-	-	
Storage	mSATA	F/S (SATA signal shared with Onboard flash)	F/S (SATA, USB2.0)	
	eMMC	-	-	
	SATA SSD	-	-	
	M.2 E-Key 2230	-	1	
	M.2 B-Key 3042	-	-	
	M.2 B/M-Key 2280	-	-	
	M.2 M-Key 2242	-	-	
	M.2 M-Key 2280	-	-	
Expansion	mini-PCIe	Opt. to mSATA (PCIex1, USB2.0)	Opt. to mSATA (PCIex1, USB2.0)	
	PC/104	-	-	
	PCI104	-	1	
	PCI104-Plus	-	-	
Others	MIOe (PCIe/PCIe Bifurcation/USB2.0/USB3.0/LPC/eSPI/SMBus/Line-out/Power Supply)	-	-	
	TPM	-	-	
	Fan	-	-	
	WatchDog Timer	1-255 sec/min, output to Reset	255 levels timer interval, programmable by software	
Power	Power Type	AT, ATX (Support PC104-Plus Power module)	AT, ATX	
	Power Supply Voltage	12V, 5V, 5VSB	12V	
	Connector	Wafer 8P 2.00mm	2X2 ATX Connector	
	Power Management	ACPI	ACPI	
	Power Consumption (Idle)	E3845: 4.72W E3825: 4.47W N2930: 4.42W	N4200: 0.44 @ 12V (5.28W) N3350: 0.48 @ 12V(5.76W)	
Thermal	Power Consumption (Full Load)	E3845: 7.69W E3825: 5.66W N2930: 6.84W	N4200: 1.32 @ 12V (15.84W) N3350: 1.36 @ 12V(16.32W)	
	Fan or Fanless	Passive (Fan-less)	Passive (Fan-less)	
	Operating Temperature (air flow 0.7 m/sec)	0 ~ 60 °C Extend: -40 ~ 85 °C	0 ~ 60 °C Extend: -40 ~ 85 °C	
	Storage Temperature	-40 ~ 85 °C	-40 ~ 85 °C	
Environment	Relative Humidity (Operating)	40 °C @ 95% RH Non-Condensing	40 °C @ 95% RH Non-Condensing	
	Relative Humidity (Storage)	-40 °C ~ 85 °C and 60 °C @ 95% RH Non-Condensing	-40 °C ~ 85 °C and 60 °C @ 95% RH Non-Condensing	
Certification	EMC	CE/FCC Class B	CE/FCC Class B	
	Safety Certifications	-	-	

マザーボード - AIMB

UTX

Intel Core i Platform

Intel Atom Platform



Model Name		AIMB-U233	AIMB-U217	AIMB-U117
Form Factor		UTX-E	UTX-E	UTX
Processor System	CPU	Intel® 8th Gen Core i7/i5/i3/Celeron	Intel E3950/ E3940	Intel E3950/ E3930
	Socket	BGA1528	FCBGA	FCBGA
	Max. Speed	2.2/1.7/1.6 GHz	QC 1.6 GHz	QC 1.6/ DC 1.3 GHz
	TDP	15 W	12W/ 9.5W	12W/ 6.5W
	L2 Cache	8M/6M/4M/2M	2M	2M
	L3 Cache	-	-	-
	Chipset	-	-	-
	BIOS	AMI EFI 256Mbit, SPI	AMI EFI 128 Mbit SPI	AMI EFI 128 Mbit SPI
Expansion Slot	M.2	3 (M-key, E-key, B-Key)	1 (E-Key)	1 (E-Key)
	PCI	-	-	-
	Mini PCIe	-	1 (F/S)	1 (F/S)
	PCIe	-	-	-
Memory	Technology	DDR4 2400MHz SDRAM	Single channel DDR3L 1866/ 1600/ 1333 Mhz SDRAM	Single channel DDR3L 1866/ 1600/ 1333 Mhz SDRAM
	Max. Capacity	32 GB	8GB	8GB
	Socket	1 x 260-pin SODIMM	1 X 204-pin SODIMM	1 X 204-pin SODIMM
Graphics	Controller	Intel HD Graphics	Intel HD Graphics	Intel HD Graphics
	VGA/DVI-D/HDMI/DP	-/-/2/-	-/-/1/1	-/-/1/1
	Dual channel 24-bit LVDS/eDP	1/1 (LVDS is optional)	1/1 (LVDS is optional)	1/1 (LVDS is optional)
	Multiple Display	2 HDMI+eDP 2 HDMI+LVDS	DP+HDMI+eDP DP+HDMI+LVDS	DP+HDMI+eDP DP+HDMI+LVDS
Ethernet	Interface	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps
	Controller	LAN1: Intel i219LM LAN2: Intel i211AT	LAN1: Intel i211AT LAN2: Intel i211AT LAN3: Realtek RTL8111H	LAN1: Realtek RTL8111H LAN2: Realtek RTL8111H
	Connector	RJ45 x 2	RJ-45 x3	RJ-45 x2
TPM		Optional	Optional	Optional
SATA	Max Data Transfer Rate	600 MB/s	600 MB/s	600 MB/s
	Channel	1	1	1
	eSATA/mSATA	-/-	-/-	-/-
External I/O	VGA/DVI/HDMI/DP	-/-/2/-	-/-/1/1	-/-/1/1
	Ethernet	2	3	2
	USB	2 x USB3.0	4 x USB3.0	4 x USB3.0
	Audio	Line Out	Line out	Line out
	Serial	-	-	-
	PS/2	-	-	-
	DC Jack	1	1	1
Internal Connector	LVDS & Inverter	1 (Optional)	1 (Optional)	1 (Optional)
	DVI	-	-	-
	USB	2	2	-
	Serial	4 (2 x RS-232, 2 x RS-232 or 422 or 485)	4 (2 x RS-232, 2 x RS-232 or 422 or 485)	2 (1 x RS-232; 1 x RS-422 or 485)
	Parallel	-	-	-
	SATA	1	1	1
	CompactFlash/ eMMC	-	-/1 x 153 ball eMMC (optional)	-/1 x 153 ball eMMC (optional)
	GPIO	16-bit GPIO	16-bit GPIO	8-bit GPIO
	CANBus	-	1 (Isolated CANBus)	1 (Optional)
	MDB	-	-	1 (colay with RS-232)
ccTALK	-	-	1 (colay with RS-422/ 485)	
Power Input		12V DC-in Rear: DC Jack	12~24V DC-in Rear: DC Jack	12~24V DC-in Rear: DC Jack
Certification		CE/FCC Class B	CE/FCC Class B	CE/FCC Class B

マザーボード - AIMB

Mini-ITX

Intel Atom Platform

AMD Platform

NEW



NEW



Model Name	AIMB-218	AIMB-215	AIMB-216	AIMB-217	AIMB-229	AIMB-228	
Form Factor	THIN Mini-ITX	THIN Mini-ITX	THIN Mini-ITX	THIN Mini-ITX	Mini-ITX	THIN Mini-ITX	
Processor System	CPU	Intel Pentium J6425/ Celeron J6413/Celeron N6211/Atom x6413E	Intel Celeron J1900 / N2930 / N2807	Intel Pentium N3710 & Celeron N3160/N3010 & Atom x5-E8000	Intel Pentium N4200/ Celeron N3350/Atom x7-E3950	AMD Embedded Ryzen V2000	AMD Embedded Ryzen V1000/R1000
	Socket	FCBGA	FCBGA	FCBGA	FCBGA	-	FP5
	Max. Speed	QC 1.8/QC 1.8/DC 1.2/ QC 1.5 GHz	QC 2.0 / 1.83 GHz; DC 1.58 GHz	QC 1.6/QC 1.6/DC 1.04/ QC 1.04 GHz	QC 1.1/DC 1.1/QC 1.6 GHz	8C 4.15GHz / 6C 3.95GHz	QC 3.35GHz/ QC 2.00GHz/ DC 2.30GHz
	TDP	10W/10W/6.5W/9W	10 / 7.5 / 4.3 W	6 / 6 / 4 / 5 W	6 W/6 W/12 W	54W/25W	45W/ 15W/ 15W
	L2 Cache	1.5MB	2 MB / 2 MB / 1 MB	2MB	2MB	4Mb	2M/2M/1M
	L3 Cache	-	-	-	-	-	-
	Chipset	-	-	-	-	-	-
	BIOS	AMI EFI 256Mbit, SPI	AMI EFI 16 Mbit, SPI	AMI EFI 16 Mbit, SPI	AMI EFI 128 Mbit, SPI	AMI EFI 128 Mbit, SPI	AMI EFI 128Mbit, SPI
Expansion Slot	M.2	2 (B key + E key)	-	1 (B Key)	1 (E Key)	1 M Key & 1 E Key	2 (B key + E key)
	Mini PCIe	-	2	1	1	0	-
	PCIe	PCIe x1, 1 slot	PCIe x1, 1 slot	PCIe x1, 1 slot	PCIe x1, 1 slot	PCIe x8, 1 slot	PCIe x8, 1 slot (Only PCIe4 signal for R1000)
Memory	Technology	Dual channel DDR4 3200MHz SDRAM	Dual / Dual / Single channel DDR3L 1333 MHz SDRAM	Dual channel DDR3L 1600/1066 MHz SDRAM	Dual channel DDR3L 1866 MHz SDRAM	Dual Channel DDR4 3200MHz SDRAM	Dual channel DDR4 2400/2666/3200 MHz SDRAM
	Max. Capacity	64 GB/ up to 32 GB per DIMM	8 / 8 / 4 GB	8 GB/ up to 8 GB per DIMM	8 GB/ up to 8GB per DIMM	64 GB/ 32 GB per DIMM non-ECC/ECC Support	32 GB/ up to 16 GB per DIMM
	Socket	2 x 260-pin SODIMM	2 / 2 / 1 x 204-pin SODIMM	2 x 204-pin SODIMM	2 x 204-pin SODIMM	2 x 260-pin SODIMM	2 x 260-pin SODIMM
Graphics	Controller	Intel UHD Graphics	Intel HD Graphics	Intel HD Graphics	Intel HD Graphics	AMD Radeon	AMD Radeon
	VGA/DVI-D/ HDM/DP++	-/-/1/1	1/-/1	-/1/1/1 (DP only)	1/-/1/1	-/-/2/2	-/-/1/4
	Dual channel 24-bit LVDS/ eDP	1/1 (LVDS & eDP is optional)	1/1 (eDP is optional)	1/1 (eDP is optional)	1/1 (eDP is optional)	-/1	1/- (LVDS is optional)
	Type C Alt.	-	-	-	-	2	-
Multiple Display	Triple display: DP+HDMI+LVDS(or eDP)	Dual display: VGA+DP(or eDP), VGA+LVDS, LVDS+DP(or eDP)	Triple display: DVI-D+DP(or eDP)+LVDS, DVI-D+DP(or eDP)+HDMI	Triple display: VGA(or eDP)+ DP(or LVDS)+HDMI	Quad displays: HDMI+HDMI+DP+DP, eDP+HDMI+DP+DP	Quad displays: DP+DP+DP+DP	
Ethernet	Interface	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps
	Controller	LAN1: Realtek RTL8111H LAN2: Realtek RTL8111H	LAN1: Realtek RTL8119I LAN2: Realtek RTL8119I	LAN1: Realtek RTL8111H LAN2: Realtek RTL8111H	LAN1: Realtek RTL8111H LAN2: Realtek RTL8111H	LAN1: Realtek RTL8111H LAN2: Realtek RTL8111H	LAN1: Realtek RTL8111H LAN2: Realtek RTL8111H
	Connector	RJ-45 x 2	RJ-45 x2	RJ-45 x 2	RJ-45 x 2	RJ-45 x 2	RJ-45 x 2
TPM	Optional	optional	Optional	Optional	TPM2.0	Optional	
SATA	Max Data Transfer Rate	600 MB/s	300 MB/s	600 MB/s	600 MB/s	600 MB/s	600MB/s
	Channel	1	2	2	2	2	2
	eSATA/mSATA	-/-	-/1	-/-	-/1	-/-	-/-
Rear I/O	VGA/DVI-D/ HDM/DP	-/-/1/1	1/-/1	-/1/1/1	1/-/1/1	-/-/2/2	-/-/1/1000: 4 -/-/1/1000: 3
	Type C Alt.	-	-	-	-	2	-
	Ethernet	2	2	2	2	2	2
	USB	4 (3 x USB3.2 Gen1/ 1 USB 2.0)	4 (1 x USB3.2 Gen1/ 3 x USB 2.0)	4 (USB3.2 Gen1)	4 (USB3.2 Gen1)	3 x USB3.2 Gen2 / 3 x USB3.2 Gen1	4 (2 USB 3.2 Gen2/ 2 USB 2.0))
	Audio	Line-out	Line-out	Line-out	Line-out	Line-out + Mic/Line in	Mic-in, Line-out
	Serial	-	-	-	-	-	-
	PS/2	-	-	-	-	-	-
Internal Connector	DC Jack	1	1	1	1	1	1
	LVDS/eDP	1 (optional) /1 (optional) eDP co-lay with LVDS	1/1 (optional) eDP colay with DP	1/1 (optional) LVDS colay with HDMI, eDP colay with DP	1/1 (optional) LVDS colay with DP, eDP colay with VGA	-/1	1 (optional)/- LVDS colay with DP
	USB	4 (USB 2.0)	4 (USB 2.0)	6 (USB 2.0), USB7/8/9/10 is optional	8 (USB 2.0), USB9/10/11/12 is optional	2 (USB2.0)	2 (USB2.0)
	Serial	6 (5 x RS-232, 1 x RS-232/422/485) COM3~COM6 optional	6 (5 x RS-232; 1 x RS-232/422/485)	6 (5 x RS-232; 1 x RS-232/422/485)	6 (5 x RS-232; 1 x RS-232/422/485)	6 (4 x RS-232; 2 x RS-232/422/485)	6 (4 x RS-232, 2 x RS-232/422/485, 1 supports CcTalk, 1 supports TTL)
	Parallel	-	-	-	-	-	-
	SATA	1	2	2	2	2	2
	eMMC/UFS	-/1 (32~256GB), optional	-/-	-/-	-/-	-/-	-/-
GPIO	8 bit GPIO	8-bit GPIO	8-bit GPIO	8-bit GPIO	16 bit	16-bit GPIO	
Power Input	12V DC-in Rear: DC Jack Internal: ATX 4 pin	12V DC-in Rear: DC Jack Internal: ATX 4 pin	12V DC-in Rear: DC Jack Internal: ATX 4 pin	12V DC-in Rear: DC Jack Internal: ATX 4 pin	12V DC-in Rear: DC Jack Internal: ATX 4 pin	12~24V DC-in Rear: DC Jack Internal: ATX 4 pin	
Certification	CE/FCC Class B	CE/FCC Class B	CE/FCC Class B	CE/FCC Class B	CE/FCC Class B	CE/FCC Class B	

マザーボード - AIMB

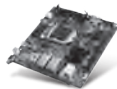
Mini-ITX

Intel Core i Platform

NEW

Preliminary

NEW



Model Name		AIMB-288	AIMB-278	AIMB-287	AIMB-277	AIMB-286	AIMB-286EF
Form Factor		THIN Mini-ITX extended (170 x 190mm)	Mini-ITX	THIN Mini-ITX	Mini-ITX	THIN Mini-ITX	THIN Mini-ITX
Processor System	CPU	Intel 12th Core i	Intel 12th Core i9/i7/i5/i3	Intel 10th Core i9/i7/i5/i3/Celeron	Intel 10th Core i9/i7/i5/i3/Celeron	Intel 9th/8th Core i7/ i5/ i3 / Pentium/Celeron	Intel 9th/8th Core i7/ i5 /i3 / Pentium/Celeron
	Socket	LGA 1700 socket	LGA 1700 socket	LGA1200	LGA1200	LGA1151	LGA1151
	Max. Speed	2.8/2.9/3.1/3.2/3.8/3.2 GHz	P-core up to 5.0 GHz E-core up to 3.8 GHz	2.8/2.9/3.1/3.2/3.8/3.2 GHz	2.8/2.9/3.1/3.2/3.8/3.2 GHz	3.7/3.6/3.2/3.1/3.0/2.9/2.4/2.1GHz	3.7/3.6/3.2/3.1/3.0/2.9/2.4/2.1GHz
	TDP	Up to 65W	Up to 65W	65W/58W/35W	65W/58W/35W	65W/54W/35W	65W/54W/35W
	L2 Cache	-	-	-	-	-	-
	L3 Cache	Up to 20MB	Up to 30MB	20MB/16MB/12MB/6MB/2MB	20MB/16MB/12MB/6MB/2MB	12MB/9 MB/6 MB/4 MB/2 MB	12MB/9 MB/6 MB/4 MB/2 MB
	Chipset	Intel H610E	Intel Q670E	Intel H420E	Intel Q470E	Intel H310	Intel H310
BIOS	AMI EFI 256 Mb	AMI EFI 256 Mbit SPI	AMI EFI 256 Mbit SPI	AMI EFI 256 Mbit SPI	AMI EFI 128 Mbits, SPI	AMI EFI 128 Mbits, SPI	
Expansion Slot	M.2	2 (B key + M Key)	2 (M key + E key)	2 (M key + E key)	2 (M key + E key)	2 (B key + E key)	2 (B key + E key)
	Mini PCIe	0	0	0	0	0	0
	PCIe	MXM , 1 slot	PCIe x 16, 1 slot	0	PCIe x 16, 1 slot	PCIe x 4, 1 slot	PCIe x 16, 1 slot
Memory	Technology	Dual Chaneel DDR5 4800 MHz SDRAM	Dual Chaneel DDR5 4800 MHz SDRAM	Dual Chaneel DDR4 2933 MHz SDRAM	Dual Chaneel DDR4 2933 MHz SDRAM	Dual Chaneel DDR4 2666 MHz SDRAM	Singel Chaneel DDR4 2666 MHz SDRAM
	Max. Capacity	64 GB/ up to 32 GB per DIMM	64 GB/ up to 32 GB per DIMM	64 GB/ up to 32 GB per DIMM	64 GB/ up to 32 GB per DIMM	64 GB/ up to 32 GB per DIMM	32 GB/ up to 32 GB per DIMM
	Socket	2 x 262-pin SODIMM	2 x 260-pin SODIMM	2 x 260-pin SODIMM	2 x 260-pin SODIMM	2 x 260-pin SODIMM	1 x 260-pin SODIMM
Graphics	Controller	TBD	Intel HD Graphics	Intel HD Graphics	Intel HD Graphics	Intel HD Graphics	Intel HD Graphics
	VGA/DVI-D/ HDMI/DP++	-/-/2	-/-/2	-/2/-	1/-/1	-/-/1	-/-/1
	Dual channel 24-bit LVDS/eDP	0/1	0/1	0/1	1/1	1/1 (eDP is optional)	1/1 (eDP is optional)
	Type C Alt.	-	1	-	-	-	-
	Multiple Display	Dual display: DP+DP, DP+eDP	Triple displays: DP+DP+eDP	Dual display: HDMI + HDMI, HDMI+eDP	Triple displays: DP+DP+HDMI, DP+HDMI+LVDS (or eDP), LVDS(or eDP)+DP+DP	Dual display: DP+HDMI, DP+LVDS(or eDP), HDMI+LVDS(or eDP)	Dual display: DP+HDMI, DP+LVDS(or eDP), HDMI+LVDS(or eDP)
Ethernet	Interface	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps
	Controller	LAN1: Intel i219LM LAN2: Intel i225	LAN1: Intel i219LM LAN2: Intel i225	LAN1: Intel i219LM LAN2: Intel i211AT	LAN1: Intel i219LM LAN2: Intel i211AT	LAN1: Realtek RTL8111H LAN2: Realtek RTL8111H (only for FL/F/G2 SKU) LAN3: Intel i211AT (only for FL/F SKU)	LAN1: Realtek RTL8111H LAN2: Realtek RTL8111H LAN3: Intel i211AT
	Connector	RJ-45 x 2	RJ-45 x 2	RJ-45 x 2	RJ-45 x 2	RJ-45 x 3 (AIMB-286FL/F; AIMB-286G2: 2; AIMB-286L: 1)	RJ-45 x 3
TPM	TPM2.0	TPM2.0	Optional	Optional	Optional	Optional	
SATA	Max Data Transfer Rate	600 MB/s	600 MB/s	600 MB/s	600 MB/s	600 MB/s	600 MB/s
	Channel	2	3	2	4	3	3
	eSATA/mSATA	-/-	-/-	-/-	-/-	-/-	-/-
Rear I/O	VGA/DVI/HDMI/ DP	-/-/2	-/-/2	-/2/-	-/-/1	-/-/1	-/-/1
	Type C Alt.	-	1	-	-	-	-
	Ethernet	2	2	2	2	FL/F SKU: 3 G2 SKU: 2 L SKU: 1	3
	USB	4 (USB3.2 Gen1)	4 (USB3.2 Gen2)	4 (USB3.2 Gen1)	4 (USB3.2 Gen2)	4 (USB 3.2 Gen1)	4 (USB3.2 Gen1)
	Audio	Line out	Mic-in, Line-out, Line-in	Line out	Mic-in, Line-out, Line-in	Mic-in, Line-out	Mic-in, Line-out
	Serial	-	-	-	-	-	-
	PS/2	-	-	-	-	-	-
DC Jack	1 (4-pin phoenix connector)	-	-/1	-	1	1	
Internal Connector	LVDS/eDP	-/1	1/1 (LVDS optional)	-/1	1/1	1/1 (optional) LVDS colay with eDP	1/1 (optional) LVDS colay with eDP
	VGA	-	-	-	1 (pin header)	-	-
	USB	2 x USB 3.2 Gen1 (5Gb/s)	2 USB3.2 Gen2, 2 USB3.2 Gen1	4 (2x USB3.2 Gen1, 2xUSB2.0)	4 (USB3.2 Gen1)	4 USB 2.0 (only for FL/F/G2 SKU)	4 (USB 2.0)
	Serial	2 (RS-232/422/485; support by BOM optional)	2 (RS232/422/485 + RS232)	4 (2 x RS-232, 2 x RS-232/422/485; RS-422/485 support by BOM optional)	2 (RS232/422/485)	FL/F SKU: 6 (4 x RS-232, 2 x RS-232/422/485, RS-422/485 support by BOM optional) G2/L SKU: 2 (1 x RS-232, 1 x RS-232/422/485, RS-422/485 support by BOM optional)	2 (1 x RS-232, 1 x RS-232/422/485; RS-422/485 support by BOM optional)
	Parallel	-	-	-	-	-	-
	SATA	1	3	2	4	FL/F/G2 SKU: 3 L SKU: 2	3
	eMMC/UFS	-/-	-/-	-/-	-/-	-/-	-/-
	GPIO	0	8-bit GPIO	8-bit GPIO	8-bit GPIO	16-bit GPIO	16-bit GPIO
Power Input	19~24V / 12V DC-in Rear: Phoenix connector 4 pin	12V ATX	12~24V DC-in Rear: DC Jack Internal: ATX 4 pin	ATX Internal: ATX 24 pin + 8 pin (12V)	12V DC-in Rear: DC Jack Internal: ATX 4 pin	12V DC-in Rear: DC Jack Internal: ATX 4 pin	
Certification	CE/FCC Class B	CE/FCC Class B	CE/FCC Class B	CE/FCC Class B	CE/FCC Class B	CE/FCC Class B	

マザーボード - AIMB

Mini-ITX

Intel Core i Platform



Model Name		AIMB-276	AIMB-285	AIMB-275	AIMB-205	AIMB-233	AIMB-232
Form Factor		Mini-ITX	THIN Mini-ITX	Mini-ITX	Mini-ITX	THIN Mini-ITX	THIN Mini-ITX
Processor System	CPU	Intel 9th/8th Gen Core i7/ i5 / i3/ Pentium/ Celeron	Intel 7th/6th Gen Core i7/ i5/ i3/ Pentium/ Celeron	Intel 7th/6th Gen Core i7/ i5/ i3/ Pentium/ Celeron	Intel 7th & 6th Gen Core i7/ i5/ i3/ Pentium/Celeron	Intel® 8th Gen Core i7/ i5/i3/Celeron	Intel core i7-6600u / i5-6300u / i3-6100u/ celeron 3955u Intel core i7-7600u i5-7300u/ i3-7100u/Celeron 3965u
	Socket	LGA1151	LGA1151	LGA1151	LGA1151	BGA1528	BGA1356
	Max. Speed	3.7/3.6/3.2/3.1/3.0/2.9/2.4/2.1GHz	3.6/3.3/2.4/3.4/3.2/2.8/2.6 GHz	3.6/3.3/2.4/3.4/3.2/2.8/2.6 GHz	3.6/3.3/2.4/3.4/3.2/2.8/2.6 GHz	2.2/1.7/1.6/2.0 GHz	2.6GHz/2.4GHz/2.3GHz/2GHz
	TDP	65W/58W/54W/35W	65W/54W/ 51W/ 35W	65W/54W/ 51W/ 35W	65W/51W/54W/35W	15W	15W
	L2 Cache	-	-	-	-	-	-
	L3 Cache	12MB/9 MB/6 MB/4 MB/2 MB	8 MB/6 MB/4 MB/3 MB/2 MB	8 MB/6 MB/4 MB/3 MB/2 MB	8 MB/6 MB/4 MB/3 MB/2 MB	8 MB/6 MB/4 MB/2 MB	4 MB/3 MB/3 MB/2 MB
	Chipset	Intel Q370	Intel H110	Intel Q170/H110	Intel H110	-	-
BIOS	AMI EFI 256 Mbits, SPI	AMI EFI 128 Mbits,SPI	AMI EFI 128 Mbits,SPI	AMI EFI 128 Mbits,SPI	AMI EFI 256 Mbits, SPI	AMI uEFI 16 Mbit, SPI	
Expansion Slot	M.2	2 (B key + E key)	-	1 (B Key)	1 (B Key)	2 (M key + E key)	-
	Mini PCIe	0	2	1	1	1 (F/S), optional	2
	PCIe	PCIe x 16, 1 slot	PCIe x 4, 1 slot	PCIe x16, 1 slot	PCIe x 16, 1 slot	PCIe x1, 1 slot	-
Memory	Technology	Dual Channel DDR4 2666 MHz SDRAM	Dual Channel DDR4 2133/2400 MHz SDRAM	Dual Channel DDR4 2133/2400 MHz SDRAM	Dual Channel DDR4 2133/2400 MHz SDRAM	Dual Channel DDR4 2400MHz SDRAM	Dual Channel DDR4 2400 MHz SDRAM
	Max. Capacity	64 GB/ up to 32 GB per DIMM	32 GB	32 GB	32 GB	32 GB/ up to 16 GB per DIMM	32 GB/ up to 16 GB per DIMM
	Socket	2 x 260-pin SODIMM	2 x 260-pin SODIMM	2 x 260-pin SODIMM	2 x 260-pin SODIMM	2 x 260-pin SODIMM	2 x 260-pin SODIMM
Graphics	Controller	Intel® UHD Graphics	Intel® HD Graphics	Intel® HD Graphics	Intel HD Graphics	Intel Graphics Gen 9	Intel HD Graphics 520
	VGA/DVI-D/ HDMI/DP++	-/-/1/2	1/-/1/1 (VGA by pin header)	-/-/1/1	1/1/-/1	-/-/1/-	-/-/1/1
	Dual channel 24-bit LVDS/ eDP	1/1 (eDP is optional)	1/- (LVDS only for LV sku)	1/1 (eDP is optional)	1/1 (eDP is optional)	1/1 (eDP is optional)	1/1 (eDP is optional)
	Type C Alt.	-	-	-	-	1	-
	Multiple Display	Triple display: DP+DP+HDMI, DP+DP+LVDS(or eDP), DP+HDMI+LVDS(or eDP)	Dual display: DP+HDMI, DP+VGA, HDMI+VGA, DP+LVDS, HDMI+LVDS, VGA+LVDS	Triple display: DP+HDMI+LVDS DP+HDMI+eDP	Dual display: DP+VGA, DP+LVDS(or eDP), DP+DVI-D, DVI-D+VGA, DVI-D+LVDS(or eDP), VGA+LVDS(or eDP)	Triple display: Type C Alt. + HDMI+LVDS(or eDP)	Triple display: DP+HDMI+LVDS(or eDP)
Ethernet	Interface	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps
	Controller	LAN1: Intel i219LM LAN2: Intel i211AT	LAN1: Realtek RTL8111H LAN2:Realtek RTL8111H	LAN1: Intel PHY i219-LM LAN2: Intel i211	LAN1: Realtek RTL8111H LAN2:Realtek RTL8111H	LAN1: Intel i219LM LAN2: Intel i211AT	LAN1: Intel i219LM LAN2: Intel i211AT
	Connector	RJ-45 x 2	RJ-45 x 2	RJ-45 x 2	RJ-45 x 2	RJ-45 x 2	RJ-45 x 2
TPM	Optional	Optional	Optional	Optional	Optional	Optional	Optional
SATA	Max Data Transfer Rate	600 MB/s	600 MB/s	600 MB/s	600 MB/s	600 MB/s	600 MB/s
	Channel	3	3	3	2	2	2
	eSATA/mSATA	-/-	-/1	-/1	-/1	-/-	-/1
Rear I/O	VGA/DVI/ HDMI/DP	-/-/1/2	-/-/1/1	-/-/1/1	1/1/-/1	-/-/1/1(Type C Alt.) Type C Alt. is optional	-/-/1/1
	Type C Alt.	1 (Optional)	-	-	-	1 (optional)	-
	Ethernet	2	2	2	2	2	-
	USB	8 (6 x USB 3.2 Gen2/ 2 USB3.2 Gen1), 1 optional Type-C	4 (USB 3.2 Gen1)	4 (USB 3.2 Gen1)	8 (4 x USB3.2 Gen1/ 4 x USB2.0)	4 (USB3.2 Gen2) (3 type A+1 type C, Type C is optional)	4 (USB 3.2 Gen1)
	Audio	Mic-in, Line-out, Line-in	Mic-in, Line-out	Mic-in, Line-out, Line-in	Mic-in, Line-in, Line-out	Mic-in, Line-out	Mic-in, Line-out
	Serial	-	-	-	-	-	Mic-in, Line-out
	PS/2	1 (4-pin phoenix connector)	-	-	-	-	-
	DC Jack	1/1 (optional) LVDS coloy with eDP	1	-	-	-	-
Internal Connector	LVDS/eDP	-	1/- (LVDS only for LV SKU)	1/1 (optional) LVDS coloy with eDP	1/1 (optional) eDP coloy with DP	1/1 (eDP optional)	1/1 (eDP optional)
	VGA	-	1	-	-	-	-
	USB	2 (USB 3.2 Gen1)	4 (USB 2.0)	6 (2 x USB 3.2 Gen1/ 4 x USB 2.0)	6 (USB 2.0), USB11/12/13/14 is optional	4 (2 x USB 3.2 Gen1, 2 x USB2.0)	4 (2 x USB 3.2 Gen1, 2 x USB2.0)
	Serial	2 (1 x RS-232; 1 x RS-232/422/485)	2 (1 x RS-232; 1 x RS-232/422/485)	2 (1 x RS-232; 1 x RS-232/422/485)	8 (7 x RS-232; 1 x RS-232/422/485)	6 (5 x RS-232, 1 x RS-232/422/485)	2 (RS-232)
	Parallel	-	-	-	-	-	-
	SATA	3	3	3	2	2	2
	eMMC/UFS	-/-	-/-	-/-	-/-	-/-	-/-
GPIO	8-bit GPIO	8-bit GPIO	8-bit GPIO	8-bit GPIO	8-bit GPIO	8-bit GPIO	
Power Input	12~24V / 12V DC-in Rear: Phoenix connector/ DC Jack Internal: ATX 4 pin	12V DC-in Rear: DC Jack Internal: ATX 4 pin	12~24V DC-in Rear: Phoenix connector Internal: ATX 4 pin	ATX Internal: ATX 20 pin + 4 pin (12V)	12~24V DC-in Rear: Phoenix connector	12V DC-in Rear: DC Jack Internal: ATX 4 pin	
Certification	CE/FCC Class B	CE/FCC Class B	CE/FCC Class B	CE/FCC Class B	CE/FCC Class B	CE/FCC Class B	

マザーボード - AIMB

Micro-ATX

Intel Core i Platform

AMD Platform

Preliminary

NEW

NEW

NEW



Model Name	AIMB-588	AIMB-587	AIMB-506	AIMB-586	AIMB-505	AIMB-592	AIMB-522
Form Factor	Micro-ATX	Micro-ATX	Micro-ATX	Micro-ATX	Micro-ATX	Micro-ATX	Micro-ATX
CPU	Intel 12th Core i	Intel 10th Xeon/Core/ i9/i7/i5/i3/Pentium/ Celeron	Intel 9th & 8th Gen Core i7/i5/i3/Pentium/ Celeron	Intel 9th & 8th Xeon/ Core i7/i5/i3 / Pentium/ Celeron	Intel 6th & 7th Gen Core i7/ i5/ i3 / Pentium/ Celeron	AMD EPYC™ 7003 up to 64 Zen 3 cores	AMD Ryzen Pro
Socket	LGA1700	LGA1200	LGA1151	LGA1151	LGA1151	SP3	AM4
Max speed	Up to 3.8GHz	3.8/ 3.5/3.4/3.2/3.1/3.0/2.9/2.8/2.4/2.3/2.0 /1.8 GHz	3.7/3.6/3.2/3.0/ 2.9 GHz	3.7/3.6/3.4/3.2/3.1/ 3.0/2.9/2.4/2.1 GHz	3.4/3.2/2.8/2.7/2.6/ 2.4/2.3 GHz	3.7(7313P)/3.7(7543P)/ 3.675(7713P) GHz	Up to 3.4GHz
TDP	Up to 125W	95W/80W/65W/58W/ 35W	65W /58W/35W	80W/71W/65W/35W	65W / 51W / 35W	155W(7313P)/225W (7543P)/225W(7713P)	Up to 105W
L2 cache	-	-	-	-	-	-	-
L3 cache	Up to 30MB	20MB/16MB/12MB/ 6MB/4MB/2MB	12 MB/ 9MB / 6MB /2MB	12MB/9 MB/8 MB/ 6 MB/4 MB/2 MB	8 MB/6 MB/4 MB/ 3 MB/2 MB	128MB(7313P)/256MB (7543P)/256MB(7713P)	Up to 64MB
Chipset	Q670E / R680E / H610E	Intel Q470E/W480E	Intel H310	Intel Q370/C246/H310	Intel H110	System On Chip	X570
BIOS	AMI EFI 256 Mb	AMI EFI 256 Mbits, SPI	AMI EFI 128 Mbits, SPI	AMI EFI 256 Mbits, SPI	AMI EFI 128 Mbits, SPI	AMI BIOS 256 MB SPI	AMI EFI 256 Mb
PCI	-	-	2 (L Sku: 0)	-	1	-	-
PCIe x16	1	1 (QG2/F: x16 link, WG2: x8 link)	1	1 (QG2/L: x16 link, WG2: x8 link)	1	4 (Gen4)	1
PCIe x8	-	1 (WG2 only)	-	1 (WG2 only)	-	-	-
PCIe x4	2	1	-	1	-	-	2
PCIe x1	-	1	1	1 (QG2/WG2 only)	2	-	-
mini-PCIe/ M.2	-/1(M Key)	-/1(M key)	-/1 (B-Key, L Sku:0)	-/2 (M & E key, QG2/ WG2 only)	1/-	-/1 (M key)	1 / 1(M key)
Technology	Dual Channel DDR5 4800 Mhz SDRAM	Dual Channel DDR4 2666/2933 Mhz SDRAM	Dual Channel DDR4 2400/2666 Mhz SDRAM	Dual Channel DDR4 2400/2666 Mhz SDRAM	Dual Channel DDR4 2133/2400 Mhz SDRAM	6 Channel DDR4 up to 3200, ECC memory supported	Dual channel DDR4 3200Mhz SDRAM
Max. Capacity	128GB / up to 32 GB per DIMM	128GB/ up to 32 GB per DIMM	64 GB/ up to 32 GB per DIMM	128 GB/ up to 32 GB per DIMM	32GB	768 GB	128GB / up to 32 GB per DIMM
Socket	4 x 288 pin DIMM	4 x 288 pin DIMM	2 x 288-pin DIMM	4 x 288-pin DIMM	2 x 288-pin DIMM	6x RDIMM 288-pin	4 x 288 pin DIMM
Controller	TBD	Intel HD Graphics	Intel HD Graphics	Intel HD Graphics	Intel HD Graphics	BMC (AST2500/ AST2510)	Radeon™ Graphics (Ryzen 4000 series)
VRAM	TBD	Shared system memory up to 1 GB	Shared system memory up to 1 GB	Shared system memory up to 1 GB	Shared system memory up to 1 GB	-	TBD
VGA	-	1 (F/WG2 only)	1	-	1	1	1
LCD	-	-	Dual Channel 48-bit LVDS (Optional)	Dual channel 48-bit LVDS(optional)	Dual channel 48-bit LVDS (Optional)	-	-
DVI-D	-	-	1	-	1	-	-
HDMI	1	-	-	1 (option to HDMI2.0a)	-	-	1
DP/eDP	2/1	2/1 (WG2: eDP is option)	1/1 (G2/ L sku without eDP)	2 / 1 (L: eDP is option)	1/1	- / -	1 / -
Dual Display	DP++ + DP++ ,DP++ + eDP, DP++ + HDMI, HDMI + eDP	DP++ + VGA, DP++ + DP++ DP++ + eDP, VGA + eDP	DP+ DVI-D, DP+VGA, DVI-D+VGA, DP+eDP(LVDS), DVI-D+eDP(LVDS), VGA+eDP(LVDS)	DP++ + HDMI, DP++ + DP++ , DP++ + eDP/ LVDS, HDMI + eDP/LVDS	VGA + DVI, VGA + DP, VGA + eDP, DVI + DP, DVI + eDP, DP + eDP	-	VGA+DP, VGA+HDMI, HDMI+DP
Triple Display	eDP + HDMI + DP++, eDP + DP++ + DP++, HDMI + DP++ + DP++	DP++ + DP++ + VGA, DP++ + DP++ + eDP, DP++ + VGA + eDP	-	DP++ + DP++ + HDMI, DP++ + DP++ + eDP/ LVDS, DP++ + HDMI + eDP/ LVDS	-	-	VGA+DP+HDMI
Interface	10/100/1000 Mbps	10/100/1000/ 10GbE Mbps	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps	10GbE/2.5GbE	10/100/1000 Mbps
Controller	LAN1: Intel I219LM LAN2: Intel I225LM LAN3/4: i210-AT (Option)	LAN1: Intel I219LM (QG2/WG2/L) LAN2: Intel I211AT (QG2) I210AT (WG2) LAN3/4: X550-AM1 (QG2/WG2 Option)	LAN1: Realtek RTL8111H LAN2: Realtek RTL8111H	LAN1: Intel I219LM (QG2/WG2/L) LAN2: Intel I211AT (QG2) I210AT (WG2) LAN3/4: Realtek RTL8111H (Option)	LAN1: Realtek RTL8111H LAN2: Realtek RTL8111H	LAN1&2: Intel I226-LM LAN3&4: Intel X550 (AIMB-592SF)	LAN 1/2/3/4: Intel I225LM
Connector	RJ-45 x 4 (2 option)	RJ-45 x 4 (2 option)	RJ-45 x2	RJ-45 x 4 (2 option)	RJ-45 x2	RJ45 x5 (592SF) / RJ45 x3 (592SL)	RJ-45 x 4
TPM	-	Optional	Optional	Optional	Optional	TPM 2.0	-
Max Data Transfer	600 MB/S	600 MB/S	600 MB/s	600 MB/s	600 MB/S	600 MB/s	600 MB/S
Channel	6	6 -QG2 sku; 8 - WG2/F sku (SW RAID)	3	6 -QG2 sku; 8 - WG2 sku (SW RAID)	3	4 (SW RAID, QG2/ WG2 only)	4
mSATA/M.2	- / 1 (M key)	- / 1 (M key)	- / 1 (B Key, F, G2 sku)	- / 1 (M key)	1 / -	1 / -	- / 1 (M key)
VGA	-	1 (QG2/WG2 option)	1	-	1	1	1
USB	4x USB (2.0) / 5x USB (3.2 Gen1) / 3 USB (3.2 Gen2) / 1x USB (Type C)	6 USB (2.0)/ 6 USB (3.2 Gen1)/ 4 USB (3.2 Gen2)	F sku: 20 (8 USB3.0 + 12 USB2.0) G2 sku: 12 (4 USB3.0 + 8 USB2.0) L sku: 8 (4 USB3.0 + 4 USB2.0)	WG2 / QG2 sku: 4 USB3.1 + 2 USB 3.0 + 8 USB2.0, 2 option) L sku: 4 USB 3.0 + 8 USB 2.0	6(USB 2.0),8(USB 3.0)	5 (USB 3.2)	8x USB (3.2 Gen 2)
Serial	6 (4x RS-232; 2x RS-232/422/485)	6 (5 x RS-232; 1 x RS-232/422/485)	F sku: 14 (12 x RS-232; 2 x RS-232/422/485) G2 sku: 10 (8 x RS-232; 2 x RS-232/422/485) L sku: 2 (2 x RS-232)	6 (QG2/WG2: 5x RS-232, 1x RS-232/422/485) 2 (L: 1x RS-232, 1x RS-232/422/485)	10 (8 x RS-232; 2 x RS-232/422/485)	1 x RS-232	6 (4 x RS-232; 2 x RS-232/422/485)
Parallel	-	-	-	-	1	-	-
SIM Card Holder	-	-	1 (L Sku:0)	-	-	-	-
PS/2	-	1 (onboard)	1 (onboard)	1 (onboard)	1 (onboard)	-	-
Ethernet (GbE)	4 (2 option)	4 (2 x 10GbE option)	2	4 (2 option)	2	5 (592SF) / 3 (592SL)	4
IEEE 1394	-	-	-	-	-	-	-
Audio	Mic-in, Line-out	Mic-in, Line-out	Mic-in, Line-out	Mic-in, Line-out	Mic-in, Line-out	-	Mic-in, Line-out
GPIO	8-bit	16 bit	16-bit	16-bit	8-bit	8-bit	8-bit
Power Input	ATX Internal: ATX 24 pin + 8 pin (12V)	ATX Internal: ATX 24 pin + 8 pin (12V)	ATX Internal: ATX 24 pin + 4 pin (12V)	ATX or 12V DC-in Internal: ATX 24 pin + 4 pin (12V) or 8 pin (12V)	ATX Internal: ATX 24 pin + 4 pin (12V)	ATX Internal: ATX 24 pin + 4 pin (12V) + 4pin (12V)	ATX Internal: ATX 24 pin + 8 pin (12V)
Certification	CE/FCC Class B	CE/FCC Class B	CE/FCC Class B	CE/FCC Class B	CE/FCC Class B	CE/FCC Class B	CE/FCC Class B

RISC ARMプラットフォーム - ROM

コンピュータオンモジュール

NEW



Model Name		ROM-3310	ROM-3420	ROM-3620	ROM-5420 B1	ROM-5620
Form Factor		RTX V2.0	RTX V2.0	RTX V2.1	SMARC V1.1	SMARC V2.1
Compatible Carrier Board		ROM-DB3900-SWA1E	ROM-DB3900-SWA1E	ROM-DB3900-SWA2E	ROM-DB5900-SWA2E	ROM-DB5901-SWA1
Processor System	CPU	TI Arm AM3352 Cortex-A8 1 GHz	NXP Arm i.MX6 Cortex-A9 1 GHz	NXP Arm i.MX 8X Cortex-A35 1.2 GHz	NXP Arm i.MX6 Cortex-A9 1 GHz	NXP Arm i.MX 8X Cortex-A35 1.2 GHz
	Technology	DDR3 800 MT/s	DDR3 1066 MT/s	LPDDR4 2400 MT/s	DDR3 1066 MT/s	LPDDR4 2400 MT/s
Memory	Capacity	On-board DDR3 512 MB	On-board DDR3 1 GB / 2 GB	On-board LPDDR4 2 GB	On-board DDR3 1 GB	On-board LPDDR4 2 GB
	Flash	8 GB eMMC NAND Flash for O.S. and 4 MB SPI NOR Flash for Advantech boot loader	4 GB eMMC NAND Flash for O.S. and 4 MB SPI NOR Flash for Advantech boot loader	16 GB eMMC Flash for O.S. and 8 MB QSPI NOR Flash for board information	4 GB eMMC NAND Flash for O.S. and 4 MB SPI NOR Flash for Advantech boot loader	16 GB eMMC NAND Flash for O.S. and 8 MB QSPI NOR FLASH for board information
	Graphics Engine	Direct3D Mobile, OGL-ES 1.1 and 2.0, OpenVG 1.0, and OpenMax	2 x IPU. OpenGL ES 2.0 for 3D, BitBit for 2D and OpenVG 1.1	Vivante GC7000 Lite, supports OpenGL 3.0, 2.1; OpenGL ES 3.1, 3.0, 2.0, 1.1; OpenCL 1.2, 1.1; OpenVG 1.1; and Vulkan	2 x IPU. OpenGL ES 2.0 for 3D, BitBit for 2D and OpenVG 1.1	Vivante GC7000 Lite, supports OpenGL 3.0, 2.1; OpenGL ES 3.1, 3.0, 2.0, 1.1; OpenCL 1.2, 1.1; OpenVG 1.1; and Vulkan
Graphics	LVDS	-	1 x 24-bit LVDS, 1366 x 768 at 60Hz	2 x 24-bit single channel LVDS*	1 x 24-bit LVDS, 1366 x 768 at 60Hz	2 x 24-bit single channel LVDS*
	MIPI-DSI	-	-	2 x 4-Lane MIPI DSI*	-	2 x 4-Lane MIPI-DSI*
	eDP	-	-	-	-	-
	HDMI	-	1920 x 1080 at 60Hz	-	1920 x 1080 at 60Hz	-
	Parallel RGB	1 x 24-bit TTL, 1366 x 768 at 60Hz	1 x 24-bit TTL, 1920 x 1200 at 60Hz	-	1 x 24-bit TTL, 1920 x 1200 at 60Hz	-
	VGA	-	-	-	-	-
	DP	-	-	-	-	-
	H/W Video Codec	-	Decoder: MPEG-4 ASP, H.264 HP, H.263, MPEG-2 MP, MJPEG BP Encoder: MPEG-4 SP, H.264 BP, H.263, MJPEG BP	Decoder: H.265/H.264(4Kp30), WMV9/VC-1 imple, MPEG-1, MPEG-2, AVS, MPEG4.2 ASP, H.263 Encoder: H.264(1080p30)	Decoder: MPEG-4 ASP, H.264 HP, H.263, MPEG-2 MP, MJPEG BP Encoder: MPEG-4 SP, H.264 BP, H.263, MJPEG BP	Decoder: H.265/H.264(4Kp30), WMV9/VC-1 imple, MPEG-1, MPEG-2, AVS, MPEG4.2 ASP, H.263 Encoder: H.264(1080p30)
Ethernet	Chipset	TI AM3352 Integrated RGMII	NXP i.MX6 Integrated RGMII	NXP i.MX8X integrated RGMII	NXP i.MX6 integrated RGMII	NXP i.MX8X Integrated RGMII
	Speed	1 x 10/100/1000 Mbps	1 x 10/100/1000 Mbps	2 x 10/100/1000 Mbps	1 x 10/100/1000 Mbps	2 x 10/100/1000 Mbps
RTC		Yes	Yes	Yes	Yes	Yes
WatchDog Timer		1~6553s, default 60s, power on/off 1s	256-level timer interval, from 0 ~ 128 sec	1~6553s, default 60s, power on/off 1s	256-level timer interval, from 0 ~ 128 sec	1~6553s, default 60s, power on/off 1s
TPM		-	-	TPM2.0 (ST33HTPH2E32AHC2)	-	TPM2.0 (ST33HTPH2E32AHC2)
I/O	PCIe	-	1 PCIe 1x	1 PCIe 3.0 1x	1 PCIe 1x	1 PCIe 3.0 1x
	SATA	-	1 SATA II	-	1 SATA II	-
	USB	1 USB 2.0, 1 USB 2.0 OTG	1 USB 2.0, 1 USB 2.0 OTG	1 USB 3.2 Gen 1 by 1, 1 USB 2.0, 1 USB 2.0 OTG	1 USB 2.0, 1 USB 2.0 OTG	1 USB 3.2 Gen 1 by 1, 1 USB 2.0 Host, 1 USB 2.0 OTG
	Audio	I2S	I2S	I2S	I2S	2 x I2S
	SPDIF	-	-	-	1	-
	SDIO	1	1	1	1	1
	Serial Port	4 UART (1 x 4-wire, 3 x 2-wire w/ 3.3V)	3 UART (3 x 4-wire)	3 UART (1 x 4-wire, 2 x 2-wire)	4 UART (2 x 2-wire, 2 x 4-wire w/ 3.3V)	3 UART (1 x 4-wire, 2 x 2-wire)
	SPI	1	2	2	4	2
	CAN	2 x CAN bus 2.0 A/B	2 x CAN bus 2.0 A/B	2 x CAN bus 2.0 A/B	2 x CAN bus 2.0 A/B	2 x CAN bus 2.0 A/B
	GPIO	10	10	10	12	12
	I2C	1	4	5	5	4
	Camera Input	-	1 x 4-Lane MIPI CSI-2	1 x 4-Lane MIPI CSI-2	1 x 4-Lane MIPI CSI-2	1 x 4-Lane MIPI CSI-2
	System Bus	-	Address: 26 bits Data: 16 bits	-	-	-
	Touch	-	-	-	-	-
	Keypad	-	-	-	-	-
PWM	-	-	-	-	-	
Power	Power Supply Voltage	5 ~ 24 V	5 ~ 24 V	5 ~ 24 V	3 ~ 5.25 V	4.75 ~ 5.25V
	Power Consumption	2.11W (Max)	3.3W (Max)	5.372W (Max)	3.4W (Max)	3.83W (Max)
Environment	Operational Temperature	0 ~ 60 °C / -40 ~ 85 °C	0 ~ 60 °C / -40 ~ 85 °C	0 ~ 60 °C / -40 ~ 85 °C	0 ~ 60 °C / -40 ~ 85 °C	0 ~ 60 °C / -40 ~ 85 °C
	Operating Humidity	5%~95% Relative Humidity, non-condensing	5%~95% Relative Humidity, non-condensing	5% ~ 95% Relative Humidity, non-condensing	5%~95% Relative Humidity, non-condensing	5% ~ 95% Relative Humidity, non-condensing
Mechanical	Dimensions (W x D)	68 x 68 mm	68 x 68 mm	68 x 68 mm	82 x 50 mm	82 x 50 mm
Operating System		Linux	Linux Android	Linux Android	Linux Android	Linux Android
Certifications		CE/FCC Class B	CE/FCC Class B	CE/FCC Class B	CE/FCC Class B	CE/FCC Class B

RISC ARMプラットフォーム - ROM

コンピュータオンモジュール

NEW
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Model Name		ROM-5720	ROM-5721	ROM-5722	ROM-5780
Form Factor		SMARC V2.1	SMARC V2.1	SMARC V2.1	SMARC V2.1
NPU		-	-	2.3 TOPS Neural Network Performance	-
Compatible Carrier Board		ROM-DB5901-SWA1	ROM-DB5901-SWA1	ROM-DB5901-SWA1 SOM-DB2510-00A1	ROM-DB5901-SWA2 SOM-DB2510-00A1
Processor System	CPU	NXP Arm i.MX 8M Cortex-A53 1.5 GHz	NXP Arm i.MX 8M Mini Cortex-A53 1.8 GHz	NXP Arm i.MX 8M Plus Cortex-A53 1.8 GHz	Rockchip Arm RK3399 Cortex-A72 1.8 GHz
	Technology	LPDDR4 3200 MT/s	LPDDR4 3000 MT/s	LPDDR4 4000 MT/s	LPDDR4 3732 MT/s
Memory	Capacity	On-board LPDDR4 2 GB	On-board LPDDR4 2 GB	On-board LPDDR4 6 GB	On-board LPDDR4 2 GB/4 GB
	Flash	16 GB eMMC NAND Flash for O.S. and 8 MB QSPI NOR FLASH for board information	16 GB eMMC NAND Flash for O.S. and 8 MB QSPI NOR FLASH for board information	16 GB eMMC Flash for O.S. and 8 MB QSPI NOR Flash for board information	16 GB/32 GB eMMC NAND Flash for O.S. and 8 MB SPI NOR Flash for board information
	LVDS	-	1 x Dual Channel LVDS**	2 x 24 bit single channel LVDS or 1 x dual channel LVDS	1 x Single Channel 24-bits LVDS(Default) or 1 x Dual Channel 24-bits LVDS (Shared with eDP, by BOM Option)
Graphics	MIPI-DSI	1 x 4-Lane MIPI-DSI	1 x 4-Lane MIPI-DSI**	1 x 4-Lane MIPI-DSI (shared with LVDS1)	1 x 4-lane MIPI DSI, up to 1920 x 1080 at 60Hz (Shared with 4-lane MIPI-CSI, by S/W Configuration)
	eDP	-	-	-	1 x eDP 1.3
	HDMI	1 x HDMI 2.0, up to 4096 x 2160 at 60 Hz	-	1 x HDMI 2.0, up to 3840 x 2160 at 30 Hz	3840 x 2160 at 60Hz
	Parallel RGB	-	-	-	-
	VGA	-	-	-	-
	DP	-	1 x DP, up to 1080p (By BOM Option)	-	-
	Graphics Engine	GC7000L/GC7000LVX, support OpenGL ES 3.1, 3.0, 2.0, 1.1; Open CL 1.2, and Vulkan	Vivante GC320, GC NanoUltra 3D GPU Support OpenGL ES 2.0, VG 1.1	GC7000UL with 2D/3D Graphic Acceleration supporting 1G Pixel/s, OpenVG 1.1, Open GL ES3.1, Vulkan, and Open CL 1.2 FP	Mali-T860MP4 GPU, supports OpenGL ES1.1/2.0/3.0, OpenCL1.2, DirectX 11.1
	H/W Video Codec	Decoder: HEVC/H.265(4Kp60), VP9(4Kp60), H.264(4Kp30), MPEG-2, MPEG-4p2, VC-1, VP8, RV9, AVS, MJPEG, H.263	Decoder: H.265, H.264, VP8/9 1080p Encoder: H.264, VP8 1080p	Decoder: 1080p60 HEVC/H.265 Main, VP9 Profile 0/2, VP8, AVC/H.264 Baseline/Main/High Encoder: 1080p60 AVC/H.264, HEVC/H.265	Decoder: H.265 up to 4Kx2K@60fps, H.264, H.263, VC-1, VP9, VP8, MVC, MPEG-1/2/4 Encoder: H.264 up to HP@level4.1, MVC and VP8
Ethernet	Chipset	1 x NXP i.MX8M Integrated RGMII 1 x RTL8119I PCIe GbE controller	NXP i.MX8M Mini Integrated RGMII	NXP i.MX8M Plus Integrated RGMII	Rockchip RK3399 Integrated RGMII
	Speed	2 x 10/100/1000 Mbps	1 x 10/100/1000 Mbps	2 x 10/100/1000 Mbps	1 x 10/100/1000 Mbps
RTC		Yes	Yes	Yes	Yes
WatchDog Timer		1~6553s, default 60s, power on/off 1s	1~6553s, default 60s, power on/off 1s	1~6553s, default 60s, power on/off 1s	1~6553s, default 60s, power on/off 1s
TPM		TPM2.0 (ST33HTPH2E32AHC2)	TPM2.0 (ST33HTPH2E32AHC2)	TPM2.0 (ST33HTPH2E32AHC2)	TPM2.0 (ST33HTPH2E32AHC2) (BOM Option)
I/O	PCIe	1 PCIe 2.0 1x	1 PCIe 2.0 1x	1 PCIe 3.0 1x	1 PCIe 2.0 1x
	SATA	-	-	-	1 SATA II
	USB	2 USB 3.2 Gen 1 by 1, 4 USB 2.0, 1 USB 2.0 OTG	4 USB 2.0, 1 USB 2.0 OTG	2 USB 3.2 Gen 1 by 1, 4 USB 2.0 Host, 1 USB 2.0 OTG	2 USB3.2 Gen1 by 1, 3 USB 2.0 Host, 1 USB 2.0 OTG
	Audio	2 x I2S	2 x I2S	2 x I2S	2 x I2S
	SPDIF	-	-	-	-
	SDIO	1	1	1	1
	Serial Port	4 UART (1 x 4-wire, 3 x 2-wire)	4 UART (2 x 2-wire, 2 x 4-wire)	4 UART (3 x 2-wire, 1 x 4-wire)	3 UART (2 x 2-wire, one share with debug console by jumper selection, 1 x 4-wire with H/W flow control)
	SPI	1	2	2	1
	CAN	-	-	2 x CAN-FD for WQ & WD SKU, 2 x CAN bus 2.0 A/B for CQ & CD SKU	-
	GPIO	12	12	14	12
	I2C	4	4	5	5
	Camera Input	1 x 4-Lane MIPI CSI-2 1 x 2-Lane MIPI CSI-2	1 x 4-Lane MIPI CSI-2	1 x 4-Lane MIPI CSI-2 1 x 2-Lane MIPI CSI-2	1 x 4-lane MIPI CSI-2 1 x 2-lane MIPI CSI-2
	System Bus	-	-	-	-
	Touch	-	-	-	-
	Keypad	-	-	-	-
PWM	-	-	-	-	
Power	Power Supply Voltage	4.75 ~ 5.25V	4.75 ~ 5.25V	4.75 ~ 5.25V	4.75 ~ 5.25V
	Power Consumption	5.3W (Max)	2.173W (Max)	3.7W (Max)	8.52W (Max)
Environment	Operational Temperature	0 ~ 60 °C / -40 ~ 85 °C	0 ~ 60 °C / -40~85 °C	0 ~ 60 °C/ -40 ~ 85 °C	0 ~ 60 °C/ -20 ~ 85 °C
	Operating Humidity	5% ~ 95% Relative Humidity, non-condensing	5% ~ 95% Relative Humidity, non-condensing	5% ~ 95% Relative Humidity, non-condensing	5% ~ 95% Relative Humidity, on-condensing
Mechanical	Dimensions (W x D)	82 x 50 mm	82 x 50 mm	82 x 50 mm	82 x 50 mm
Operating System		Linux Android	Linux Android	Linux Android	Debian Linux Android
Certifications		CE/FCC Class B	CE/FCC Class B	CE/FCC Class B	CE/FCC Class B

*LVDS & MIPI-DSI are shared interface

** Quad Core SKU support LVDS by default

** Dual/Core SKU support MIPI-DSI by default

RISC ARMプラットフォーム - ROM

コンピュータオンモジュール

NEW

NEW



Model Name		ROM-5880	ROM-7421	ROM-7510	ROM-7720	ROM-8720
Form Factor		SMARC V2.1	Qseven V2.0	Qseven V2.0	Qseven V2.1	COM Express Compact Type 7
Compatible Carrier Board		SOM-DB2510-ROA1	ROM-DB7501-SCA1E	ROM-DB7502-SCA1E	ROM-DB7503-SCA1E	SOM-DB5920-00A1
Processor System	CPU	Rockchip RK3568 Arm Quad-core Cortex-A55, up to 2.0 GHz	NXP Arm i.MX6 Plus Cortex-A9 1 GHz	TI Arm AM5728 Cortex-A15 1.5 GHz	NXP Arm i.MX 8 Cortex-A72 1.6 GHz	NXP Arm LS1046A Cortex-A72 1.8 GHz
	Technology	LPDDR4 3733 MT/s	DDR3 1066 MT/s	DDR3L 1066 MT/s	LPDDR4 3200 MT/s	LPDDR4 2133 MT/s
Memory	Capacity	On-board LPDDR4 2 GB/4 GB	On-board DDR3 1 GB/ 2 GB	On-board DDR3L 2 GB	On-board LPDDR4 4 GB	1 SO-DIMM supports ECC and Non-ECC, up to 32GB
	Flash	16/32 GB eMMC NAND Flash for O.S. and boot loader	4 GB eMMC NAND Flash for O.S. and 4 MB SPI NOR Flash for Advantech boot loader	8 GB eMMC NAND Flash for O.S. and 4 MB SPI NOR Flash for Advantech boot loader	16 GB eMMC NAND Flash for O.S. and 32 MB QSPI NOR FLASH for board information	16 GB eMMC/Micro SD socket for O.S. and 32 MB QSPI NOR Flash for board information
	LVDS	1 x Single Channel 24-bits LVDS (Shared with MIPI-DSI, eDP)	2 x 24-bit LVDS, 1366 x 768 for 1ch; 1920 x 1080 for 2ch at 60Hz	1 x 24-bit dual channel LVDS, 1920 x 1200	2 x 24-bit LVDS, 1366 x 768 for 1ch; 1920 x 1080 for 2ch at 60Hz	-
Graphics	MIPI-DSI	1 x 2ch MIPI-DSI up to 2560*1440@60Hz (Shared with LVDS/eDP, by BOM Option)	-	-	-	-
	eDP	1 x eDP (shared with LVDS, by BOM Option)	-	-	-	-
	HDMI	1 x HDMI2.0, up to 4096 x 2160	1920 x 1080 at 60Hz	1920 x 1080 at 60Hz	4096 x 2160 at 60Hz	-
	Parallel RGB	-	-	-	-	-
	VGA	-	-	-	-	-
	DP	-	-	-	-	-
	Graphics Engine	Arm Mali-G52 GPU, support OpenGL ES1.1/2.0/3.2, OpenCL2.0,Vulkan 1.0/ 1.1	2 x IPUs. OpenGL ES 3.0 for 3D, BitBit for 2D and OpenVG 1.1	2D-Graphics Accelerator (BB2D) Subsystem and Dual-Core PowerVR® SGX544™ 3D GPU	Vivante GC7000XS/VX, supports OpenGL 3.0, 2.1; OpenGL ES 3.2, 3.1, 3.0, 2.0, 1.1; OpenCL 1.2, 1.1; OpenVG 1.1; and Vulkan	-
	H/W Video Codec	Decoder:H.265 up to 4096x2304@60fps, H.264, VP9,VP8 Encoder:H.264/ up to 1920x1080@100fps,H.265 up to 1920x1080@100fps (4096x4096@10fps with TILE)	Decoder: MPEG-4 ASP, H.264 HP, H.263, MPEG-2 MP, MJPEG BP Encoder: MPEG-4 SP, H.264 BP, H.263, MJPEG BP	Video Processing Engine (VPE)	Decoder: HEVC/ H.265(4Kp60), VP9(4Kp60), H.264(4Kp30), MPEG-2 MPEG-4p2, VC-1, VP8, RV9, AVS, MJPEG, H.263	-
Ethernet	Chipset	2 x YT8531	NXP i.MX6 Plus integrated RGMII	TI Sitara Integrated RGMII	NXP i.MX8 Integrated RGMII	NXP LS1046A integrated XFI, RGMII, SGMII
	Speed	2 x 10/100/1000 Mbps	1 x 10/100/1000 Mbps	1 x 10/100/1000 Mbps	1 x 10/100/1000 Mbps	4 x 10/100/1000 Mbps 2 x 10GBASE-KR
RTC		Yes	Yes	Yes	Yes	Yes
WatchDog Timer		1~6553s, default 60s, power on/off 1s	1~6553s, default 60s, power on/off 1s	1~6553s, default 60s, power on/off 1s	1~6553s, default 60s, power on/off 1s	1~6553s, default 60s, power on/off 1s
TPM		-	-	-	TPM2.0 (ST33HTPH2E32AHC2)	TPM2.0 (ST33HTPH2E32AHC2)
I/O	PCIe	2 x PCIe 3.0 1lane, 1 x PCIe 2.0 1lane (shared with SATA, by BOM Option)	1 PCIe 1x	2 PCIe 1x	2 PCIe 1x	3 PCIe 3.0, 2 PCIe 2.0
	SATA	1, default (shared with PCIe2.0, by BOM Option)	1 SATA II	1 SATA II	1 SATA III	SATA 3.0 x1 (only supported on ROM-8720WQ-RA1E)
	USB	1 USB3.0, 2 USB2.0, 1 USB3.0 OTG (Host/Device mode)	4 USB 2.0, 1 USB 2.0 OTG	1 USB 3.2 Gen1 by 1, 1 USB 2.0 OTG, 4 USB 2.0 Host	3 USB 3.2 Gen1 by 1, 1 USB 2.0 OTG	3 USB 3.2 Gen 1 by 1, 3 USB 2.0
	Audio	1 x I2S	I2S	I2S	I2S	-
	SPDIF	-	-	-	-	-
	SDIO	1	1	1	1	-
	Serial Port	"2 x 2-wire UART 2 x 4-wire UART"	2 UART (2 x 4-wire w/ 3.3V)	2 UART (2 x 4-wire)	2 UART (2 x 4-wire)	2 UART (4-wire)
	SPI	1	1	1	1	1
	CAN	2	1 x CAN bus 2.0 A/B	1 x CAN bus 2.0 A/B	1 x CAN bus 2.0 A/B	-
	GPIO	14	8	8	8	8
	I2C	5	2	2	2	1
	Camera Input	1 x 4-lane MIPI CSI-2 or 2 x 2-lane MIPI CSI-2	1 x 4-Lane MIPI CSI for CE & CU SKU	-	1 x 4-Lane MIPI CSI-2 1 x 2-Lane MIPI CSI-2	-
	System Bus	-	-	-	-	-
	Touch	-	-	-	-	-
	Keypad	-	-	-	-	-
PWM	-	-	2	-	-	
Power	Power Supply Voltage	4.75~5.25V	5V	5V	5V	12V
	Power Consumption	4.57W (Max)	4W (Max)	10W (Max)	10.96W (Max)	TBD
Environment	Operating Temperature	0 ~ 60 °C / -40 ~ 85 °C	0~60 °C / -40~85 °C	0~60 °C / -40~85 °C	0~60 °C / -40~85 °C	-20 ~ 70 °C
	Operating Humidity	5% ~ 95% Relative Humidity, non-condensing	5% ~ 95% Relative Humidity, non-condensing	5% ~ 95% Relative Humidity, non-condensing	5% ~ 95% Relative Humidity, non-condensing	5% ~ 95% relative humidity, non-condensing
Mechanical	Dimensions (W x D)	82 x 50 mm	70 x 70 mm	70 x 70 mm	70 x 70 mm	95 x 95 mm
Operating System		Linux Debian 10	Linux Andorid	Linux	Linux Android	Ubuntu
Certifications		CE/FCC Class B	CE/FCC Class B	CE/FCC Class B	CE/FCC Class B	CE/FCC Class B

RISC ARMプラットフォーム - RSB

シングルボードコンピュータ

UI040-Express

UI040-Express

NEW

UI040-Express

NEW

UI040-Express

NEW



Model Name		RSB-3430	RSB-3710	RSB-3720	RSB-3730	
Form Factor		2.5" UI040-Express SBC	2.5" UI040-Express SBC	2.5" UI040-Express SBC	2.5" UI040-Express SBC	
Processor System		CPU NXP Arm i.MX6 Cortex-A9 1 GHz	Rockchip Arm RK3399 Cortex-A72 1.8 GHz	NXP Arm i.MX 8M Plus Cortex-A53 1.8 GHz	NXP i.MX 8M Mini Cortex-A53 Quad core up to 1.8GHz	
AI Performance		-	-	2.3 TOPS NPU	-	
Memory		Technology	DDR3 1066 MT/s	LPDDR4 1333 MT/s	LPDDR4 1333MHz	
		Capacity	On-board DDR3 1 GB	On-board LPDDR4 2 GB	On-board LPDDR4 4 GB / 6 GB	On-board DDR3 1 GB
		Flash	4 GB eMMC NAND Flash for O.S. and 4 MB SPI NOR Flash for Advantech boot loader	16 GB eMMC NAND Flash for O.S. and Advantech boot loader	16 GB eMMC Flash for O.S. and 8 MB QSPI NOR Flash for board information	4 GB eMMC Flash for O.S. and 4 MB NOR Flash for Advantech boot loader
Graphics		LVDS	2 x 18/24-bit LVDS, 1366 x 768 for 1ch, 1920 x 1080 for 2ch at 60Hz	1 x 18/24-bit LVDS with 1920 x 1200 for dual channels @60Hz	2 x 24-bit Single Channel or 1 x Dual Channel LVDS	1 Dual Channel 18/24 Bit (shared with HDMI, default as HDMI)
		MIPI-DSI	-	-	1 x 4-Lane MIPI-DSI (Shared with LVDS1)	x-
		HDMI	1920 x 1080 at 60Hz	1 x HDMI 2.0, 1920 x 1080 at 60Hz	1 x HDMI 2.0, up to 3840 x 2160 at 30Hz	1 HDMI 2.0
		VGA	-	-	-	-
		eDP	-	1 x Max 2.7Gbps (shared with LVDS)	-	-
		Graphics Engine	2 IPU's, OpenGL ES 2.0 for 3D, BitBit for 2D and OpenVG 1.1	OpenGL ES 1.1/2.0/3.1, OpenGL 1.1, DirectX 11	GC7000UL with 2D/3D Graphic Acceleration supporting 1G Pixel/s, OpenVG 1.1, Open GL ES3.1, Vulkan, and Open CL 1.2 FP.	Vivante GC320, GC NanoUltra 3D GPU Support OpenGL ES 2.0, VG 1.1
		H/W Video Codec	Decoder: MPEG-4 ASP, H.264 HP, H.263, MPEG-2 MP, MJPEG BP Encoder: MPEG-4 SP, H.264 BP, H.263, MJPEG BP	Decoder: MPEG-1, MPEG-2, MPEG-4, H.263, H.264, AVS, VC-1, VP8, MVC, HEVC/H.265 decoder, 4k@60FPS Encoder: H.264 (BP@level4.0, MP, HP@level4.0), MVC and VP8	Decoder: 1080p60 HEVC/H.265 Main, VP9 Profile 0/2, VP8, AVC/H.264 Baseline/Main/High Encoder: 1080p60 AVC/H.264, HEVC/H.265	Decoder: 1080p60 H265, VP9;1080p60 H264, VP8 Encoder: 1080p60 H.264, VP8
Ethernet		Chipset NXP i.MX6 integrated RGMII	Rockchip RK3399 Integrated RGMII	NXP i.MX8M Plus integrated RGMII	RTL8211FS	
Speed		1 x 10/100/1000 Mbps	2 x 10/100/1000 Mbps	2 x 10/100/1000 Mbps	10/100/1000 Mbps	
WatchDog Timer		1~6553s, default 60s, power on/ off 1s	1~6553s, default 60s, power on/ off 1s	1~6553s, default 60s, power on/ off 1s	Yes	
TPM		-	-	TPM2.0 (ST33HTPH2E32AHC2)	-	
I/O		SATA	-	-	-	
		SATA Power	-	-	-	
		USB	2 x USB 2.0 Type A, 4 x USB 2.0 in UIO 40	1 USB 3.2 Gen 1 by 1 Type A, 1 USB 2.0 Type A, 3 USB 2.0 in UIO 40, 1 x USB OTG	1 USB 3.2 Gen 1 by 1 Type A, 1 USB 2.0 Type A, 1 USB3.2 Gen 1 by 1 and 2 USB 2.0 in UIO 40	2 x USB2.0 by typeA, 1 x USB OTG
		Audio	1 x Line-out, 1 x Line-in by pin header	1 x Line out, 1x Mic in by pin header (By BOM option)	1 x Line-out, 1 x Line-in by pin header	1 Mic. in / Line out by pin header (option)
		SPDIF	-	-	-	-
		SDIO	1 x Micro SD slot	1 x Micro SD slot	1 x Micro SD slot	1x Micro SD slot
		Serial Port	1 x 4-wire RS-232/422/485 by DB9, 3 x 2-wire RS-232 in UIO 40	1 x RS-232/Debug by pin header, 2 x 2-wires RS-232 in UIO 40	1 x 4-wire RS-232/422/485 by pin header (default used as debug console), 2 x 2-wire RS-232 in UIO 40	1 x RS232 for debug 1 x RS232/485
		SPI	-	-	-	-
		CAN	1 CAN bus 2.0 in UIO 40 (share w/ 1 UART)	-	1 CAN-FD/CAN bus* by pin header, 1 CAN 2.0B in UIO 40	-
		GPIO	12 GPIO in UIO 40, 3.3V level	8	10 GPIO in UIO 40, 3.3V level	8 in UIO 40
		I2C	1 in UIO 40	1 in UIO 40	1 in UIO 40	2 in UIO 40
		Camera Input	-	-	2 x 4-Lane MIPI CSI-2	-
		System Bus	-	-	-	-
		Touch	-	-	-	-
		Keypad	-	-	-	-
Button	-	1 x Reset button	1 x Reset button	-		
Indicator		1 Power LED 1 Programmable LED	1 Power LED	1 Green Power LED 1 Blue Programmable LED	1 Power LED	
Expansion		Mini PCIe	1 x mini PCIe slot (USB signal only)	1 x mini PCIe slot (USB signal only)	1 Full Size Mini PCIe Slot (with USB)	
		M.2	1 x M.2 2230 Key E slot	-	1 x M.2 2230 Key E slot (USB/Pcie/SDIO/UART/I2S)	1 E-Key 2230, w/ SDIO & UART&PCIE &USB signal
		SD Socket	1 x Micro SD slot	1 x Micro SD slot	1 x Micro SD slot	1 Micro SD Slot
Power		SIM	1 x Nano SIM slot	1 x Nano SIM slot	1 Nano SIM Slot	
		Power Supply Voltage	12 V	12 V	12 V	+12 V
		Power Type	DC-in	Lockable DC-in (2pin type connector by BOM option)	Lockable DC-in (2pin type connector by BOM option)	Lockable DC-Jack (2pin type connector by BOM option)
Power Consumption		4.05W (Max)	11.5W (Max)	7.13W (Max)	TBD	
Environment		Operating Temperature	0 ~ 60 °C / -40 ~ 85 °C	0 ~ 60 °C / -20 ~ 85 °C	0 ~ 60 °C / -40 ~ 85 °C	0 ~ 60 °C / -40 ~ 85 °C
		Operating Humidity	5%~95% Relative Humidity, non-condensing	5%~95% Relative humidity, non-condensing	5%~95% Relative humidity, non-condensing	5%~95% Relative humidity, non-condensing
Mechanical		Dimensions (W x D x H)	100 x 72 x 20 mm	100 x 72 x 19 mm	100 x 72 x 19 mm	100 x 72 x 19 mm
Operating System		Linux Android	Android Debian Linux	Linux Android	Yocto3.0, and Android	
Certifications		CE/FCC Class B	CE/FCC Class B	CE/FCC Class B	CE/FCC Class B	

*CAN-FD with WQ & WD SKU, CAN bus with CQ & CD SKU.

RISC ARMプラットフォーム - RSB

シングルボードコンピュータ



Model Name		RSB-3810	RSB-4220	RSB-4411	RSB-4760
Form Factor		2.5" UIO40-Express SBC	3.5" SBC	3.5" SBC	3.5" SBC
Processor System	CPU	MediaTek Genio 1200	TI Arm AM3352 Cortex-A8 1 GHz	NXP Arm i.MX6 Cortex-A9 1 GHz	Qualcomm Arm APQ8016 Cortex-A53 1.2 GHz
	AI Performance	4.8 TOPS Neural Network performance	-	-	-
Memory	Technology	-	DDR3 800 MT/s	DDR3 1066 MT/s	LPDDR3 1066 MT/s
	Capacity	-	On-board DDR3 512 MB	On-board DDR3 1 GB	On-board LPDDR3 1 GB/2 GB
	Flash	-	4 GB eMMC NAND Flash for O.S. and 4 MB SPI NOR Flash for Advantech boot loader	4 GB eMMC NAND Flash for O.S. and 4 MB SPI NOR Flash for Advantech boot loader	8 GB eMMC NAND Flash for O.S. and 4 MB SPI NOR Flash for Advantech boot loader
Graphics	LVDS	1 dual channel LVDS	1 x 18-bit LVDS, 1366 x 768	1 x 18/24-bit LVDS, 1366 x 768 for 1ch; 1920 x 1080 for 2ch at 60Hz	-
	MIPI-DSI	-	-	-	-
	HDMI	1 HDMI 2.0, 4K 60	-	1920 x 1080 at 60Hz	1920 x 1080 at 60Hz
	VGA	-	-	1920 x 1080 at 60Hz	-
	eDP	-	-	-	-
	Graphics Engine	Arm Mali-G57 MP5	Direct3D Mobile, OGL-ES 1.1 and 2.0, OpenVG 1.0, and OpenMax	2 IPU's. OpenGL ES 2.0 for 3D, BitBlit for 2D and OpenVG 1.1	Adreno™ A306 3D graphics core
	H/W Video Codec	Decoder: 4K 90fps AV1/VP9/HEVC/H.264 Encoder: 4K 60fps HEVC/H.264	-	Decoder: MPEG-4 ASP, H.264 HP, H.263, MPEG-2 MP, MJPEG BP Encoder: MPEG-4 SP, H.264 BP, H.263, MJPEG BP	Decoder: 30 fps 1080p (MPEG-4/H.264/H.263/DivX/MPEG2/VC1/Soreson/VP8) Encoder: 30 fps 720p (H.264 Baseline/MPEG-4); 30 fps 1080p (MPEG-4/H.264/VP8/H.263)
Ethernet	Chipset	RTL8135	TI AM3352 integrated RGMII	NXP i.MX6 Integrated RGMII	Microchip LAN7500
	Speed	10/100/1000 Mbps	2 x 10/100/1000 Mbps	1 x 10/100/1000 Mbps	1 x 10/100/1000 Mbps
WatchDog Timer		Yes	1~6553s, default 60s, power on/off 1s	1~6553s, default 60s, power on/off 1s	1~6553s, default 60s, power on/off 1s
TPM		-	-	-	-
I/O	SATA	-	-	1	-
	SATA Power	-	-	1	-
	USB	1 x USB3.0 Host, 1 USB2.0 Host	1 x USB 2.0 Host/OTG (Jumper selection)	1 x USB 2.0 OTG, 2 x USB 2.0 Type A, 3 x USB 2.0 pin header	2 x USB 2.0 Host 1 x USB 2.0 OTG
	Audio	Mic-in, Line-Out Connectors	-	1 x Line-out, 1 x Mic-in via pin header	1 x Line-out, 1 x Mic-in by pin header
	SPDIF	-	-	-	-
	SDIO	1x Micro SD slot	1 x SD slot	1 x SD slot	1 x SD slot
	Serial Port	1x 4 wires RS-232/422/485 by pin header + COM debug console	1 x 4-wire RS-232/422/485 and 4 x 2-wire RS-232	2 x 2-wire RS-232 by pin header 1 x 4-wire RS-232/422/485	1 x 4-wire RS-232/422/485
	SPI	-	-	1	1
	CAN	-	1	2	-
	GPIO	10 in UIO 40	4 GPI/ 4 GPO w/ isolation	20 GPIO w/o Isolation via pin header	8 GPIO via D-SUB 9 / 8 GPIO via pin header (3.3V TTL level)
	I2C	1 in UIO 40	1	2	1
	Camera Input	3x 4-Lane MIPI-CSI2	-	1 x 4-Lane MIPI CSI2	-
	System Bus	-	-	-	-
	Touch	-	-	-	-
Indicator	LED	-	1 Power LED 1 Programmable LED	1 Power LED	1 Power LED 1 RF status LED
	Expansion	Mini PCIe	1 x mini PCIe slot (USB signal only)	1 x mini PCIe slot	1 x mini PCIe slot
Power	M.2	1 M.2 2230 Key E Slot / 1 M.2 3052 Key B Slot	-	1 x M.2 2230 Key E slot	1 x M.2 2230 Key E slot
	SD Socket	1 Micro SD Slot	1 x SD slot	1 x SD slot	1 x SD slot
	SIM	1 Nano SIM Slot	-	1 x SIM slot	1 x SIM slot
	Power Supply Voltage	+12 V	12 ~ 24 V	12 ~ 24 V	9~36V
Environment	Power Type	Lockable DC-Jack (2pin type connector by BOM option)	2-pole lockable DC-in	DC-in	DC-in
	Power Consumption	TBD	4W (Max)	5.6W (Max)	6W (Max)
	Operating Temperature	0 ~ 60 °C / -40 ~ 85 °C	0 ~ 60 °C / -40 ~ 85 °C	0 ~ 60 °C / -40 ~ 85 °C	0 ~ 60 °C
Mechanical	Operating Humidity	5%~95% Relative humidity, non-condensing	5% ~ 95% Relative Humidity, non-condensing	5% ~ 95% Relative Humidity, non-condensing	5% ~ 95% Relative Humidity, non-condensing
	Dimensions (W x D x H)	100 x 72 x 19 mm	146 x 102 x 16 mm	146 x 102 x 20 mm	146 x 102 x 20 mm
Operating System		Yocto3.0, and Android	Linux	Linux Android	Yocto Linux Android Debian Linux
Certifications		CE/FCC Class B	CE/FCC Class B	CE/FCC Class B	CE/FCC Class B

RISC ARMプラットフォーム - RSB

シングルボードコンピュータ



Model Name		RSB-4680	RSB-4710	RSB-4810	RSB-6410
Form Factor		3.5" SBC	3.5" SBC	3.5" SBC	Mini-ITX SBC
Processor System	CPU	Rockchip Arm RK3288 Cortex-A17 1.6 GHz	Rockchip Arm RK3399 Cortex-A72 1.8 GHz	Rockchip Arm RK3568 Cortex-A55 2 GHz	NXP Arm i.MX6 Cortex-A9 1 GHz
	AI Performance	-	-	0.8 TOPS NPU	-
Memory	Technology	DDR3L 1333 MT/s	LPDDR4 1333 MT/s	LPDDR4 3200 MT/s	DDR3 1066 MT/s
	Capacity	On-board DDR3L 2 GB	On-board LPDDR4 2 GB	On-board LPDDR4 2 GB/4 GB	On-board DDR3 1 GB/2 GB
	Flash	8 GB eMMC NAND Flash for O.S. and Advantech boot loader	16 GB eMMC NAND Flash for O.S.	16 GB/32 GB eMMC NAND Flash for O.S. and Advantech boot loader	8 GB eMMC NAND Flash for O.S. and 4 MB SPI NOR Flash for Advantech boot loader
Graphics	LVDS	1 x 18/24/30-bit LVDS, 1366 x 768 for 1ch; 1920 x 1080 for 2ch at 60Hz	1 x 18/24-bit LVDS with 1920 x 1200 for dual channel at 60Hz	1 x single channel LVDS	1 x 18/24-bit LVDS, 1366 x 768 for 1ch; 1920 x 1080 for 2ch at 60Hz
	MIPI-DSI	-	-	1 x 4-Lane MIPI-DSI (shared with LVDS connector by BOM option)	-
	HDMI	3840 x 2160 at 60Hz	1 x 3840 x 2160 at 60Hz 1 x 1920 x 1080 at 60Hz	4096 x 2160 at 60Hz	1920 x 1080 at 60Hz
	VGA	1920 x 1200 at 60Hz	-	-	1920 x 1080 at 60Hz
	eDP	-	1, Max 2.7Gbps	1	-
	Graphics Engine	OpenGL ES1.1/2.0/3.0, OpenGL1.1, DirectX11	OpenGL ES 1.1/2.0/3.1, OpenGL 1.1, DirectX 11	3D Graphics Engine: Mali-G52 Support OpenGL ES 1.1/2.0/3.2, Vulkan 1.0/1.1, OpenGL 2.0	2 IPUs. OpenGL ES 2.0 for 3D, BitBit for 2D and OpenVG 1.1
H/W Video Codec	Decoder: MPEG-1, MPEG-2, MPEG-4, H.263, H.264, AVS, VC-1, VP8, MVC, HEVC/H.265 decoder, 4k@60FPS Encoder: H.264 (BP@level4.0, MP, HP@level4.0), MVC and VP8	Decoder: MPEG-1, MPEG-2, MPEG-4, H.263, H.264, AVS, VC-1, VP8, MVC, HEVC/H.265 decoder, 4k@60 Encoder: H.264 (BP@level4.0, MP, HP@level4.0), MVC and VP8	Decoder: H.265/H.264/PV9 up to 4Kx2K @ 60fps, VP8/VC1/MPEG-4/2/1, up to 1920x1080@60fps Encoder: H.265/H.264 up to 1920x1080@100fps. Support YUV/RGB video source with rotation and mirror	Decoder: MPEG-4 ASP, H.264 HP, H.263, MPEG-2 MP, MJPEG BP Encoder: MPEG-4 SP, H.264 BP, H.263, MJPEG BP	
Ethernet	Chipset	Rockchip RK3288 Integrated RGMII	Rockchip RK3399 Integrated RGMII	Rockchip RK3568 Integrated RGMII	NXP i.MX6 integrated RGMII
	Speed	1 x 10/100/1000 Mbps	2 x 10/100/1000 Mbps	2 x 10/100/1000 Mbps	1 x 10/100/1000 Mbps
WatchDog Timer		0~22s, default 22s	0~21s, default 21s	0~21s, default 21s	1~6553s, default 60s, power on/off 1s
TPM		-	-	-	-
I/O	SATA	-	-	1 x SATA III	1
	SATA Power	-	-	1	1
	USB	1 x USB 2.0 OTG, 2 x USB 2.0 Type A, 3 x USB 2.0 pin header	1 x USB 3.2 Gen1 by 1, 1 x USB 2.0 Type A, 3 x USB 2.0 pin header 1 x USB 2.0 OTG	1 x USB 3.2 Gen 1 by 1 Type A, 1 x USB 3.2 Gen 1 by 1 Type A/OTG* 2 x USB2.0 Pin header	6 x USB 2.0 Type A
	Audio	1 x Line-out, 1 x Mic-in by pin header	1 x Line-out/Mic-in/Line-in/Speaker by pin header	1 x HP, 1 x Mic, 1 x speaker by pin header	1 x Line-out, 1 x Mic-in
	SPDIF	-	-	-	-
	SDIO	1 x Micro SD slot	1 x Micro SD slot	1 x Micro SD slot	1 x SD slot
	Serial Port	1 x 4-wire RS-232/485, DB9 1 x 2-wire RS-232/Debug port, pin header selected by jumper 4 x 4-wire RS-232, pin header	1 x 2-wire RS-232/Debug 3 x 2-wire RS-232 2 x 4-wire RS-232/485	1 x 2-wire RS-232 by DB9 1 x 2-wire RS-232 by pin header 2 x 4-wire RS-232, 2 x RS-232/485 by pin header 1 x Debug by pin header	3 x 4-wire RS-232 and 1 x 4-wire RS-232/422/485
	SPI	1	1	1	1
	CAN	-	-	2 CAN-FD by pin header	1
	GPIO	8 GPIO via pin header (3.3V TTL level)	5 GPIO	6 GPIO via pin header (3.3V TTL level)	18 GPIO
	I2C	1	1	1	2
	Camera Input	-	1x MIPI CSI	-	-
	System Bus	-	-	-	-
	Touch	-	-	-	-
Keypad	-	-	-	-	
Indicator	LED	1 Power LED	1 Power LED	1 Power LED 1 SATA LED	1 Power LED
	Expansion	1 x mini PCIe slot	1 x mini PCIe slot (USB signal only)	1 x mini PCIe slot (USB2.0/PCIe3.0)	1 x mini PCIe slot
Expansion	M.2	1 x M.2 2230 Key E slot (SDIO 3.0 & UART signal only)	1 x M.2 2230 Key E slot (USB2.0/PCIe/SDIO/UART)	1 x M.2 2230 Key E slot (USB2.0/PCIe3.0/SDIO/UART)	1 x M.2 2230 Key E slot
	SD Socket	1 x Micro SD Slot	1 x Micro SD slot	1 x Micro SD slot	1 x SD slot
	SIM	1 x SIM slot	1 x Nano SIM slot	1 x Nano SIM slot	1 x SIM slot
Power	Power Supply Voltage	12V	12 V	12 V	12 V
	Power Type	DC-in	DC-in	Lockable DC-in (2pin type connector by BOM option)	DC-in
	Power Consumption	11.6W (Max)	15W (Max)	TBD	9W (Max)
Environment	Operational Temperature	0 ~ 60°C / -20 ~ 85°C	0 ~ 60°C / -20 ~ 85°C	0 ~ 60 °C / -40 ~ 85 °C	0 ~ 60 °C
	Operating Humidity	5% ~ 95% Relative Humidity, non-condensing	5% ~ 95% Relative Humidity, non-condensing	5% ~ 95% Relative humidity, non-condensing	5% ~ 95% Relative Humidity, non-condensing
Mechanical	Dimensions (W x D x H)	146 x 102 x 20 mm	146 x 102 x 20 mm	146 x 102 x 20 mm	170 x 170 x 35 mm
Operating System		Android Debian	Android Debian	Android Debian	Yocto Linux Android
Certifications		CE/FCC Class B	CE/FCC Class B	CE/FCC Class B	CE/FCC Class B

*Shared with one of the USB 3.2 Gen 1 by 1 Type A, DM, DP signal, ID pin by jumper selection

RISC ARMプラットフォーム - UIO-Express

I/O拡張ボード - UIO40-Express

UIO-4030

1 x RS-485
1 x RS-232
1 x 4 DIs & 4 DOs



CE FC

Specifications

General	
USB	–
RS-232	1 x 2-wire RS-232
RS-485	1 x RS-485
GPIO	4 DIs, 4 DOs (2.5-24V)
CAN Bus	–
GbE	–
Dimension	146 x 31 x 22 mm
Environment	
Weight	180g
Operating Humidity	5% ~ 95% relative humidity, non-condensing
Operating Temperature	-40 ~ 85 °C
Storage Temperature	-40 ~ 85 °C and 60 °C @ 95% RH Non-Condensing

Ordering Information

P/N	Description
UIO-4030	UIO-4030, 1 RS232, 4 DIs, 4 DOs, 1 RS-485

UIO-4034

1 x CAN bus
2 x RS-232



CE FC

Specifications

General	
USB	–
RS-232	2 x 2-wire RS-232
RS-485	–
GPIO	–
CAN Bus	1 x CAN bus 2.0B, 1 Mbps
GbE	–
Dimension	146 x 31 x 22 mm
Environment	
Weight	180g
Operating Humidity	5% ~ 95% relative humidity, non-condensing
Operating Temperature	-40 ~ 85 °C
Storage Temperature	-40 ~ 85 °C and 60 °C @ 95% RH Non-Condensing

Ordering Information

P/N	Description
UIO-4034	UIO-4034, 1 CAN, 2 RS-232

Compatible Main Boards

Part No.	Description
RSB-3430XD-PXA1E*	RSB-3430 NXP i.MX6 Series 2.5" UIO Main Board
RSB-3720XX-XCA1E*	RSB-3720 NXP i.MX8M Plus Series 2.5" UIO Main Board
RSB-3710XX-XXA1E*	RSB-3710 Rockchip RK3399 Series 2.5" UIO Main Board

*X indicates different configurations, please refer to each main board's datasheet for complete P/N to order.

UIO-4032

1 x GbE
2 x USB2.0
2 x RS-232



CE FC

Specifications

General	
USB	2 x USB 2.0
RS-232	2 x 2-wire RS-232
RS-485	–
GPIO	–
CAN Bus	–
GbE	1 x GbE
Dimension	146 x 31 x 22 mm
Environment	
Weight	200g
Operating Humidity	5% ~ 95% relative humidity, non-condensing
Operating Temperature	-40 ~ 85 °C
Storage Temperature	-40 ~ 85 °C and 60 °C @ 95% RH Non-Condensing

Ordering Information

P/N	Description
UIO-4032	UIO-4032, 1 GbE, 2 USB, 2 RS-232

UIO-4036

4 x GbE



CE FC

Specifications

General	
USB	–
RS-232	–
RS-485	–
GPIO	–
CAN Bus	–
GbE	4 x GbE hub
Dimension	146 x 31 x 20 mm
Environment	
Weight	200g
Operating Humidity	5% ~ 95% relative humidity, non-condensing
Operating Temperature	-40 ~ 85 °C
Storage Temperature	-40 ~ 85 °C and 60 °C @ 95% RH Non-Condensing

Ordering Information

P/N	Description
UIO-4036	UIO-4036, 4 GbE

RISC ARMプラットフォーム - UIO-Express

UIO-4038

4 x GbE (3 x LAN; 1 x WAN)



CE FC

Specifications

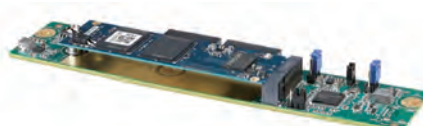
General	
USB	-
RS-232	-
RS-485	-
GPIO	-
CAN Bus	-
GbE	4 x GbE (3 x LAN; 1 x WAN)
Dimension	146 x 100 x 20mm
Environment	
Weight	300g
Operating Humidity	5 ~ 95% relative humidity, non-condensing
Operating Temperature	-40 ~ 85 °C
Storage Temperature	-40 ~ 85 °C and 60 °C @ 95% RH Non-Condensing

Ordering Information

P/N	Description
UIO-4038	UIO-4038, 3 x LAN 1 X WAN

UIO-4040

NVMe SSD



CE FC

Specifications

General	
USB	-
RS-232	-
RS-485	-
GPIO	-
CAN Bus	-
GbE	-
NVMe SSD	SQF-C8Bxx-xG-EDx
Dimension	146 x 31 x 20mm
Environment	
Weight	200g
Operating Humidity	5 ~ 95% relative humidity, non-condensing
Operating Temperature	-40 ~ 85 °C
Storage Temperature	-40 ~ 85 °C and 60 °C @ 95% RH Non-Condensing

Ordering Information

P/N	Description
UIO-4040-128G	UIO-4040, NVMe SSD Storage 128G
UIO-4040-256G	UIO-4040, NVMe SSD Storage 256G
UIO-4040-512G	UIO-4040, NVMe SSD Storage 512G
UIO-4040-1TB	UIO-4040, NVMe SSD Storage 1TB
UIO-4040-2TB	UIO-4040, NVMe SSD Storage 2TB

エッジAIソリューション - VEGA/FaceView

AIアクセラレータモジュール



	VEGA-230	VEGA-320	VEGA-330		VEGA-340	
SoC	Kneron KL520	One Intel® Movidius™ Myriad™ X MA2485	One Intel® Movidius™ Myriad™ X MA2485	Two Intel® Movidius™ Myriad™ X MA2485	Four Intel® Movidius™ Myriad™ X MA2485	Eight Intel® Movidius™ Myriad™ X MA2485
Form Factor	Full size Mini PCIe	M.2 2230 (Key A+E)	Full size Mini PCIe		PCI Express Specification V2.0	
Signal Interface	USB2.0	PCIe Gen2 x1 and USB 2.0		PCI Express x4		
Power Consumption	0.5W	3.8W	3.8W	7.6W	Idle Mode: 6.7W Heavy Loading: 16.8W	Idle Mode: 9.6W Heavy Loading: 28W
Cooling	Passive Cooling	Passive Cooling	Passive Cooling		Active fan	
Operating Temperature	0°C ~ 70°C	-20 ~ 60 °C, with 0.7 m/s air flow	-20 ~ 60 °C, with 0.7 m/s air flow	-20 ~ 55°C, with 0.7 m/s air flow	-20 ~ 60 °C	
Power Source	-	-	-	-	Default power source from PCIe gold finger 6-pin connector for 12VDC input by cable	
Operating Systems	-	Windows 10 Enterprise 64bit Ubuntu 16.04.3 LTS (64 bit) CentOS 7.4 (64 bit)			Windows 10 Enterprise 64 bit Ubuntu 18.04. LTS, 64-bit	
Dimension (mm)	30 x 50.95 x 4.80	22 x 30 x 3.63	30 x 50.95 x 4.86		171.07 x 68.9	
AI Framework Support	ONNX, TensorFlow, Keras, Caffe, PyTorch	TensorFlow, Caffe				
Software/Toolkit	NA	Advantech Edge AI Suite and Intel OpenVINO R2 2019 or the latest				

AI顔認識ソフトウェア FaceView

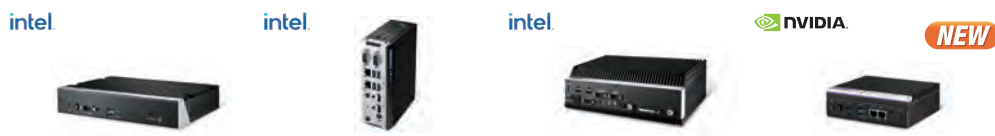


	Facial Recognition	Facial Mask Detection	Body Temperature Monitoring
OS	MS Windows 10	MS Windows 10	MS Windows 10
Software Latest Version	V1.2.2.10609 (SW)	V1.2.2.10609 (SW)	FMH V4.3.1
Face Detection	Support	Support	Support
Face Recognition	Support	Support	Support
Face Tracking	Support	Support	Support
Masked Face Recognition	Not support	Support	Support
Mask Detection	Not support	Support	Support
Thermal Detection	Not support	Not support	Support
FR Captured Facial Attributes	Gender, Age, Emotion, Face Angles	Gender, Age, Emotion, Face Angles, Mask	No emotion, fewer attributes
Live Video Support	web camera, IP cam	web camera, IP cam	web camera+Thermal camera, IP cam
Emotion Detection	Happy, Sad, Angry, Surprise & Calm	Happy, Sad, Angry, Surprise & Calm	Not support
SDK Support Chipset (CPU/GPU/VPU) *disregard OS	Intel® 64, ARM64™, NVIDIA® GPU, NVIDIA® Jetson, Intel® Movidius™ VPU, MediaTek i350 APU, Qualcomm SoC(GPU), NXP i.MX8		
Development Tool	C++, RESTful API(DB access)	C++, RESTful API(DB access)	HTTP(limited)
AI Inference Engine Support *fit on demand	Intel® OpenVINO™, NVIDIA® TensorRT / CUDA, Qualcomm SNPE, MediaTek NeuroPilot, CoreML		

エッジAIソリューション - AIR

エッジAI推論システム

AIRシリーズ



		AIR-100	AIR-101	AIR-200	AIR-020X
Processor	CPU	Intel Atom E3950 Quad core SoC	Intel Atom E3940 Quad core SoC	Intel® i5-6442EQ QC SoC	ARM v8.2 Six core Carmel processors, Max. 1.9 GHz
	GPU	Integrated NVIDIA GT1030	-	Intel QM170	Volta 384 CUDA core and 48 Tensor cores
	VPU	One Intel Movidius MA2485	Two Intel Movidius MA2485	Two Intel Movidius MA2485	-
AI Spec	AI Engine	Intel Movidius VPU	Intel Movidius VPU	Intel Movidius VPU	NVIDIA Xavier NX
	AI Performance	4 TOPS	8 TOPS	8 TOPS	21 TOPS (INT8)
Memory		4GB memory built-in	8GB memory built-in	8GB memory built-in	8 GB LPDDR4 on board
Storage		64GB 2.5" SSD built-in	64GB SATA Slim SSD built-in	64GB 2.5" SSD built-in	16G eMMC on board, M.2 2280 128GB built-in
Display		4x HDMI	2x HDMI	2x HDMI	1x HDMI
I/O Ports	Ethernet	1x GbE	2x GbE	2x GbE	2x GbE
	COM	1x RS-232	2x RS-232/422/485, COM2 w/ 5V/12V power	3x RS-232/422/485	2x RS-232/422/485
	USB	2x USB2.0, 2x USB3.0	4x USB 3.0	3x USB3.0	2x USB 3.2 Type A, 1x USB Type C
	Digital IO	-	8 bit reserved	4x DI, 4x DO	8 bit, 4bit in, 4bit out
	CANbus	-	-	optional	1x DB9
Expansion	Expansion Slot	1x Full-size mPCIe	M.2 2230 E key	1x Full-size mPCIe 1x M.2 2230 E key	1x Full-size mPCIe w/ nano SIM slot
Power	Power Input	19 V _{DC}	12-28 V _{DC}	12-24 V _{DC}	12-24V V _{DC}
	Power Supply	DC 19V/65W adapter (built-in)	AC to DC 24V/60W adapter (optional)	AC to DC 24V/150W adapter (optional)	AC to DC adapter 65W with 2-pin pheinx
Mechanical	Dimension	220 x 40 x 150 mm	53.5 x 158 x 114mm	260 x 86.8 x 160.2 mm	139 x 110 x 44.5mm
	Mounting	Wall mount kits for LCD or plasma panels	DIN-rail, wall mount	Wall mount	Wall mount
Environment, software and Certificate	Operational Temperature	0 ~ 50 °C with 0.7m/s air flow	-20 ~ 55 °C with 0.7 m/s air flow	-20 ~ 60 °C with 0.7m/s air flow	-10 ~ 55 °C with 0.7 m/s air flow
	Vibration during operation	2 Grms @ 5 ~ 500 Hz, random, 1 hr/axis	3 Grms @ 5 ~ 500 Hz, random, 1 hr/axis	MIL-STD-810G, Method 514.6	3 Grms @ 5 ~ 500 Hz, random, 1 hr/axis
	Operating System	Windows 10 (pre-installed)	Windows 10 (optional)	Windows 10 (pre-installed)	Ubuntu 18.04 built-in
	Software support	Edge AI Suite, OpenVINO R2 2019 or latest	Edge AI Suite, OpenVINO R2 2019 or latest	Edge AI Suite, OpenVINO R2 2019 or latest	Edge AI Suite/FaceView compatible
	EMC/Safety Certification	CE/FCC Class B, CB, UL, CCC and BSMI (No RED)	CE/FCC Class B, CB, UL, CCC and BSMI (No RED)	CE/FCC Class B, CB, UL, CCC and BSMI (No RED)	CE/FCC Class B, CB, UL, CCC and BSMI (No RED)



		AIR-020T	AIR-020N	AIR-300	AIR-500D
Processor	CPU	Denver 2 CPU and Cortex A57 Quad Core, Max. 2.0 GHz	ARM Cortex® A57 Quad core	Intel 6th & 7th Gen. Xeon E3/ Core i3/i5/i7	Intel Ice Lake-D LCC Xeon
	GPU	Pascal 256 CUDA cores	Maxwell 128 CUDA cores	Intel HD Graphics 630	-
	VPU	-	-	-	-
AI Spec	AI Engine	NVIDIA TX2 NX	NVIDIA Nano	-	-
	AI Performance	1.33 TFLOPS (FP16)	0.5 TFLOPS (FP16)	-	-
Memory		4 GB LPDDR4 on board	4 GB LPDDR4 on board	2 x DDR4 2133 Mhz 260-pin SO-DIMM	4x SODIMM DDR4 2666MHz, upto 128GB (ECC/Non-ECC)
Storage		16G eMMC on board, M.2 2280 128GB built-in	16G eMMC on board, M.2 2280 128GB built-in	Max. 4x 2.5" SATAIII hard drive bay	4x swappable 2.5" Storage (RAID 0/1/5/10)
Display		1x HDMI	1x HDMI	1x VGA, 1x HDMI	1x VGA
I/O Ports	Ethernet	2x GbE	1x GbE	4x GbE	4x GbE
	COM	1x RS-232/422/485	1x RS-232/422/485	4x RS-232/422/485	4x RS-232/422/485
	USB	2x USB 3.2 Type A, 1x USB Type-C	2x USB 3.2 Type A, 1x USB Type-C	8x USB3.0	6x USB3.0
	Digital IO	8 bit, 4bit in, 4bit out	8 bit, 4bit in, 4bit out	optional	1x 16bit DIO
	CANbus	1x DB9 (reserved)	-	-	-
Expansion	Expansion Slot	1x Full-size mPCIe w/ nano SIM slot	1x Full-size mPCIe w/ nano SIM slot (USB signal only)	2x Full-size mPCIe 1x M.2 2230 E key 1x PCIe x16, support Max. 350W GPU card	1x M.2 2230 E key 1x M.2 2230/2280/3052 B key 2x PCIe x16 (signal x8 each) 1x PCIe x4 1x PCIe x1
Power	Power Input	12-24 V _{DC}	12-24 V _{DC}	100~240 V _{AC}	100~240 V _{AC}
	Power Supply	AC to DC adapter 65W with 2-pin pheinx	AC to DC adapter 65W with 2-pin pheinx	850 power supply built-in	1200W power supply built-in
Mechanical	Dimension	139 x 110 x 44.5mm	138 x 109.8 x 44.5mm	228.3 x 230 x 399.92mm	260 x 270 x 399mm
	Mounting	Wall mount	Wall mount	Desk mount	Wall mount
Environment, software and Certificate	Operational Temperature	-10 ~ 55 °C with 0.7 m/s air flow	-10 ~ 55 °C with 0.7 m/s air flow	0 ~ 50 °C with 0.7m/s air flow	-10 ~ 50 °C with 0.7m/s air flow
	Vibration during operation	3 Grms @ 5 ~ 500 Hz, random, 1 hr/axis	3 Grms @ 5 ~ 500 Hz, random, 1 hr/axis	-	3 Grms @ 5 ~ 500 Hz, random, 1 hr/axis
	Operating System	Ubuntu 18.04 built-in	Ubuntu 18.04 built-in	Windows 7 & 10 (optional)	Windows 10 (optional)
	Software support	Edge AI Suite/FaceView compatible	Edge AI Suite/FaceView compatible	-	-
	EMC/Safety Certification	CE/FCC Class B, CB, UL, CCC and BSMI (No RED)	CE/FCC Class B, CB, UL, CCC and BSMI (No RED)	CE/FCC Class B, CB, UL, CCC and BSMI (No RED)	CE/FCC Class B, CB, UL, CCC and BSMI (No RED)

エッジインテリジェンスシステム - EIS/EI-52

エッジインテリジェンスシステム


NEW

Model Name	EIS-D620	EIS-D210	EIS-D150	EIS-D110	EI-52	
CPU	Rockchip RK3399	Intel® Celeron® N3350	Intel® 6th Gen Core™ i5 6300U	Intel® Celeron® J1900	Intel 11th Gen. Core i5-1145G7E/ Core i3-1115G4E/ Celeron 6305E	
RAM/Storage	2GB RAM/16GB eMMC built-in	4GB RAM/64GB SSD built-in	8GB RAM/256GB SSD built-in	Optional	8GB/16GB DDR4 RAM and 64GB SATA Slim SSD Built-in	
OS	Debian	Win 10 IoT Enterprise	Win 10 IoT Enterprise	Optional	Win 10 IoT Enterprise	
I/O Interface	2 x HDMI, 2 x GbE, 1 x RS-232, 1 x USB 3.0, 1 x USB 2.0	1 x VGA, 2 x GbE, 2 x RS232/422/485, 4 x USB 3.0, iDoor	1 x HDMI, 1 x VGA, 2 x GbE, 4 x RS232/422/485, iDoor	2 x HDMI, 2 x GbE, 1 x RS232/422/485	1 x HDMI, 1 x DP, 2 x GbE, 2 x RS232/422/485, 4 x USB 3.0, 2 x USB 2.0	
Wireless Networking	Optional	CE RED/FCC RF Compliance	Optional		CE RED/FCC RF Compliance optional AIW-355 5G module optional AMO-WiFi13 Wi-Fi kit	
Dimensions (W x H x D)	135 x 130 x 29 mm	133 x 46.4 x 94.2 mm	260 x 54 x 140.2 mm	133.8 x 43.1 x 94.2 mm	156 x 112 x 60 mm	
Software Package	<p>DeviceOn/iEdge</p> <p>Data Integration and Edge Management</p> <ul style="list-style-type: none"> Data Integration Centralized Remote Management Real-time Edge Analytics Auto Generated Dashboard <p>Add-on Package:</p> <ul style="list-style-type: none"> iEdgeSEMI for SECS/GEM protocol conversion iEdgePLC support over 450+ PLC protocol drivers 				<p>WebAccess/SCADA</p> <p>Smart SCADA</p> <ul style="list-style-type: none"> Dashboard Editor Viewer Widget Library & Widget Builder Cross Browser & Device Viewing (For EIS-D150 and EIS-D210) 	<p>WISE-DeviceOn</p> <p>IoT Device Operation Management</p> <ul style="list-style-type: none"> Device Management Monitoring & Control Update Management <p>EDGE X FOUNDRY</p> <ul style="list-style-type: none"> Heterogeneous Devices Connection Application Integration Data Analytics Neutral & Open Platform
Development Tools	Node-RED Data Flow Logic Designer & Dashboard Builder Protocol Plug-in SDK & Configuration Tools				Edge X API and SDK	
Ordering Information	EIS-D620-D1DE121	EIS-D210W-E1DS642	EIS-D150-E1DS182	EIS-D110-01D0002	EI-52-S6A1 (i5), EI-52-S2A1 (i3), EI-52-U0A1 (Celeron)	

エッジインテリジェンスシステム - EIS

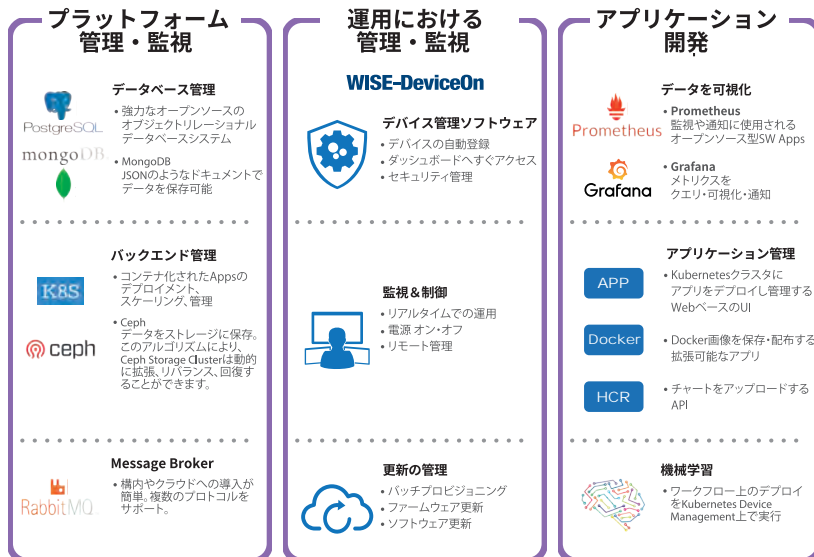
エッジクラウドサーバー

NEW

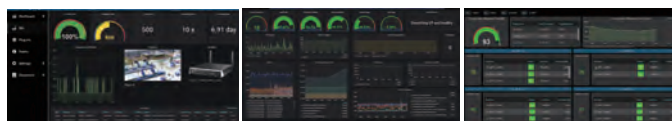


Model Name	EIS-S232	EIS-S230
CPU	Intel® Core™ i7-10700E	Intel® Xeon® E3-1275 V6
RAM/Storage	32GB RAM/1TB SSD built-in	32GB RAM/512GB SSD built-in
OS	Ubuntu 20.04 (64bit)	Ubuntu 16.04 (64bit)
I/O Interface	1 x HDMI, 1 x VGA, 2 x GbEx2, 4 x USB 3.2, 4 x USB 3.0, 6 x COM, GPIO 16bit, iDoor	1 x HDMI, 4 x GbE, 4 x RS-232/422/485, 8 x USB 3.0
Wireless Networking	Optional	
Dimensions (W x H x D)	197 x 204 x 230 mm	156 x 205 x 230 mm
Software Package	WISE-DeviceOn IoT Device Operation Management <ul style="list-style-type: none"> Device Management Monitoring & Control Update Management Platform Management <ul style="list-style-type: none"> Docker, Kubernetes RabbitMQ, MongoDB PostgreSQL, Grafana 	
Development Tools	Kubernetes DeKvelopment Kit	
Ordering Information	EIS-S232-U20STB1	EIS-S230-U20S501

ソフトウェアパッケージ



ダッシュボード

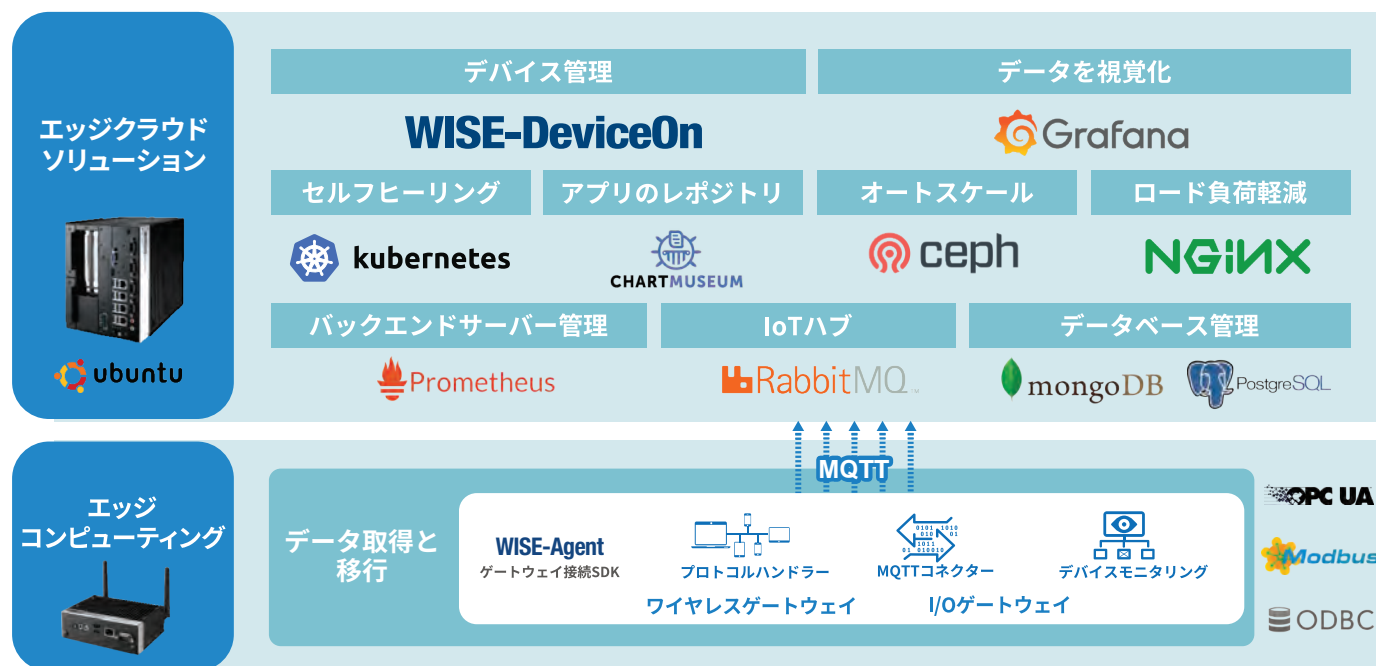


ステータス管理

リソース管理

オペレーション管理

システム構成



エッジクラウドソリューション

ソリューションパッケージ

施設内モニタリング



製造工程マネジメント



設備状態モニタリング



ソリューション

iEdge
SEMI

NEW



SECS/GEMプロトコル変換

- 半導体工場の設備とエッジPC間でSECS/GEMプロトコル変換を実現
- 自動通知センターでデバイスのシャットダウンを保護



SEMI機器通信規格



SECS/GEMプロトコル
へのデータ変換

GEM300

SECSドライバに
GEM300ライブラリ
が内蔵



エッジデータベース、
ダッシュボードを含む

製品情報

IEDGE-SEMI-21A

- 1 x EI-52-S6A1 (Intel Core i5-1145G7E, w/16G RAM, 64G SSD)
- 1 x 20706WX9VM0024 Win10 image w/ iEdgeSEMI for EI-52
- 1 x 31ASE2ISEC0301 iEdgeSEMI License
- 1 x 36WSWPE21001A1 DeviceOn/iEdge Client Bundle License 1 device

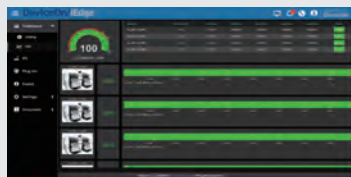
iEdge
PLC

NEW



PLC管理

- 三菱/オムロン/Simensなどの主要PLCプロトコルをサポート
- 使いやすいダッシュボードによるデバイスの一元管理



450以上の
PLCドライバをサポート



軽量PLCランタイム
アプリケーション



PLC接続の無制限&
無料お試しタグ



導入・デプロイメント
を簡単に

製品情報

IEDGE-PLC-21A

- 1 x EIS-D210 (Intel Celeron N3350/4GB RAM/64GB SSD/Win10)
- Win10 image w/ iEdgePLC for EIS-D210
- 1 x 36WSWPE21001A1 DeviceOn/iEdge Client Bundle License 1 device
- iEdgePLC trial version

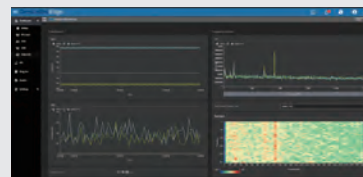
iEdge
VAM

NEW



振動データ監視

- データをRMS/FFT/Spectrogramに変換、リアルタイムで監視
- モデルの正常な状態を監視、問題を早期発見、ダウンタイムを回避



リアルタイム
振動モニタリング



振動データ分析



状態監視



アラーム管理
メンテナンス

製品情報

IEDGE-VAM-21A

- EIS-D150 x1
- 1 x 36WSWPE21001A1 DeviceOn/iEdge Client Bundle License 1 device
- Vibration Sensor, Vibration Software, Vibration DAQ

ファンレスPC - ARK

コンパクトシリーズ



Model Name		ARK-1123L	ARK-1123C	ARK-1123H	ARK-1124C
CPU	CPU	Intel® Atom® DC E3825	Intel® Atom® DC E3825	Intel® Celeron® QC J1900	Intel® Celeron® DC N3350
	Frequency	1.33 GHz	1.33 GHz	2.0GHz	1.1GHz, turbo burst 2.4 GHz
	Core Number 4/4	2	2	4	2
	BIOS	AMI EFI 64 Mbit	AMI EFI 64 Mbit	AMI EFI 64 Mbit	AMI EFI 64 bit
	Chipset	-	-	-	-
Memory	Technology	DDR3L 1066 MHz	DDR3L 1066 MHz	DDR3L 1333 MHz	DDR3L 1866 MHz
	Max. Capacity	8GB	8GB	8GB	8GB
	Socket	1 x 204-pin SO-DIMM	1 x 204-pin SO-DIMM	1 x 204-pin SO-DIMM	1 x 204-pin SO-DIMM
Display	Chipset	Intel® Atom® SoC integrated	Intel® Atom® SoC integrated	Intel® Atom® SoC integrated	Intel® HD Graphics 500
	Graphic Engine	DirectX* 11.1, OGL 3.0, OCL 1.1, OGL ES 2.0 ; Encode: H264, MPEG2/4, VC1, WMV9 ; Decode: H264, MPEG2	DirectX* 11.1, OGL 3.0, OCL 1.1, OGL ES 2.0 ; Encode: H264, MPEG2/4, VC1, WMV9 ; Decode: H264, MPEG2	DirectX* 11.1, OGL 3.0, OCL 1.1, OGL ES 2.0 ; Encode: H264, MPEG2/4, VC1, WMV9 ; Decode: H264, MPEG2	4K Codec Decode& Encode for H.264, MPEG2, MVC, VC-1, WMV9, H.265 / HEVC, VP8, JPEG / MJPEG
	VGA	1 x VGA, support up to 1920x1200	1 x VGA, support up to 1920x1200	-	1 x VGA, support up to 2048 x 1280 @ 60Hz
	DDI	-	-	2 x HDMI, up to 1920x1080@60Hz	-
	Multiple Display	-	-	Dual	-
Expansion Interface	Mini PCIe	1 x Full-size Mini PCIe	1 x Full-size Mini PCIe	1 x Full-size Mini PCIe	1 x Full-size MiniPCIe
	M.2	-	-	-	-
	SIM socket	-	-	-	-
	PCIe	-	-	-	-
	PCI	-	-	-	-
	PCIe + PCI	-	-	-	-
	i Door	-	-	-	Yes
Ethernet	Controller	GbE 1 : Intel i210	GbE 1 : Intel i210 ; GbE 2 : Intel i210	GbE 1 : Intel i210 ; GbE 2 : Intel i210	GbE 1 : Intel i210
	Speed	10/ 100/ 1000 Mbps	10/ 100/ 1000 Mbps	10/ 100/ 1000 Mbps	10/ 100/ 1000 Mbps
Audio	Audio Interface	HD Audio	HD Audio	HD Audio	HD Audio
	CODEC	ALC-888S-VD2-GR	ALC-888S-VD2-GR	ALC-888S-VD2-GR	ALC-888S-VD2-GR
WatchDog Timer	Connector	Line-in, Line out	Line-in, Line out	Line-in, Line out	Line-in, Line-out
	Yes	Yes	Yes	Yes	
Storage	SATA	1 x 2.5" SATA drive bay (Max 9.5mm height only)	1 x 2.5" SATA drive bay (Max 9.5mm height only)	1 x 2.5" SATA drive bay (Max 9.5mm height only)	1 x 2.5" SATA drive bay (Max 9.5mm height only)
	mSATA	1 x Half-Size mSATA	1 x Half-Size mSATA	1 x Half-Size mSATA	1 x Half-Size mSATA
I/O	USB3.1/3.2	-	-	-	-
	USB 3.0	1	1	1	2
	USB2.0	1	2	2	-
	GPIO	8-bit Programmable DIO	-	-	-
	COM Port	1 x RS-232, 1 x RS-232/422/485	2 x RS-232/422/485	1 x RS-232/422/485	4 x RS-232/422/485
Power	Power Type	ATX	ATX	ATX	ATX
	Power Supply Voltage	12 V _{DC} ± 10%	12 V _{DC} ± 10%	12 V _{DC} ± 10%	Default: 12 V _{DC} ± 10%; Optional: 12 V _{DC} - 24 V _{DC} by power module
	Connector	Lockable DC Jack	Lockable DC Jack	Lockable DC Jack	Default: Lockable DC Jack ; Optional: 2-Pin phenix connector via power module AMO-P011
	Power Consumption (Idle: CPU/Memory only)	5.28W	5.28W	5.64W	5.5W
	Power Consumption (Full Load: CPU/Memory only)	8.16W	8.16W	14.04W	9.8W
Environment	Power Adaptor	Lockable AC to DC, DC12 V/3 A, 36 W	Lockable AC to DC, DC12 V/3 A, 36 W	Lockable AC to DC, DC12 V/3 A, 36 W	Lockable AC to DC, DC12 V/3 A, 36 W
	Operating Temperature (air flow 0.7 m/sec)	With extend temperature peripherals: -30 ~ 70 °C with standard temperature peripherals: 0 ~ 40 °C	With extend temperature peripherals: -30 ~ 70 °C with standard temperature peripherals: 0 ~ 40 °C	With extend temperature peripherals: -20 ~ 60 °C with standard temperature peripherals: 0 ~ 40 °C	With extend temperature peripherals: -20 ~ 60 °C with standard temperature peripherals: 0 ~ 40 °C
	Non-operating Temperature	-40 ~ 85 °C and 40 °C @ 95% RH Non-Condensing	-40 ~ 85 °C and 40 °C @ 95% RH Non-Condensing	-40 ~ 85 °C and 40 °C @ 95% RH Non-Condensing	-40 ~ 85 °C and 40 °C @ 95% RH Non-Condensing
	Vibration Resistance	With mSATA/SSD: 3 Grms, random, 5 ~ 500 Hz, 1 hr/axis ; With HDD: 0.5Grms, random, 5~500Hz, 3 axes, 1hr/axis	With mSATA/SSD: 3 Grms, IEC, random, 5 ~ 500 Hz, 1 hr/axis ; With HDD: 0.5Grms, random, 5~500Hz, 3 axes, 1hr/axis	With mSATA/SSD: 3 Grms, random, 5 ~ 500 Hz, 1 hr/axis ; With HDD: 0.5Grms, random, 5~500Hz, 3 axes, 1hr/axis	With mSATA/SSD: 3 Grms, random, 5 ~ 500 Hz, 1 hr/axis ; With HDD: 0.5Grms, random, 5~500Hz, 3 axes, 1hr/axis
	Shock Protection	With mSATA/SSD: 30 G, half sine, 11 ms duration; With HDD: 10G, half sine, 11 ms duration	With mSATA/SSD: 30 G, half sine, 11 ms duration; With HDD: 10G, half sine, 11 ms duration	With mSATA/SSD: 30 G, half sine, 11 ms duration; With HDD: 10G, half sine, 11 ms duration	With mSATA/SSD: 30 G, half sine, 11 ms duration; With HDD: 10G, half sine, 11 ms duration
Physical Characteristics	Dimensions (W x H x D mm)	133.8 x 43.1 x 94.2 mm	133.8 x 43.1 x 94.2 mm	133.8 x 43.1 x 94.2 mm	Single Layer: 133 x 46.4 x 94.2 mm Dual Layer: 133 x 83.6 x 94.2 mm
	Weight	1.2 kg	1.2 kg	1.2 kg	0.7 Kg
Operating System	Mounting	Optional DIN Rail/ VESA/ Wall mounting	Optional DIN Rail/ VESA/ Wall mounting	Optional DIN Rail/ VESA/ Wall mounting	Optional DIN Rail/ VESA/ Wall mounting
	Microsoft Windows	Yes (Windows 7, Windows 8, Windows 10)	Yes (Windows 7, Windows 8, Windows 10)	Yes (Windows 7, Windows 8, Windows 10)	Yes (Windows 10 64bit)
Software	Linux	Yes (by project inquiry)	Yes (by project inquiry)	Yes (by project inquiry)	Yes (by project inquiry)
	DeviceOn	WISE-DeviceOn	WISE-DeviceOn	WISE-DeviceOn	WISE-DeviceOn
Certification	Other	McAfee, Acronis	McAfee, Acronis	McAfee, Acronis	McAfee, Acronis
	EMC	CE/FCC Class A, CCC, BSMI	CE/FCC Class B, CCC, BSMI	CE/FCC Class B, CCC, BSMI	CE/FCC Class B, CCC, BSMI
Safety Certifications	CB, UL, CCC, BSMI	CB, UL, CCC, BSMI	CB, UL, CCC, BSMI	CB, UL, CCC, BSMI	CB, UL, CCC, BSMI

ファンレスPC - ARK

NEW



Model Name		ARK-1124U	ARK-1124H	ARK-1220L	ARK-1220F
CPU	CPU	Intel® Celeron® DC N3350	Intel® Atom® QC E3940	Intel® Atom® QC E3940	Intel® Atom® QC E3940
	Frequency	1.1GHz, turbo burst 2.4 GHz	1.6GHz, turbo burst 1.8 GHz	1.6GHz, turbo burst 1.8 GHz	1.6GHz, turbo burst 1.8 GHz
	Core Number 4/4	2	4	4	4
	BIOS	AMI EFI 64 bit	AMI EFI 64 bit	AMI EFI 64 bit	AMI EFI 128 bit
Memory	Chipset	-	-	-	-
	Technology	DDR3L 1866 Mhz	DDR3L 1866 Mhz	DDR3L 1600 MHz	DDR3L 1600 MHz
	Max. Capacity	8GB	8GB	8GB	8GB
Display	Socket	1 x 204-pin SO-DIMM	1 x 204-pin SO-DIMM	2 x 204-pin SO-DIMM	2 x 204-pin SO-DIMM
	Chipset	Intel® HD Graphics 500	Intel® HD Graphics 500	Intel® HD Graphics 500	Intel® HD Graphics 500
	Graphic Engine	4K Codec Decode & Encode for H.264, MPEG2, MVC, VC-1, WMV9, H.265 / HEVC, VP8, JPEG / MJPEG	4K Codec Decode & Encode for H.264, MPEG2, MVC, VC-1, WMV9, H.265 / HEVC, VP8, JPEG / MJPEG	4K Codec Decode & Encode for H.264, MPEG2, MVC, VC-1, WMV9, H.265 / HEVC, VP8, JPEG / MJPEG	4K Codec Decode & Encode for H.264, MPEG2, MVC, VC-1, WMV9, H.265 / HEVC, VP8, JPEG / MJPEG
	VGA	1 x VGA, support up to 2048 x 1280 @ 60Hz	-	-	1 (up to 1920 x 1200)
	DDI	-	2 x Lockable HDMI, support up to 3840 x 2160 @ 30Hz	2 x Lockable HDMI, support up to 3840 x 2160 @ 30Hz	1 x Lockable HDMI, support up to 3840 x 2160 @ 30Hz
Expansion Interface	Multiple Display	-	Dual	Dual	Dual
	Mini PCIe	1 x Full-size MiniPCIe w/ SIM	1 x Full-size MiniPCIe w/ SIM	1 x Full-size MiniPCIe w/ SIM	1 x Full-size MiniPCIe w/ nano SIM
	M.2	1 x 2230 E key for Wi-Fi	1 x 2230 E key for Wi-Fi	1 x 2230 E key for Wi-Fi	1 x 2230 E key for Wi-Fi
	SIM socket	1 (standard size)	1 (micro SIM)	1 (standard size)	1 (nano SIM)
	PCIe	-	-	-	-
	PCI	-	-	-	-
Ethernet	Controller	GbE 1: Intel i210; GbE 2: Intel i210	GbE 1: Intel i210; GbE 2: Intel i210	GbE 1: Intel i210; GbE 2: Intel i210	GbE 1: Intel i210-IT, GbE 2: Intel i210-IT
	Speed	10/ 100/ 1000 Mbps	10/ 100/ 1000 Mbps	10/ 100/ 1000 Mbps	10/ 100/ 1000 Mbps
	Audio Interface	HD Audio	HD Audio	HD Audio	HD Audio
Audio	CODEC	ALC-888S-VD2-GR	ALC-888S-VD2-GR	ALC-888S-VD2-GR	ALC-888S-VD2-GR
	Connector	Line-in, Line-out	Line-in, Line-out	Mic-in, Line-out	Line out or Mic-in
WatchDog Timer	Yes	Yes	Yes	Yes	
Storage	SATA	1 x 2.5" SATA drive bay (Max 9.5mm height only)	1 x 2.5" SATA drive bay (Max 9.5mm height only)	1 x 2.5" SATA drive bay (Max15mm height)	1 x 2.5" SATA drive bay (Max15mm height)
	mSATA	-	1 x Half-Size mSATA	1 x Full-size mSATA (shared w/ mPCIe)	1 x Full-size mSATA (shared w/ mPCIe)
I/O	USB3.1/3.2	-	-	-	-
	USB 3.0	4	4	4	4
	USB2.0	-	-	-	1 (plus one more internal)
	GPIO	-	-	Reserved. 8-bit Programmable DIO	8-bit Programmable DIO
	COM Port	2 x RS-232/422/485	1 x RS-232/422/485	2 x RS-232/422/485 COM2 with 5V/12V power	1 x RS-232/422/485, 1 x RS-422/485
Power	Power Type	ATX	ATX	ATX	ATX (Default)/ AT
	Power Supply Voltage	Default: 12 V _{DC} ± 10%; Optional: 12 V _{DC} - 24 V _{DC} by power module	Default: 12 V _{DC} ± 10%; Optional: 12 V _{DC} - 24 V _{DC} by power module	12 ~ 28 V _{DC}	12 ~ 28 V _{DC}
	Connector	Default: Lockable DC Jack ; Optional: 2-Pin phenix connector via power module AMO-P011	Default: Lockable DC Jack ; Optional: 2-Pin phenix connector via power module AMO-P011	3-pin terminal block	3-pin terminal block
	Power Consumption (Idle: CPU/Memory only)	5W	6.02W	7.6W	8.93W
	Power Consumption (Full Load: CPU/Memory only)	15.7W	15.7W	19W	18.36W
Environment	Power Adaptor	Lockable AC to DC, DC12 V/5 A, 60 W	Lockable AC to DC, DC12 V/5 A, 60 W	Lockable AC to DC, DC24 V/2.5 A, 60 W (Optional)	Lockable AC to DC, DC24 V/2.5 A, 60 W (Optional)
	Operating Temperature (air flow 0.7 m/sec)	With extend temperature peripherals: -20 ~ 60 °C with standard temperature peripherals: 0 ~ 40 °C	With extend temperature peripherals: -20 ~ 60 °C with standard temperature peripherals: 0 ~ 40 °C	With extend temperature peripherals: -30 ~ 70 °C with standard temperature peripherals: 0 ~ 40 °C	With extend temperature peripherals: -30 ~ 60 °C with standard temperature peripherals: 0 ~ 40 °C
	Non-operating Temperature	-40 ~ 85 °C and 40 °C @ 95% RH Non-Condensing	-40 ~ 85 °C and 40 °C @ 95% RH Non-Condensing	-40 ~ 85 °C and 40 °C @ 95% RH Non-Condensing	-40 ~ 85 °C and 40 °C @ 95% RH Non-Condensing
	Vibration Resistance	With mSATA/SSD: 3 Grms, random, 5 ~ 500 Hz, 1 hr/axis ; With HDD: 0.5Grms, random, 5~500Hz, 3 axes, 1hr/axis	With mSATA/SSD: 3 Grms, random, 5 ~ 500 Hz, 1 hr/axis ; With HDD: 0.5Grms, random, 5~500Hz, 3 axes, 1hr/axis	With mSATA/SSD: 3 Grms, random, 5 ~ 500 Hz, 1 hr/axis ; With HDD: 0.5Grms, random, 5~500Hz, 3 axes, 1hr/axis	With mSATA/SSD: 3 Grms, random, 5 ~ 500 Hz, 1 hr/axis ; With HDD: 0.5Grms, random, 5~500Hz, 3 axes, 1hr/axis
Physical Characteristics	Shock Protection	With mSATA/SSD: 30 G, half sine, 11 ms duration ; With HDD: 10G, half sine, 11 ms duration	With mSATA/SSD: 30 G, half sine, 11 ms duration ; With HDD: 10G, half sine, 11 ms duration	With mSATA/SSD: 30 G, IEC 60068-2-27, half sine, 11 ms duration ; With HDD: 10G, IEC 60068-2-27, half sine, 11 ms duration	With mSATA/SSD: 30 G, IEC 60068-2-27, half sine, 11 ms duration ; With HDD: 10G, IEC 60068-2-27, half sine, 11 ms duration
	Dimensions (W x H x D mm)	Single Layer: 133 x 46.4 x 94.2 mm Dual Layer: 133 x 83.6 x 94.2 mm	Single Layer: 133 x 46.4 x 94.2 mm Dual Layer: 133 x 83.6 x 94.2 mm	114 x 158 x 53.5 mm	114 x 158 x 60 mm
	Weight	0.7 Kg	0.7 Kg	1.2 Kg	1.5 Kg
Operating System	Mounting	Optional DIN Rail/ VESA/ Wall mounting	Optional DIN Rail/ VESA/ Wall mounting	DIN Rail Mounting (standard) Optional Wall mounting	DIN Rail Mounting (standard) Optional Wall mounting
	Microsoft Windows	Yes (Windows 10 64bit)	Yes (Windows 10 64bit)	Yes (Windows 10 64bit)	Yes (Windows 10 64bit)
Software	Linux	Yes (by project inquiry)	Yes (by project inquiry)	Yes (by project inquiry)	Yes (by project inquiry)
	DeviceOn	WISE-DeviceOn	WISE-DeviceOn	WISE-DeviceOn, DeviceOn/iEdge	WISE-DeviceOn, DeviceOn/iEdge
	Other	McAfee, Acronis	McAfee, Acronis	McAfee, Acronis	McAfee, Acronis
Certification	EMC	CE/FCC Class B, CCC, BSMI	CE/FCC Class B, CCC, BSMI	CE/FCC Class B, CCC, BSMI	CE/FCC Class B (Heavy industrial), CCC, BSMI
	Safety Certifications	CB, UL, CCC, BSMI	CB, UL, CCC, BSMI	CB, UL, CCC, BSMI	CB, UL, CCC, BSMI

ファンレスPC - ARK



Model Name		ARK-1221L	ARK-1250L	ARK-1551
CPU	CPU	Intel Atom x6413E Quad Core SoC	Intel® Core i5 1145G7E/ Intel® Core i3 1115G4E	Intel® Celeron® 4305UE/Intel® Core™ i3-8145UE/Intel® i5-8365UE
	Frequency	1.50 GHz, turbo burst up to 3.00 GHz	Intel® Core i5 1145G7E, turbo boost up to 4.1 GHz Intel® Core i3 1115G4E, turbo boost up to 3.9 GHz	2.0GHz/2.1 GHz, turbo burst up to 3.9 GHz 1.6 GHz, turbo up to 4.1 GHz
	Core Number 4/4	4	4/2	2/2/4
	BIOS	AMI EFI 256 Mbit	AMI EFI 256 Mbit	AMI UEFI 256Mbit
Memory	Chipset	-	-	Intel® Celeron 4305UE/Intel® i5-8365UE
	Technology	DDR4 3200 Mhz	DDR4 3200 Mhz	DDR4 2400MHz
	Max. Capacity	32GB	64GB	32GB
Display	Socket	2 x 260-pin SO-DIMM	2 x 260-pin SO-DIMM	2 x 260-pin SO-DIMM, Each SO-DIMM up to 16GB
	Chipset	Intel® UHD Graphics for 10th Gen Intel® Processors	Intel 12th gen. Graphics	Intel® UHD Graphics 610/ Intel® UHD Graphics 620
	Graphic Engine	-	-	Media Codec Supported: H.264, MPEG2, MVC, VC-1, WMV9, H.265 / HEVC, 3D HW Acceleration: OpenGL 4.5, DirectX* 11.3/12, OpenCL* 2.1
	VGA	-	1 , up to 1920 x 1080@ 60Hz	1 , up to 1920 x 1080@ 60Hz
	DDI	1 x lockable HDMI 1.4b, 4096 x 2160@24Hz; 1 x DP 1.2, 4096 x 2304 @ 60Hz	1 x lockable HDMI 2.0b: 4096 x 2160 @ 60Hz	1 x lockable HDMI 1.4b, 4096 x 2160@30Hz; 1 x DP 1.2, 4096 x 2304 @ 60Hz (co-lay with VGA, by project support with MOQ = 30)
Expansion Interface	Multiple Display	Dual (HDMI+DP)	Dual (HDMI+VGA)	Dual (VGA+HDMI)
	Mini PCIe	1 x Full-size mPCIe	1 x Full-size MiniPCIe	1 x Full-size MiniPCIe w/ nano SIM
	M.2	1 x M2. 2230 E key and 1 x M.2 2280 B key with nano SIM holder	1 x M2. 2230 E key and 1 x M.2 3052 B key with nano SIM holder	1 x 2230 E key for Wi-Fi
	SIM socket	1 (Nano SIM)	1 (Nano SIM)	1 (Nano SIM)
	PCIe	-	-	-
	PCI	-	-	-
	PCIe + PCI	-	-	-
	i Door	-	-	-
Ethernet	Controller	GbE 1 : Intel i210, GbE 2 : Intel i210	GbE 1: Intel i210, GbE 2: Intel i219, GbE 3: Intel i225	GbE 1: Intel i210, GbE 2: Intel i219
	Speed	10/ 100/ 1000 Mbps	10/ 100/ 1000 Mbps	10/ 100/ 1000 Mbps
Audio	Audio Interface	HD Audio	HD Audio	HD Audio
	CODEC	ALC-888S-VD2-GR	ALC-888S-VD2-GR	Realtek ALC892
WatchDog Timer	Connector	Line out or Mic-in	Line out or Mic-in	Line out or Mic-in
	Yes	Yes	Yes	Yes
Storage	SATA	1 x 2.5" SATA drive bay	1 x 2.5" SATA drive bay	1 x removable 2.5" SATA drive bay (Max 7mm height only)
	mSATA	1 x Full-size mSATA (*share with mPCIe slot)	1 x Full-size mSATA (*share with mPCIe slot)	1 x Full-size mSATA (shared w/ mPCIe)
I/O	USB3.1/3.2	2	3	4
	USB 3.0	-	-	-
	USB2.0	2	3	-
	GPIO	8-bit Programmable DIO	8-bit Programmable DIO	8-bit Programmable DIO
	COM Port	2 x RS-232/422/485	4 x RS-232/422/485 (COM1 share with optional CANBUS,COM1 switch to CANBUS by jumper)	4 x RS-232/422/485
Power	Power Type	ATX (Default)/ AT	ATX (Default)/ AT	ATX (Default)/ AT
	Power Supply Voltage	12 ~ 28 V _{DC}	12 ~ 24 V _{DC}	12V~24V _{DC} @-10% / +20%
	Connector	3-pin terminal block	3-pin terminal block	3-pin terminal block
	Power Consumption (Idle: CPU/Memory only)	TBD	TBD	8.93 Watt (Celeron®)/13.31Watt (Core™ i3) 13.87 Watt (Core™ i5)
	Power Consumption (Full Load: CPU/Memory only)	TBD	TBD	24.7 Watt (Celeron®)/46.1(Core™ i3) 47.12Watt (Core™ i5)
Environment	Power Adaptor	Lockable AC to DC, DC24 V/2.5 A, 60 W (Optional)	AC to DC, 90W adaptor built-in	Core™ i3, Celeron®: AC to DC, 90W (Optional) Core™ i5: AC to DC, 90W for 0~ 40 °C (Optional) AC to DC, 120W for -20~ 55 °C (Optional)
	Operating Temperature	With extend temperature peripherals: -30~60°C with standard temperature peripherals: 0 ~ 40 °C	With extend temperature peripherals: -20~60°C with standard temperature peripherals: 0 ~ 40 °C	With extend temperature peripherals: -20 ~ 55 °C With standard temperature peripherals: 0 ~ 40 °C
	Non-operating Temperature	-40~ 85 °C and 40 °C @ 95% RH Non-Condensing	-40~ 85 °C and 40 °C @ 95% RH Non-Condensing	-40~ 85 °C and 40 °C @ 95% RH Non-Condensing
	Vibration Resistance	With mSATA/SSD: 3 Grms, random, 5 ~ 500 Hz, 1 hr/axis ; With HDD: 0.5Grms, random, 5~500Hz, 3 axes, 1hr/axis	With mSATA/SSD: 3 Grms, random, 5 ~ 500 Hz, 1 hr/axis ; With HDD: 0.5Grms, random, 5~500Hz, 3 axes, 1hr/axis	With mSATA/SSD: 3 Grms, random, 5 ~ 500 Hz, 1 hr/axis
Physical Characteristics	Shock Protection	With mSATA/SSD: 30 G, IEC 60068-2-27, half sine, 11 ms duration ; With HDD: 10G, IEC 60068-2-27, half sine, 11 ms duration	With mSATA/SSD: 30 G, IEC 60068-2-27, half sine, 11 ms duration ; With HDD: 10G, IEC 60068-2-27, half sine, 11 ms duration	With mSATA/SSD:30 G, half sine, 11 ms duration
	Dimensions (W x H x D mm)	114 x 158 x 60 mm	173 x 141 x 60 mm	195 x 55 x 140 mm
	Weight	1.5 Kg	TBD	1.9 kg
Operating System	Mounting	DIN Rail Mounting (standard) Optional Wall mounting	DIN Rail Mounting (standard) Optional Wall mounting	Wall Mounting (Standard) / VESA & DIN- Rail Mounting Kit (Optional)
	Microsoft Windows	Yes (Windows 10 64bit)	Yes (Windows 10 64bit)	Yes (Windows 10 64bit)
Software	Linux	Yes (by project inquiry)	Yes (by project inquiry)	Yes (by project inquire)
	DeviceOn	WISE-DeviceOn	WISE-DeviceOn, DeviceOn/iEdge	WISE-DeviceOn
Certification	Other	McAfee, Acronis	McAfee, Acronis	McAfee, Acronis
	EMC	CE/FCC Class B, CCC, BSMI	CE/FCC Class B, CCC, BSMI	CE/FCC Class B, CCC, BSMI
Safety Certifications	Safety Certifications	CB, UL, CCC, BSMI	CB, UL, CCC, BSMI	CB, UL, CCC, BSMI

ファンレスPC - ARK

高拡張性シリーズ



Model Name		ARK-2121L	ARK-2121F	ARK-2230L
CPU	CPU	Intel® Celeron® J1900 SoC	Intel® Celeron® J1900 SoC	Intel® Celeron® J1900 SoC
	Frequency	2.0 GHz, turbo boost up to 2.42GHz	2.0 GHz, turbo boost up to 2.42GHz	2.0 GHz, turbo boost up to 2.42GHz
	Core Number	4	4	4
	BIOS	AMI 64Mbit	AMI 64Mbit	AMI 64Mbit
	Chipset	-	-	-
Memory	Technology	DDR3L 1333 MHz	DDR3L 1333 MHz	DDR3L 1333 MHz
	Max. Capacity	8GB	8GB	8GB
	Socket	1 x 204pin SODIMM	1 x 204pin SODIMM	1 x 204pin SODIMM
Display	Chipset	Intel Celeron J1900 SoC integrated, 7th Gen. Intel Graphic core	Intel Celeron J1900 SoC integrated, 7th Gen. Intel Graphic core	Intel Celeron J1900 SoC integrated, 7th Gen. Intel Graphic core
	Graphic Engine	DirectX 11.1, OCL 1.2, OGL 3.2 Encode: H.264, MPEG2/4, VC1, WMV9 Decode: H.264, MPEG2	DirectX 11.1, OCL 1.2, OGL 3.2 Encode: H.264, MPEG2/4, VC1, WMV9; Decode: H.264, MPEG2	DirectX 11.1, OCL 1.2, OGL 3.2 Encode: H.264, MPEG2/4, VC1, WMV9; Decode: H.264, MPEG2
	VGA	Up to 2048 x 1152 @ 60Hz	Up to 2048 x 1152 @ 60Hz	Up to 2048 x 1152 @ 60Hz
	DDI	HDMI: 1920 x 1080 @ 60Hz	HDMI: 1920 x 1080 @ 60Hz; Optional: HDMI and DVI	HDMI: 1920 x 1080 @ 60Hz
	Multiple Display	Dual	Dual / Triple (Option)	Dual
Expansion Interface	Mini PCIe	1 x full size Mini PCIe (With SIM holder)	2 x full size Mini PCIe (One with SIM holder)	1 x full size miniPCIe (With SIM holder)
	M.2	-	-	-
	SIM socket	1	1	1
	PCIe	-	-	-
	PCI	-	-	-
	PCIe + PCI	-	-	-
	i Door	Supported	-	Supported
Ethernet	Controller	GbE1: Intel i210 GbE2: Intel i210	GbE1: Intel i210; GbE2: Intel i210; GbE3: Intel i210 (by project); GbE4: Intel i210 (by project)	GbE1: Intel i210 GbE2: Intel i210
	Speed	10/ 100/ 1000 Mbps	10/ 100/ 1000 Mbps	10/ 100/ 1000 Mbps
Audio	Audio Interface	HD Audio	HD Audio	HD Audio
	CODEC	Realtek ALC888S	Realtek ALC888S	Realtek ALC888S
	Connector	Line-in, Line out, Mic-in	Line-in, Line out, Mic-in	Line-in, Line out, Mic-in
WatchDog Timer		Yes	Yes	Yes
Storage	SATA	1 x 2.5" SATAII HDD bay (Max up to 12.5mm in height)	1 x 2.5" SATAII HDD bay (Max up to 12.5mm in height)	1 x 2.5" SATAII HDD bay (Max up to 12.5mm in height)
	mSATA	1 x Full-size mSATA with USB signal co-lay	1 x Full-size mSATA with USB signal co-lay	1 x Full-size mSATA with USB signal co-lay
I/O	USB3.1/3.2	-	-	-
	USB 3.0	1	1	1
	USB2.0	3	5	4
	GPIO	-	8-bit Programmable DIO	8-bit Programmable DIO
	COM Port	2 x RS232, 2 x RS232/ 422/ 485	6 x RS232/ 422/ 485	2 x RS232, 2 x RS232/ 422/ 485
	Power Type	ATX	ATX	ATX
Power	Power Supply Voltage	9~36V _{DC}	9~36V _{DC}	Default: 12 V _{DC} ± 10% Optional : 9-36V DC
	Connector	2-pin phoenix head	2-pin phoenix head	Default: Lockable DC Jack ; Optional:2-pin phoenix head (MIOE-PWR2-00A1E)
	Power Consumption (Idle: CPU/ Memory only)	7.3W	8.4W	7.3W
	Power Consumption (Full Load: CPU/ Memory only)	13.3W	16.2W	13.3W
	Power Adaptor	Lockable AC to DC, DC19V/3.42A 65W (Optional)	Lockable AC to DC, DC19V/3.42A, 65W (Optional)	Lockable AC to DC, DC12V/5A, 60W (Optional)
Environment	Operating Temperature (air flow 0.7 m/sec)	With extend temperature peripherals: -20 ~ 70 °C With standard temperature peripherals: 0 ~ 45 °C	With extend temperature peripherals: -20 ~ 70 °C With standard temperature peripherals: 0 ~ 45 °C	With extend temperature peripherals: -20 ~ 60 °C With standard temperature peripherals: 0 ~ 45 °C
	Non-operating Temperature	-40~ 85 °C and 40 °C @ 95% RH Non-Condensing	-40~ 85 °C and 40 °C @ 95% RH Non-Condensing	-40~ 85 °C and 40 °C @ 95% RH Non-Condensing
	Vibration Resistance	With SSD: 3 Grms, random, 5 ~ 500 Hz, 1 hr/axis.	With SSD: 3 Grms, random, 5 ~ 500 Hz, 1 hr/axis.	With SSD: 3 Grms, random, 5 ~ 500 Hz, 1 hr/axis.
	Shock Protection	With SSD: 30 G, half sine, 11 ms duration	With SSD: 30 G, half sine, 11 ms duration	With SSD: 30 G, half sine, 11 ms duration
Physical Characteristics	Dimensions (W x H x D mm)	264.5 x 68.4 x 133.0 mm	264.5 x 68.4 x 133.0 mm	260 x 44 x 140.2 mm
	Weight	2.3 kg	2.3 kg	2.3 kg
	Mounting	Desk/ Wall/ VESA/ DIN-Rail mounting	Desk/ Wall/ VESA/ DIN-Rail mounting	Desk/ Wall/ VESA/ DIN-Rail mounting
Operating System	Microsoft Windows	Windows 7, Windows 10	Windows 7, Windows 10	Windows 7, Windows 10
	Linux	Yes	Yes	Yes
Software	DeviceOn	WISE-DeviceOn	WISE-DeviceOn	WISE-DeviceOn
	Other	McAfee, Acronis	McAfee, Acronis	McAfee, Acronis
Certification	EMC	CE/FCC class A, CCC, BSMI	CE/FCC class A, CCC, BSMI	CE/FCC class B, CCC, BSMI
	Safety Certifications	CB, UL, CCC, BSMI	CB, UL, CCC, BSMI	CB, UL, CCC, BSMI

ファンレスPC - ARK

エントリー向け・マルチI/Oシリーズ



Model Name		ARK-2232L	ARK-2250L	ARK-6322
CPU	CPU	Intel® Atom® E3940	Core™ i7-6600U/i3-6100U (i5-6300U by project) Core™ i7-7600U/i3-7100U (i5-7300U by project)	Intel® Celeron® J1900 SoC
	Frequency	1.6 GHz, turbo boost up to 1.8GHz	2.6GHz / 2.3GHz; 2.8GHz / 2.4GHz	2.0 GHz
	Core Number	4	2	4
	BIOS	AMI 64Mbit	AMI UEFI 128Mbit	AMI 16Mbit SPI
	Chipset	-	-	-
Memory	Technology	DDR3L 1866 MHz	DDR4 2133 MHz	DDR3L 1333MHz
	Max. Capacity	8GB	16GB	8GB
	Socket	1 x 204pin SODIMM	1 x 260-pin SODIMM	2 x 204pin SODIMM
Display	Chipset	Intel HD Graphics 500	Intel HD Graphics 520; Intel HD Graphics 620	Intel Gen 7 Graphics Engines and media encode/ decode engine; GPU Frequency: 688 MHz
	Graphic Engine	2D: Direct2D*, DirectWrite; 3D: D3D11.3, DXGI 1.3, DirectX* 11.1, OGL ES 2.0; Media Codec: H.264, MPEG2, VC-1, WMV9, H.265/ HEVC, VP8, JPEG/ MJPEG	DirectX 11.3, OpenGL 4.4, and OpenCL 2.1 Full AVC/VC1/MPEG2 HW Decode	DirectX* 11.1, OGL 3.0, OCL 1.1, OGL ES 2.0 ; Encode: H264, MPEG2/4, VC1, WMV9 Decode: H264, MPEG2
	VGA	Up to 1920 x 1200 @ 60Hz	Up to 1920 x 1200 @ 60Hz	Up to 2048 x 1280
	DDI	HDMI: 3840 x 2160 @ 30Hz	HDMI: 4096 x 2160 @24Hz; Optional: DP and HDMI	DisplayPort : DP++1.2, resolution up to 2560 x 1600 x 24bpp @ 60Hz
	Multiple Display	Dual	Dual / Triple (Option)	Dual
Expansion Interface	Mini PCIe	1 x full size miniPCIe (With SIM holder)	2 x full size miniPCIe (One with SIM holder, one support mSATA)	1 x full-size mini PCIe ; 1 x half-size mini PCIe
	M.2	1, 2230 E key for WIFI	-	-
	SIM socket	1	1	-
	PCIe	-	-	-
	PCI	-	-	-
	PCIe + PCI	-	-	-
	i Door	Supported	Supported	Supported
Ethernet	Controller	GbE1: Intel i210 GbE2: Intel i210	GbE1 : Intel i219 GbE2 : Intel i210	GbE1: Realtek 8119j GbE2: Realtek 8119j
	Speed	10/ 100/ 1000 Mbps	10/ 100/ 1000 Mbps	10/100/1000 Mbps
Audio	Audio Interface	HD Audio	HD Audio	HD Audio
	CODEC	Realtek ALC888S	Realtek ALC888S	Realtek ALC888S
	Connector	Line out, Mic-in	Line-out, Mic-in	Line-out, Mic-in
WatchDog Timer	Yes	Yes	Yes	
Storage	SATA	1 x 2.5" SATAIII HDD bay (Max up to 12.5mm in height)	1 x 2.5" SATAIII HDD bay (Max 12.5mm in height)	1 x 2.5" or 3.5" SATA HDD bay (Max 26.1mm height only)
	mSATA	1 x Full-size mSATA share with miniPCIe	1 x Full-size mSATA share with miniPCIe	1 (Share with full-size mini-PCIe)
I/O	USB3.1/3.2	-	-	-
	USB 3.0	2	4	1
	USB2.0	4	2	7
	GPIO	8-bit Programmable DIO	8-bit Programmable DIO	8-bit DIO (Optional)
	COM Port	2 x RS232, 2 x RS232/ 422/ 485	4 x RS232/ 422/ 485	5 x RS-232 ; 1 x RS232/422/485
Power	Power Type	ATX/AT	ATX	ATX
	Power Supply Voltage	Default: 12 V _{DC} , ± 10% ; Optional : 9-36V DC	Default: 12 V _{DC} , ± 10% ; Optional : 9-36V DC	12 V _{DC} , ± 10%
	Connector	Default: Lockable DC Jack ; Optional:2-pin phoenix head (MIOE-PWR2-00A1E)	Default: Lockable DC Jack ; Optional:2-pin phoenix head (MIOE-PWR2-00A1E)	DC Jack
	Power Consumption (Idle: CPU/ Memory only)	7.79W	6.92W (i3-6100U)/ 7.96W (i7-6600U); 14.04W (i7-7600U)	15.7W
	Power Consumption (Full Load: CPU/ Memory only)	17.48W	41.72W (i3-6100U) / 43.28W (i7-6600U); 27.72W (i7-7600U)	24.7W
Power Adaptor	Lockable AC to DC, DC12V/5A, 60W (Optional)	Lockable AC to DC, DC12V/5A, 60W (Optional)	AC to DC, DC12V/5A, 60 W (Optional)	
Environment	Operating Temperature (air flow 0.7 m/sec)	With extend temperature peripherals: -20 ~ 60 °C With standard temperature peripherals: 0 ~ 45 °C	With extend temperature peripherals: -20 ~ 60 °C With standard temperature peripherals: 0 ~ 45 °C	0 ~ 40 °C with 3.5" HDD.; 0 ~ 45 °C with 2.5" HDD. 0 ~ 50 °C with SSD/mSATA
	Non-operating Temperature	-40~ 85 °C and 40 °C @ 95% RH Non-Condensing	-40~ 85 °C and 40 °C @ 95% RH Non-Condensing	-40~ 85 °C and 40 °C @ 95% RH Non-Condensing
	Vibration Resistance	With SSD: 3 Grms, random, 5 ~ 500 Hz, 1 hr/axis.	With SSD: 3 Grms, random, 5 ~ 500 Hz, 1 hr/axis.	With HDD: 0.5 Grms, random, 5 ~ 500 Hz, 1 Oct./min, 1 hr/axis
	Shock Protection	With SSD: 30 G, half sine, 11 ms duration	With SSD: 30 G, half sine, 11 ms duration	With HDD: 10 G, half sine, 11 ms duration
Physical Characteristics	Dimensions (W x H x D mm)	260 x 44 x 140.2 mm	260 x 54 x 140.2 mm	200 x 64 x 200 mm
	Weight	1.9 kg	2.3 kg	2.0 kg
	Mounting	Desk/ Wall/ VESA/ DIN-Rail mounting	Desk/ Wall/ VESA/ DIN-Rail mounting	Wall Mounting/VESA mounting (optional)
Operating System	Microsoft Windows	Windows 10	Windows 7, Windows 8.1, Windows 10	Windows 10
	Linux	Yes	Yes	Yes
Software	DeviceOn	WISE-DeviceOn	WISE-DeviceOn	WISE-DeviceOn
	Other	McAfee, Acronis	McAfee, Acronis	McAfee, Acronis
Certification	EMC	CE/FCC class B, CCC, BSMI	CE/FCC class B, CCC, BSMI	CE/FCC class A, CCC, BSMI
	Safety Certifications	CB, UL, CCC, BSMI	CB, UL, CCC, BSMI	CB, UL, CCC, BSMI

ファンレスPC - ARK

ハイパフォーマンスシリーズ



Model Name		ARK-3520P	ARK-3520L	ARK-3530L	ARK-3530F	ARK-3531
CPU	CPU	6th gen, Intel® Core™ i7-6820EQ, i5-6440EQ	6th gen, Intel® Core™ i7-6820EQ, i5-6440EQ	6th/7th gen, Intel® Desktop Xeon E3/ Core™ i series (Support up to 65W)	6th/7th gen, Intel® Desktop Xeon E3/ Core™ i series (Support up to 65W)	8th/9th gen, Intel® Desktop Core™ i series (Support up to 35W)
	Frequency	2.8 GHz/2.7 GHz	2.8 GHz/2.7 GHz	by Processor	by Processor	by Processor
	Core Number 4/4	4/4	4/4	by Processor	by Processor	by Processor
	BIOS	AMI EFI 128Mbit	AMI EFI 128Mbit	AMI EFI 128Mbit	AMI EFI 128Mbit	AMI EFI 128Mbit
Memory	Chipset	Intel QM170	Intel QM170	Intel C236	Intel C236	Intel H370
	Technology	DDR4 2133 MHz	DDR4 2133 MHz	DDR4 2133 MHz	DDR4 2133 MHz	DDR4 2666 MHz
	Max. Capacity	32GB	32GB	32GB	32GB	64GB
Display	Socket	2x 260-pin SODIMM	2x 260-pin SODIMM	2x 260-pin SODIMM	2x 260-pin SODIMM	2 x 260-pin SODIMM
	Chipset	Intel® QM170 Integrated GFX Gen 9	Intel® QM170 Integrated GFX Gen 9	Intel® C236 Integrated GFX Gen 9	Intel® C236 Integrated GFX Gen 9	Intel® UHD Graphics 630
	Graphic Engine	HW Encode: H.265/HEVC, H.264/MPEG-4 AVC, MPEG-2, JPEG/MJPEG and VP8. HW Decode: H.265/HEVC, H.264/MPEG-4 AVC, MPEG-2, VC-1/WMV9, JPEG/MJPEG, VP8 and VP9	HW Encode: H.265/HEVC, H.264/MPEG-4 AVC, MPEG-2, JPEG/MJPEG and VP8. HW Decode: H.265/HEVC, H.264/MPEG-4 AVC, MPEG-2, VC-1/WMV9, JPEG/MJPEG, VP8 and VP9	HW Encode: H.265/HEVC, H.264/MPEG-4 AVC, MPEG-2, JPEG/MJPEG and VP8. HW Decode: H.265/HEVC, H.264/MPEG-4 AVC, MPEG-2, VC-1/WMV9, JPEG/MJPEG, VP8 and VP9	HW Encode: H.265/HEVC, H.264/MPEG-4 AVC, MPEG-2, JPEG/MJPEG and VP8. HW Decode: H.265/HEVC, H.264/MPEG-4 AVC, MPEG-2, VC-1/WMV9, JPEG/MJPEG, VP8 and VP9	HW Encode: H.265/HEVC, H.264/MPEG-4 AVC, MPEG-2, JPEG/MJPEG and VP8. HW Decode: H.265/HEVC, H.264/MPEG-4 AVC, MPEG-2, VC-1/WMV9, JPEG/MJPEG, VP8 and VP9
	VGA	1920x1200@60Hz	1920x1200@60Hz	1920x1200@60Hz	1920x1200@60Hz	2048x1280@60Hz
	DDI	1 HDMI port, HDMI 1.4b for HD video playback, 3840x2160@30Hz; 3rd Display Module by Optional	1 HDMI port, HDMI 1.4b for HD video playback, 3840x2160@30Hz; 3rd Display Module by Optional	1 HDMI port, HDMI 2.0 for HD video playback, 3840x2160@30Hz; 3rd Display Module by Optional	1 HDMI port, HDMI 2.0 for HD video playback, 3840x2160@30Hz; 3rd Display Module by Optional	HDMI 1.4 for HD video playback, 3840 x 2160 at 30Hz
	Multiple Display	Triple/Dual	Triple/Dual	Triple/Dual	Triple/Dual	Dual
Expansion Interface	Mini PCIe	2 x Full-size Mini PCIe (Supports mSATA)	2 x Full-size Mini PCIe (Supports mSATA)	2 x Full-size Mini PCIe (Supports mSATA)	2 x Full-size Mini PCIe (Supports mSATA)	1 x Full-size Mini PCIe (Supports mSATA), (M.2 B/M Key support by AMO-I026)
	M.2	1 (E key)	1 (E key)	1 (E key)	1 (E key)	1 (E key)
	SIM socket	1	1	1	1	1
	PCIe	Optional 2 slots PCIe4 (AMO-R022E)	-	-	Optional 2 slots PCIe3(AMO-R026)	-
	PCI	2 PCI slots	-	-	2 PCI slots	-
	PCIe + PCI	-	-	-	-	-
Ethernet	i Door	Supported	Supported	Supported	Supported	-
	Controller	GbE1: Intel I219-LM GbE2: Intel I-210	GbE1: Intel I219-LM GbE2: Intel I-210	GbE1: Intel I219-LM GbE2: Intel I-210	GbE1: Intel I219-LM GbE2/3/4: Intel I-210	GbE1: Intel I219-LM; GbE2/3/4: Intel I-210IT(3rd/4th LAN by project support)
	Speed	10/100/1000Mbps	10/100/1000Mbps	10/100/1000Mbps	10/100/1000Mbps	10/100/1000Mbps
Audio	Audio Interface	HD Audio	HD Audio	HD Audio	HD Audio	HD Audio
	CODEC	ALC888S	ALC888S	ALC888S	ALC888S	ALC888S
	Connector	Line out, Mic in	Line out, Mic in	Line out, Mic in	Line out, Mic in	Line-out/Mic-in (switch)
WatchDog Timer	Yes	Yes	Yes	Yes	Yes	
Storage	SATA	2 x 2.5" SATAIII HDD bay (Max 15 mm height) (SATA III, support Max. Data Transfer Rate 600 MB/s, Support RAID 0, 1)	2 x 2.5" SATAIII HDD bay (Max 15 mm height) (SATA III, support Max. Data Transfer Rate 600 MB/s, Support RAID 0, 1)	2 x (Optional up to 4) x 2.5" SATAIII HDD bay (Max 15 mm height) (SATA III, support Max. Data Transfer Rate 600 MB/s, Support RAID 0, 1, 5, 10)	2 x (Optional up to 4) x 2.5" SATAIII HDD bay (Max 15 mm height) (SATA III, support Max. Data Transfer Rate 600 MB/s, Support RAID 0, 1, 5, 10)	2 x 2.5" SATAIII HDD bay (Max 9.5 mm height) (SATA III, support Max. Data Transfer Rate 600 MB/s, Support RAID 0, 1)
	mSATA	1 (Share with full-size mini-PCIe)	1 (Share with full-size mini-PCIe)	2(Share with full-size mini-PCIe)	2 (Share with full-size mini-PCIe)	1 (Share with full-size mini-PCIe)
	USB3.1/3.2	-	-	-	-	2
	USB 3.0	6	6	8	8	6
I/O	USB2.0	2	2	-	-	-
	GPIO	16-bit	16-bit	16-bit (optional)	16-bit (optional)	16-bit
	COM Port	4 x RS232, 4 x RS232/422/485	4 x RS232, 4 x RS232/422/485	4 x RS232/422/485, 2 x RS232 (optional)	4 x RS232/422/485, 2 x RS232 (optional)	4 x RS232; 4 x RS232/422/485
	Power Type	ATX	ATX	ATX	ATX	ATX
	Power Supply Voltage	9-36V _{DC}	12V _{DC} ± 10%	12V _{DC} ± 10%	9-36V _{DC}	9-36V _{DC}
	Connector	4pin phoenix head	Lockable DC jack	Lockable DC jack (4pin phoenix head with AMO-P010E)	4pin phoenix head	4pin phoenix head
	Power	Power Consumption (Idle: CPU/ Memory only)	11.4W	11.4W	25.68W	25.68W
Power Consumption (Full Load: CPU/ Memory only)		68.4W	68.4W	88.92W	88.92W	34.8W
Power Adaptor		150W (optional)	150W (optional)	150W (optional)	150W (optional)	150W (optional)
Environment	Operating Temperature(air flow 0.7 m/sec)	With SSD and extend temperature peripherals: -20 ~ 60 °C; With HDD and standard temperature peripherals: 0 ~ 40 °C	With SSD and extend temperature peripherals: -20 ~ 60 °C; With HDD and standard temperature peripherals: 0 ~ 40 °C	With SSD and extend temperature peripherals: -20 ~ 60 °C; With HDD and standard temperature peripherals: 0 ~ 40 °C	With SSD and extend temperature peripherals: -20 ~ 60 °C; With HDD and standard temperature peripherals: 0 ~ 40 °C	With SSD and extend temperature peripherals: -20 ~ 60 °C; With HDD and standard temperature peripherals: 0 ~ 40 °C
	Non-operating Temperature	-40 ~ 85 °C and 40 °C @ 95% RH Non-Condensing	-40 ~ 85 °C and 40 °C @ 95% RH Non-Condensing	-40 ~ 85 °C and 40 °C @ 95% RH Non-Condensing	-40 ~ 85 °C and 40 °C @ 95% RH Non-Condensing	-40 ~ 85 °C and 40 °C @ 95% RH Non-Condensing
	Vibration Resistance	With SSD: 3 Grms, random, 5 ~ 500 Hz, 1 hr/axis; With HDD: 0.3 Grms, random, 5 ~ 500 Hz, 1 hr/axis.	With SSD: 3 Grms, random, 5 ~ 500 Hz, 1 hr/axis; With HDD: 0.3 Grms, random, 5 ~ 500 Hz, 1 hr/axis.	With SSD: 3 Grms, random, 5 ~ 500 Hz, 1 hr/axis.	With SSD: 3 Grms, random, 5 ~ 500 Hz, 1 hr/axis.	With SSD: 3 Grms, random, 5 ~ 500 Hz, 1 hr/axis.
	Shock Protection	With SSD: 30 G, half sine, 11 ms duration With HDD: 20 G, half sine, 11 ms duration	With SSD: 30 G, half sine, 11 ms duration With HDD: 20 G, half sine, 11 ms duration	With SSD: 30 G, half sine, 11 ms duration	With SSD: 30 G, half sine, 11 ms duration	With SSD: 30 G, half sine, 11 ms duration
Physical Characteristics	Dimensions(W x H x D)	220 x 101 x 233 mm	220 x 101 x 233 mm	105 x 205 x 230 mm	156.5 x 205 x 230 mm	200 x 75 x 215 mm
	Weight	4.4 kg	4.4 kg	5.3 kg	5.87 kg	3.2 kg
Operating System	Mounting	Desk	Desk	Desk	Desk	Desk
	Microsoft Windows	Windows 7, Windows 10	Windows 7, Windows 10	Windows 7, Windows 10	Windows 7, Windows 10	Windows 10
Software	Linux	Yes (by project inquiry)	Yes (by project inquiry)	Yes (by project inquiry)	Yes (by project inquiry)	Yes (by project inquiry)
	DeviceOn	WISE-DeviceOn	WISE-DeviceOn	WISE-DeviceOn	WISE-DeviceOn	WISE-DeviceOn, DeviceOn/Kiosk+
Certification	Other	McAfee, Acronis	McAfee, Acronis	McAfee, Acronis	McAfee, Acronis	McAfee, Acronis
	EMC	CE/FCC class A, CCC, BSMI	CE/FCC class B, CCC, BSMI	CE/FCC class B, CCC, BSMI	CE/FCC class B, CCC, BSMI	CE/FCC class B, CCC, BSMI
Safety Certifications	CE LVD, CCC, BSMI	CE LVD, CCC, BSMI	CE, UL, CCC, BSMI	CE, UL, CCC, BSMI	CE, UL, CCC, BSMI	CE, UL, CCC, BSMI

ファンレス/エッジコンピュータ - ARK

エッジサーバー

NEW



NEW



Model Name		ARK-3532B	ARK-3532C	ARK-3532D	
CPU	CPU	Intel® 10th Gen. Xeon® W and Core™ i3/i5/i7/i9 processor	Intel® 10th Gen. Xeon® W and Core™ i3/i5/i7/i9 processor	Intel® 10th Gen. Xeon® W and Core™ i3/i5/i7/i9 processor	
	Frequency	by Processor	by Processor	by Processor	
	Core Number 4/4	by Processor	by Processor	by Processor	
	BIOS	AMI EFI 256Mbit	AMI EFI 256Mbit	AMI EFI 256Mbit	
Memory	Chipset	Intel W480E	Intel W480E	Intel W480E	
	Technology	DDR4 2933 MHz	DDR4 2933 MHz	DDR4 2933 MHz	
	Max. Capacity	64GB	64GB	64GB	
Display	Socket	2 x 260-pin SODIMM	2 x 260-pin SODIMM	2 x 260-pin SODIMM	
	Chipset	Intel® UHD Graphics 630	Intel® UHD Graphics 630	Intel® UHD Graphics 630	
	Graphic Engine	DirectX 12, OpenGL 4.5; HW Encode: H.265/HEVC, H.264/MPEG-4 AVC, MPEG-2, JPEG/MJPEG and VP8, HW Decode: H.265/HEVC, H.264/MPEG-4 AVC, MPEG-2, VC-1/WMV9, JPEG/MJPEG, VP8 and VP9	DirectX 12, OpenGL 4.5; HW Encode: H.265/HEVC, H.264/MPEG-4 AVC, MPEG-2, JPEG/MJPEG and VP8, HW Decode: H.265/HEVC, H.264/MPEG-4 AVC, MPEG-2, VC-1/WMV9, JPEG/MJPEG, VP8 and VP9	DirectX 12, OpenGL 4.5; HW Encode: H.265/HEVC, H.264/MPEG-4 AVC, MPEG-2, JPEG/MJPEG and VP8, HW Decode: H.265/HEVC, H.264/MPEG-4 AVC, MPEG-2, VC-1/WMV9, JPEG/MJPEG, VP8 and VP9	
	VGA	1920x1200@60Hz	1920x1200@60Hz	1920x1200@60Hz	
	DDI	1 HDMI port, HDMI 1.4 for HD video playback, 4096x2160@30Hz; 3rd Display Module by Optional	1 HDMI port, HDMI 1.4 for HD video playback, 4096x2160@30Hz; 3rd Display Module by Optional	1 HDMI port, HDMI 1.4 for HD video playback, 4096x2160@30Hz; 3rd Display Module by Optional	
	Multiple Display	Triple (Option) / Dual	Triple (Option) / Dual	Triple (Option) / Dual	
	Expansion Interface	Mini PCIe	1 x Full-size Mini PCIe (1 x support mSATA, 1 x support SIM holder) #1	1 x Full-size Mini PCIe (1 x support mSATA, 1 x support SIM holder) #1	1 x Full-size Mini PCIe (1 x support mSATA, 1 x support SIM holder) #1
		M.2	1 (E key)	1 (E key)	1 (E key)
		SIM socket	1	1	1
		PCIe	1 slot PCIe*4, 1 slot PCIe*16	1 slot PCIe*4,	-
PCI		-	2 Slot PCI	-	
PCIe + PCI		-	-	1 slot PCIe*4, 1 slot PCIe*16, 2 Slot PCI	
i Door		-	-	-	
Ethernet	Controller	GbE1: Intel I219-LM GbE; GbE2/3/4: Intel I210 GbE	GbE1: Intel I219-LM GbE; GbE2/3/4: Intel I210 GbE	GbE1: Intel I219-LM GbE; GbE2/3/4: Intel I210 GbE	
	Speed	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps	
	Audio Interface	HD Audio	HD Audio	HD Audio	
Audio	CODEC	ALC888S	ALC888S	ALC888S	
	Connector	Line-out/Mic-in (switch)	Line-out/Mic-in (switch)	Line-out/Mic-in (switch)	
WatchDog Timer		Yes	Yes	Yes	
Storage	SATA	2 x 2.5" SATAIII 15mm height HDD bay support Intel SW RAID (Up to 4 x 2.5" SATAIII HDD bays by optional AMK-A0035)	2 x 2.5" SATAIII 15mm height HDD bay support Intel SW RAID (Up to 4 x 2.5" SATAIII HDD bays by optional AMK-A0035)	2 x 2.5" SATAIII 15mm height HDD bay support Intel SW RAID (Up to 4 x 2.5" SATAIII HDD bays by optional AMK-A0035)	
	mSATA	1 x mSATA socket (Share with Mini PCIe)	1 x mSATA socket (Share with Mini PCIe)	1 x mSATA socket (Share with Mini PCIe)	
	USB3.1/3.2	4	4	4	
I/O	USB 3.0	4	4	4	
	USB2.0	-	-	-	
	GPIO	16-bit	16-bit	16-bit	
	COM Port	4 x RS-232/422/485; 2 x RS-232	4 x RS-232/422/485; 2 x RS-232	4 x RS-232/422/485; 2 x RS-232	
	Power Type	AT/ATX	AT/ATX	AT/ATX	
	Power Supply Voltage	9-36V _{DC}	9-36V _{DC}	9-36V _{DC}	
	Connector	4pin phoenix head	4pin phoenix head	4pin phoenix head	
Power	Power Consumption (Idle: CPU/ Memory only)	30W	30W	30W	
	Power Consumption (Full Load: CPU/ Memory only)	64.8W	64.8W	64.8W	
	Power Adaptor	230W (Optional)	230W (Optional)	230W (Optional)	
Environment	Operating Temperature (air flow 0.7 m/sec)	Up to 65W processor with extended temp peripherals: -20 ~ 60° C with 0.7m/s air flow with HDD: 0 ~ 40° C with 0.7m/s air flow	Up to 65W processor with extended temp peripherals: -20 ~ 60° C with 0.7m/s air flow with HDD: 0 ~ 40° C with 0.7m/s air flow	Up to 65W processor with extended temp peripherals: -20 ~ 60° C with 0.7m/s air flow with HDD: 0 ~ 40° C with 0.7m/s air flow	
	Non-operating Temperature	-40 ~ 85° C and 40° C @ 95% RH Non-Condensing	-40 ~ 85° C and 40° C @ 95% RH Non-Condensing	-40 ~ 85° C and 40° C @ 95% RH Non-Condensing	
	Vibration Resistance	With SSD: 3 Grms, random, 5 ~ 500 Hz, 1 hr/axis.	With SSD: 3 Grms, random, 5 ~ 500 Hz, 1 hr/axis.	With SSD: 3 Grms, random, 5 ~ 500 Hz, 1 hr/axis.	
	Shock Protection	With SSD: 30 G, half sine, 11 ms duration	With SSD: 30 G, half sine, 11 ms duration	With SSD: 30 G, half sine, 11 ms duration	
Physical Characteristics	Dimensions (W x H x D)	156 x 204 x 230 mm	156 x 204 x 230 mm	197.2 x 204 x 230 mm	
	Weight	5.7 kg/ 1.5 lb	5.7 kg/ 1.5 lb	6.41 kg/14.1 lb	
	Mounting	Desk	Desk	Desk	
Operating System	Microsoft Windows	Windows 10	Windows 10	Windows 10	
	Linux	Yes (by project inquiry)	Yes (by project inquiry)	Yes (by project inquiry)	
Software	DeviceOn	WISE-DeviceOn, DeviceOn/Edge	WISE-DeviceOn, DeviceOn/Edge	WISE-DeviceOn, DeviceOn/Edge	
	Other	McAfee, Acronis	McAfee, Acronis	McAfee, Acronis	
Certification	EMC	CE/FCC class B, CCC, BSMI	CE/FCC class B, CCC, BSMI	CE/FCC class B, CCC, BSMI	
	Safety Certifications	CB, UL, CCC, BSMI	CB, UL, CCC, BSMI	CB, UL, CCC, BSMI	

Model Name		ARK-7060
CPU	CPU	Intel® 2nd Gen. Xeon® D SoC
	Frequency	by Processor
	Core Number	2-10
	BIOS	AMI EFI 512Mbit
Memory	Chipset	-
	Technology	DDR4 2666MHz
	Max. Capacity	128GB
Display	Socket	4 x 260-pin SODIMM
	Chipset	-
	Graphic Engine	-
	VGA	1
	DDI	-
	Multiple Display	-
	Mini PCIe	-
	M.2	1 x B Key, 1 x E key
	SIM socket	1
	PCIe	1 x PCIe4, 1 x PCIe16
Expansion Interface	PCI	1
	PCIe + PCI	-
	i Door	-
Ethernet	Controller	GbE 1/2: Intel I210 GbE GbE3/4: Intel X550-AT2 (optional)
	Speed	10/100/1000 Mbps 10Gbps (Optional)
	Audio Interface	-
Audio	CODEC	-
	Connector	-
WatchDog Timer		Yes
Storage	SATA	4 x 2.5" SATAIII HDD bays (Max 15mm in height)
	mSATA	-
	USB3.1/3.2	-
I/O	USB 3.0	4
	USB2.0	-
	GPIO	-
	COM Port	4 x RS-232/422/485
Power	Power Type	AT/ATX
	Power Supply Voltage	100-240V AC
	Connector	C13
	Power Consumption (Idle: CPU/ Memory only)	TBD
	Power Consumption (Full Load: CPU/ Memory only)	TBD
	Power Adaptor	850W Power Supply
	Operating Temperature (air flow 0.7 m/sec)	With extended temp peripherals: -10 ~ 50° C with 0.7m/s air flow
Environment	Non-operating Temperature	-40 ~ 85° C and 40° C @ 95% RH Non-Condensing
	Vibration Resistance	With SSD: 3 Grms, random, 5 ~ 500 Hz, 1 hr/axis.
Physical Characteristics	Shock Protection	With SSD: 30 G, half sine, 11 ms duration
	Dimensions (W x H x D)	230 x 205 x 390 mm
Operating System	Weight	9.7kg
	Mounting	Desk
Software	Microsoft Windows	Windows 10/Server 2019
	Linux	Yes (by project inquire)
Certification	DeviceOn	WISE-DeviceOn, DeviceOn/Edge
	Other	McAfee, Acronis
Safety Certifications	EMC	CE/FCC class B, CCC, BSMI
	Safety Certifications	CB, UL, CCC, BSMI

エッジコンピュータ - EPC-U

EPC-Uシリーズ

NEW



Model Name		EPC-U2117	EPC-U2217	EPC-U3233
Barebone system	Description	Fanless w/Adapter, memory	Fanless w/Adapter, memory	Fanless with BGA CPU, w/o DRAM, storage
Processor System	CPU	Intel Atom E3930 (on board)	Intel Atom E3940 (on board)	i7-8665UE i5-8365UE i3-8145UE
	BIOS	AMI EFI 16Mbit SPI	AMI EFI 16Mbit SPI	AMI EFI 256 Mbit SPI
Memory	Socket	1 x 204-pin DDR3L SODIMM (Non-ECC)	1 x 204-pin DDR3L SODIMM (Non-ECC)	1, 260-pin DDR4 SODIMM
	Technology	DDR3L 1866MHz SDRAM	DDR3L 1866MHz SDRAM	DDR4 2400MHz SDRAM
	Max. Capacity	Up to 8GB SODIMM	Up to 8GB SODIMM	Up to 32GB SODIMM
Graphics	Chipset Integrated	Intel HD Graphics GEN9	Intel HD Graphics GEN9	Intel® UHD Graphics 620
Storage	2.5" HDD Bay	1(support 2.5" HDD/SSD, max 7.5mm height)	1(support 2.5" HDD/SSD, max 7.5mm height)	-
	mSATA Slot	1, colay with F/S miniPCIE	1, colay with F/S miniPCIE	-
	eMMC	Onboard eMMC 5.1 upto 128GB	Onboard eMMC 5.1 upto 128GB	-
	M.2 2280 slot	-	-	1, M-Key, support PCIe Gen3 x4 SSD, SATA III SSD
	M.2 2242/3042 slot	-	-	1, B-Key, support PCIe Gen3 x2 SSD, SATA III SSD
Ethernet	M.2 2230 slot	-	-	1, E-Key, support PCIe Gen3 x2 SSD
	Interface	10/100/1000 GbE LANs.	10/100/1000 GbE LANs.	10/100/1000 GbE LANs
	Controller	LAN1: Realtek RTL8111H LAN2: Realtek RTL8111H	LAN1/2: Intel i210TE LAN3: Realtek RTL8111H	LAN1: Intel Jacksonville i219LM LAN2: Intel Springville i211AT
Audio	Connector	2 (RJ-45)	3 (RJ-45)	2 (RJ-45)
	Codec	Realtek ALC888	Realtek ALC888	Realtek ALC888
Internal expansion Slot	Mini-PCle	1 (F/S)	1 (F/S)	-
	M.2	1 (E-Key)	1 (E-Key)	1, B-Key PCIe x2, USB 2.0, SATA co-layout 1, E-Key, PCIe x2, USB 2.0 co-lay, support WiFi/ BT or Movidius modules
	SIM slot	-	-	1, Nano SIM
	SD slot	-	-	-
Front Panel	DP++	-	-	-
	DP/HDMI	-	-	-
	VGA	-	-	-
	DVI	-	-	-
	COM	2 (1 RS-232, 1 RS-485)	4 (3 RS-232, 1 RS-422/485)	2, COM1 (RS-232), COM2 (RS-232/422/485)
	LAN	2	3	2
	USB	4 (USB3.0)	4 (USB3.0)	2 (USB3.2 Gen2 x1 Type-A)
	Audio Jack	1	1	-
	Antenna (optional)	-	-	-
	Rear Panel	DP++	-	-
DP/HDMI		1/1	1/1	0/2
VGA		-	-	-
CAN bus		-	Isolated CANBus	-
COM		-	-	-
LAN		-	-	-
USB		-	-	-
Audio Jack		-	-	1
GPIO		-	16bit (2 DB9)	16bit (2 DB9)
Antenna (optional)		Up to 4	Up to 4	-
Right Panel	USB	-	-	2, USB2.0 Type A
	Antenna (optional)	-	-	Up to 3
Left Panel	COM	-	-	2, COM3 (RS-232), COM4 (RS-232/422/485)
	Antenna (optional)	-	-	Up to 3
Mounting		Wall Mount (Default) Din Rail (Optional)	Wall Mount (Default) Din Rail (Optional)	Wall Mount (Default) Din Rail (Optional)
Power Requirements	Power Voltage	12V~24V DC-in	12V~24V DC-in	12V~24V DC-in
	Power Input Type (Inlet)	DC Jack (2.5Ø)	DC Jack (2.5Ø)	DC Jack (2.5Ø)
	Consumption	12V@0.987A	12V@1.409A	~24W
Environment	Operating Temperature	0 ~ 50 °C	-20 ~ 60 °C with RF module by max system performance	0 ~ 50 °C
	Non-operating Temperature	-40 ~ 85 °C and 95% @ 40 °C Non-Condensing	-40 ~ 85 °C and 95% @ 40 °C Non-Condensing	-40 ~ 85 °C and 95% @ 40 °C Non-Condensing
	Humidity	-	-	0.95
	Vibration (5 ~500Hz)	3G (with 2.5" SSD)	3G (with 2.5" SSD)	3.0 Grms
	Shock	-	-	30G, 11ms, half sine wave
Certification		CE/FCC/CCC/BSMI	CE/FCC/CCC/BSMI	CE/ FCC/ CB/ UL /CCC/ BSMI
Physical Characteristics	Dimensions (W x H x D)	170 x 52.6 x 117 mm	170 X 52.6 X 117 mm	170 x 116.7 x 66 mm
	Weight	1.1KG	1.2KG	1.9 kg

エッジコンピュータ - EPC-T

EPC-Tシリーズ



Model Name		EPC-T1217	EPC-T1228	EPC-T2285	EPC-T2286
Barebone system	Description	Fanless barebone, w/ adapter, w/o SSD, memory	Fan-base barebone, w/ adapter, w/o HDD, memory	Fan-base barebone, w/o adapter, HDD, memory	Fan-base barebone, w/o adapter, HDD, memory
	Thermal Solution	Fanless (0.7 m/s air flow)	1x chassis fan (4cm/23.8CFM)	2x chassis fan (4cm/23.8CFM)	2x chassis fan (4cm/23.8CFM)
Processor System	CPU	Intel Pentium N4200 (on board)	AMD V1000 V1605B (on board)	Intel® 6th/7th Gen Core™ i processor (LGA1151)	Intel® 8th Gen Core™ i processor (LGA1151)
	BIOS	AMI 128 Mbit SPI	AMI 128Mbit SPI	AMI EFI 128 Mbit, SPI	AMI EFI 128 Mbit, SPI
	Socket	2 x 204-pin SO-DIMM (Non-ECC)	2 x 260-pin DDR4 SO-SIMM with ECC Support	260 PIN DDR4 SO-DIMM	260 PIN DDR4 SO-DIMM
Memory	Technology	DDR3L 1866 MHz SDRAM	DDR4 2400 / 2666 / 3200MHz SDRAM	Dual Channel DDR4 2133 MHz SDRAM	Dual Channel DDR4 2666 MHz SDRAM
	Max. Capacity	8 GB/8 GB per SO-DIMM	32 GB/16 GB per SO-DIMM	32 GB/up to 16 GB per SODIMM	32 GB/up to 16 GB per SODIMM
	Chipset Integrated	Intel Gen 9 Graphics Engines and media encode/decode engine	AMD Integrated Vega GCN	Intel® HD Graphics, Supports DirectX12, OpenCL 4.5	Intel® UHD Graphics, Supports DirectX12, OpenCL 4.5
Storage	2.5" HDD Bay	1 (supports 2.5" SSD, max 9.5 mm height)	1 (supports 2.5" HDD/SSD, max 9.5 mm height)	1 (supports 2.5" HDD/SSD, max 9.5 mm height)	1 (supports 2.5" HDD/SSD, max 9.5 mm height)
	mSATA Slot	1 (share w/ full size Mini-PCIe slot)	1 x B key of M.2 for SSD	1 (share w/ full size Mini-PCIe slot)	1 x B key of M.2 for SSD
Ethernet	Interface	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps
	Controller	LAN1: Realtek RTL8111H LAN2: Realtek RTL8111H	LAN1: Realtek RTL8111H LAN2: Realtek RTL8111H	LAN1: Realtek RTL8111H LAN2: Realtek RTL8111H	LAN1: Realtek RTL8111H LAN2: Realtek RTL8111H LAN3: Intel i211AT
	Connector	2 (RJ-45)	2 (RJ-45)	2 (RJ-45)	3 (RJ-45)
Audio	Codec	Realtek ALC888S	Realtek ALC888S	Realtek ALC888S	Realtek ALC888S
Internal expansion Slot	Mini-PCIe	1 (Full-size)	-	2 (Full-size, Half-size)	-
	Expansion Slot	-	-	-	-
	M.2	1 (E Key, type: 2230)	2, (1 B key for SSD and 3G/4G, type: 3042, 3042mm, with SIM card holder; 1 E key for wireless, type: 2230mm)	-	2, (1 B key for SSD and 3G/4G type: 2242, 3042mm, with SIM card holder; 1 E key for wireless, type: 2230mm)
	SIM slot	1	1	1	1
	SD slot	-	-	-	-
Front Panel	DP++	-	-	-	-
	DP/HDMI	-	-	-	-
	VGA	-	-	-	-
	DVI	-	-	-	-
	COM	5 (4 RS-232, 1 RS232/422/485, 1 support 5V/12V)	5 (4 RS-232, 1 RS232/422/485, 1 support 5V/12V)	2 (1 RS-232/422/485, 1 RS-232/422/485 and support 5V/12V)	4 (3 RS-232, 1 RS-232/422/485 by BOM option)
	Lan	-	-	-	-
	USB	4 (USB2.0; optional)	2 (USB2.0)	4 (USB2.0)	4 (USB2.0)
	Audio Jack	2 (Line-Out, Mic-In)	2 (Line-Out, Mic-In)	2 (Line-Out, Mic-In)	2 (Line-Out, Mic-In) (Optional)
	Remote Power Jack	0	0	0	1
	Antenna (optional)	up to 2	up to 2	up to 2	up to 2
Rear Panel	DP++	-	-	1	-
	DP/HDMI	1/1	4/0	1 (HDMI 1.4)	1/1
	VGA	1	-	-	-
	DVI	-	-	-	-
	COM	1 (RS232)	-	-	2 (1 RS-232/422/485, 1 support 5V/12V by jumper selection)
	Lan	2 (RJ-45)	2 (RJ-45)	2 (RJ-45)	3 (RJ-45)
	USB	4 (USB3.0)	2 (USB3.0); 2 (USB2.0)	4 (USB3.0)	4 (USB3.0)
	Audio Jack	1 (line out)	2 (Line-Out, Mic-in)	2 (Line-Out, Mic-in)	2 (Line-Out, Mic-in)
	GPIO	8 bit (Optional)	16 bit (Optional)	8 bits (Optional)	8 bits (Optional)
Antenna (optional)	up to 2	up to 2	up to 2	up to 2	
Miscellaneous	LED Indicators	2 (Power LED, HDD LED)	2 (Power LED, HDD LED)	2 (Power LED, HDD LED)	2 (Power LED, HDD LED)
	Switch	1 (Power Switch); 1 (Reset Switch)	1 (Power Switch); 1 (Reset Switch)	1 (Power Switch); 1 (Reset Switch)	1 (Power Switch); 1 (Power Remote Jack)
	Circular Cutouts	-	-	1(Reserved for internal cable)	1(Reserved for internal cable)
Mounting	Wall mount, VESA mount, Rack mount	Wall mount, VESA mount, Rack mount	Wall mount, VESA mount, Rack mount, DIN rail	Wall mount, VESA mount, Rack mount, DIN rail	
Power Requirements	Power Voltage	12V DC-in	12V DC-in	12V DC-in	12V DC-in
	Power Input Type (Inlet)	2.5Ø DC jack	2.5Ø DC jack	DC jack (2.5Ø with locked design)	DC jack (2.5Ø with locked design)
	Consumption	21.5W (N4200, Max load)	TBD	89.36W (idle with Intel i7-6700 Processor)	86.4W (i7-8700, Max load)
Environment	Operating Temperature	Fanless: 0 ~ 45 °C	Fan-based: 0 ~ 45 °C	0 ~ 50 °C	0 ~ 50 °C
	Non-operating Temperature	-40 ~ 85 °C	-40 ~ 85 °C	-40 ~ 85 °C	-40 ~ 85 °C
	Humidity	10~95% @ 40°C, non-condensing	10~95% @ 40°C, non-condensing	10~95% @ 40 °C, non-condensing	10~95% @ 40 °C, non-condensing
	Vibration (5 ~500Hz)	3 Grms (SSD x 1)	0.5 Grms (HDD x 1); 3 Grms (SSD x 1)	0.5 Grms (HDD x 1); 3 Grms (SSD x 1)	0.5 Grms (HDD x 1); 3 Grms (SSD x 1)
Shock	-	-	-	-	
Certification	CE, FCC	CE, FCC	CE/FCC/CCC/BSMI	CE/FCC/CCC/BSMI	
Physical Characteristics	Dimensions (W x H x D)	250 x 43 x 210 mm	250 x 43 x 210 mm	250 x 44.2 x 225 mm	250 x 44.2 x 225 mm
	Weight	3.1kg	3.1kg	3.68kg	3.68kg

エッジコンピュータ - EPC-T

EPC-Tシリーズ

NEW



Model Name		EPC-T3285	EPC-T3217	EPC-T4218	EPC-T4286	
Barebone system	Description	Fan-base barebone, w/o HDD, memory	Fanless barebone, w/ adapter,w/o SSD, memory	Fanless barebone, w/ adapter,w/o SSD, memory	w/Fan, w/o adaptor, memory	
	Thermal Solution	2 x chassis fan (4cm/23.8CFM)	Fanless (0.7 m/s air flow)	Fanless (0.7 m/s air flow)	2 Chassis Fans, 1 CPU cooler	
Processor System	CPU	Intel® 6th/7th Gen Core™ i processor (LGA1151)	Supports Intel Pentium, Celeron Quad Core & Dual Core processor	Intel Celeron J6413	Intel® 8th Gen Core™ i processor (LGA1151)	
	BIOS	AMI EFI 128 Mbit SPI	AMI 128 Mbit SPI	AMI 256 Mbit SPI	AMI EFI 128 Mbit SPI	
	Socket	2 x 260 PIN DDR4 SO-DIMM	2 x 204-pin SO-DIMM	2 x 260-pin SO-DIMM (Non-ECC)	260 PIN DDR4 SO-DIMM	
Memory	Technology	Dual Channel DDR4 2133 MHz SDRAM	Dual channel DDR3L 1866 MHz SDRAM	DDR4 3200 MHz SDRAM	Dual Channel DDR4 2666 MHz SDRAM	
	Max. Capacity	32GB (up to 16GB per SO-DIMM)	8 GB/8 GB per SO-DIMM	32 GB/32 GB per SO-DIMM	32 GB/up to 16 GB per SODIMM	
	Chipset Integrated	Intel® HD Graphics, Supports OpenGL 5.x, DirectX12, OpenCL 2.X	Intel Gen 9 Graphics Engines and media encode/decode engine	Intel Gen 11 Graphics Engines	Intel® UHD Graphics, Supports DirectX12, OpenCL 4.5	
Storage	2.5" HDD Bay	2 (supports 2 x 2.5" HDD/SSD, or 1 3.5" HDD)	2 (supports 2 x 2.5" HDD/SSD, or 1 3.5" HDD)	1 (supports 2.5" SSD, max 7 mm height)	1 (supports 2.5" HDD/SSD, max 7 mm height)	
	mSATA Slot	1 (share w/ full size Mini-PCIe slot)	1 (F/S with SIM card holder)	-	1 x B key of M.2 for SSD	
Ethernet	Interface	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps Ethernet	
	Controller	LAN1: Realtek RTL8111H LAN2: Realtek RTL8111H	LAN1: Realtek RTL8111H LAN2: Realtek RTL8111H	GbE LAN1: Realtek 8111H GbE LAN2: Realtek 8111H	LAN1/2: Realtek RTL8111H LAN3: Intel i211AT	
	Connector	2 (RJ-45)	2 (RJ-45)	2 (RJ-45)	3 (RJ-45)	
Audio	Codec	Realtek ALC888S	Realtek ALC888	Realtek ALC888	Realtek ALC888	
Internal expansion Slot	Mini-PCIe	2 (Full-size, Half-size) 1 PCIe slot (Full height)	1 (Full-size)	-	-	
	M.2	-	1 (E key for wireless module, type: 2230)	E key for wireless module (Type: 2230) B key for storage and LTE module, only support PCIe1 signal (Type: 2242/2280)	2 (1x B key for SSD and 3G/4G w/ Type: 2242, 3042mm; with SIM card holder; 1 x E key for wireless w/ Type: 2230mm)	
	SIM slot	1	1	1	1	
	SD slot	-	-	-	-	
Front Panel	DP++	-	-	1	-	
	DP/HDMI	-	-	0/1	1/1	
	VGA	-	-	-	-	
	DVI	-	-	-	-	
	COM	2 (1 RS-232/422/485, 1 RS-232/422/485 with 5V/12V)	4 (1 RS-232/422/485, 3 RS-232)	2	2 (RS-232)	
	LAN	-	-	2	3 (RJ45)	
	USB	4 (USB2.0)	4 (USB2.0)	8	6 (4 USB3.0, 2 USB2.0)	
	Audio Jack	2 (Line-Out, Mic-In)	2 (Line-Out, Mic-In)	2	2 (1 Line-out, 1 Mic-in)	
	Remote Power Jack	-	-	1	1	
	Antenna (optional)	up to 2	up to 2	-	up to 2	
	DP++	1	-	-	-	
Rear Panel	DP/HDMI	1 (HDMI1.4)	1/1	-	-	
	VGA	-	1	-	-	
	DVI	-	-	-	-	
	COM	-	-	4 (RS-232, optional)	4 (RS-232, optional)	
	LAN	2 (RJ-45)	2 (RJ-45)	-	-	
	USB	4 (USB3.0)	4 (USB3.0)	-	-	
	Audio Jack	2 (Line-Out, Mic-in)	1 (Line-Out)	-	-	
	GPIO	8 bits (Optional)	8 bits (Optional)	-	-	
	Antenna (optional)	up to 2	up to 2	-	2	
	Miscellaneous	LED Indicators	2 (Power LED, HDD LED)	2 (Power LED, HDD LED)	2 (Power LED, HDD LED)	2 (Power LED, HDD LED)
		Switch	1 (Power Switch); 1 (Reset Switch)	1 (Power Switch); 1 (Reset Switch)	1 (Power Switch)	1 (Power Switch)
Circular Cutouts		-	-	-	1 (Reserved for internal cable)	
Mounting	Wall mount, Rack mount	Wall mount, Rack mount	Wall mount, VESA mount, Rack mount, DIN rail	Wall mount, VESA mount, Rack mount, DIN rail		
Power Requirements	Power Voltage	12V DC-in (Optional 9~36V)	12V DC-in (Optional 9~36V)	12V	12V DC-In	
	Power Input Type (Inlet)	DC jack (2.5Ø)	DC jack (2.5Ø)	DC Jack (2.5Ø)	DC Jack (2.5Ø)	
	Consumption	102.3W (i7-7700, Max load)	21.5W (N4200, Max load)	TBD	86.4W (i7-8700, Max load)	
Environment	Operating Temperature	0 ~ 40 °C	0 ~ 40 °C	0 ~ 50 °C	0 ~ 50 °C	
	Non-operating Temperature	-20 ~ 60 °C	-20 ~ 60 °C	-40 ~ 85 °C	-40 ~ 85 °C	
	Humidity	10~95% @ 40 °C, non-condensing	10~95% @ 40°C, non-condensing	10~95% @ 40 °C, non-condensing	10~95% @ 40°C, non-condensing	
	Vibration (5 ~500Hz)	1 Grms (2.5" HDD x 1); 0.5 Grms (HDD x 2, 3.5" HDD x 1)	1 Grms (2.5" HDD x 1); 0.5 Grms (HDD x 2, 3.5" HDD x 1)	3 Grms (SSD x 1)	0.5 Grms (HDD x 1); 3 Grms (SSD x 1)	
	Shock	-	-	-	-	
Certification	CE/FCC	CE/FCC		CE/FCC/CCC/CB/UL		
Physical Characteristics	Dimensions (W x H x D)	330 x 44 x 270 mm	330 x 44 x 270 mm	188 x 44 x 188 mm	188 x 44 x 188 mm	
	Weight	5.68kg	5.68kg	3.1 Kg	3.1 Kg	

エッジコンピュータ - EPC-P/EPC-B

EPC-Pシリーズ

EPC-Bシリーズ



Model Name		EPC-P3066	EPC-P3086	
Barebone system	Description	Fan-base barebone, w/ C246 chipset	Fan-base barebone, w/ H310 chipset	
	Processor System	Supports Intel® 8th Gen Core™ i7/i5/i3 processor	Supports Intel® 8th Gen Core™ i7/i5/i3 processor	
Memory	BIOS	AMI EFI 256 Mbit SPI	AMI EFI 256 Mbit SPI	
	Socket	2 x 260-pin DDR4 SO-DIMM 2	2 x 260-pin DDR4 SO-DIMM 2	
	Technology	Dual Channel DDR4 2400/2666MHz Non-ECC SDRAM	Dual Channel DDR4 2400/2666MHz Non-ECC SDRAM	
Graphics	Max. Capacity	Up to 32GB (16GB per SO-DIMM)	Up to 32GB (16GB per SO-DIMM)	
	Chipset Integrated	Intel HD Graphics Supports DirectX11.1, OpenGL 5.0 and OpenCL 2.1	Intel HD Graphics Supports DirectX11.1, OpenGL 5.0 and OpenCL 2.1	
Storage	2.5" HDD Bay	2 (supports 2 x 2.5" HDD)	2(supports 2 x 2.5" HDD)	
	mSATA Slot	2 (Full-size, Half size)	1 (Full-size, Half size)	
Ethernet	Interface	10/100/1000 Mbps	10/100/1000 Mbps	
	Controller	LAN1: Intel i219LM PHY LAN 2: Intel i210AT LAN 3: Realtek RTL8111H	LAN1: Intel i219LM LAN2: Intel i211AT	
Audio	Codec	Realtek ALC888	Realtek ALC888	
Internal expansion Slot	Mini-PCIe	2 (F/S)	1 (F/S, H/S); colay mSATA	
	M.2	2 (1 B-Key, 1 E-Key)	-	
	SIM slot	2 (Optional)	-	
	SD slot	-	-	
	GPIO	-	-	
Front Panel	HDMI	1	1	
	VGA (default)	1	1	
	COM	6 (2 RS-232/422/485, 4 RS-232)	6 (2 RS-232/422/485, 4 RS-232)	
	GPIO	16 bits (2 DB-9)	16 bits (2 DB-9)	
	LAN	3 (RJ-45)	2 (RJ-45)	
	USB	6 (USB3.0)	4 (USB3.0); 2 (USB2.0)	
	LED indicator	5 (COM1 TX/RX, COM2 TX/RX, HDD LED)	5 (COM1 TX/RX, COM2 TX/RX, HDD LED)	
	Power SW / LED	1	1	
	Remote Control	Power SW+/SW- ; Power LED+/- ; RST +/-	Power SW+/SW- ; Power LED+/- ; RST +/-	
	Power input	12~24V	12~24V	
	i Door window (option)	1	1	
	Audio Jack	Supported by project	Supported by project	
	Antenna (optional)	up to 2	up to 2	
	Riser Card option	1 PCIe x16 1 PCIe x4	✓	✓
		1 PCIe x8 3 PCIe x4	✓	-
2 PCIe x8 2 PCI		✓	✓ (1 PCIe x16, 2 PCI)	
1 PCIe x16 3 PCIe x1		✓	✓	
Mounting		Wall mount, Rack mount	Wall mount, Rack mount	
Power Requirements	Power Voltage	12 ~ 24V DC input	12~24V DC input	
	Power Input Type (Inlet)	Terminal block 4P	Terminal block 4P	
	Consumption	TBD	TBD	
Environment	Operating Temperature	0 ~ 50 °C (Fan W/SSD)	0 ~ 50 °C (Fan W/SSD)	
	Non-operating Temperature	-20 ~ 60 °C	-20 ~ 60 °C	
	Humidity	10~95% @ 40°C, non-condensing	10~95% @ 40°C, non-condensing	
	Vibration (5 ~500Hz)	1 Grms (HDD*1); 0.5 Grms (HDD*2)	1 Grms (HDD*1); 0.5 Grms (HDD*2)	
Certification		CE/FCC/BSMI/CCC/KCC	CE/FCC/BSMI/CCC/KCC	
	Physical Characteristics	Dimensions (W x D x H) Weight	335 x 260 x 88 mm 6.8KG	

Model Name		EPC-B2205	EPC-B2275	EPC-B2276
Barebone system	Description	Fan-base barebone, w/ 150W PSU, w/o HDD, memory	Fan-base barebone, w/ 150W PSU, w/o HDD, memory	Fan-base barebone, Coffee lake, w/ 150W Adapter, w/o HDD, memory
	Processor System	2 x chassis fan (7cm/28CFM)	2 x chassis fan (7cm/28CFM)	2 x chassis fan (7cm/28CFM)
Memory	CPU	Intel® 7th Gen Core™ & 6th Gen Core™ i processor /Pentium / Celeron (LGA1151) with Intel H110 chipset	Intel® 7th & 6th Gen Core™ i processor (LGA1151)	Intel® 8th/9th Gen Core™ i processor (LGA1151)
	BIOS	AMI EFI 128 Mbit SPI	AMI EFI 128 Mbit SPI	AMI EFI 256 Mbit SPI
	Socket	2 x 260-pin DDR4 SO-DIMM	2 x 260-pin DDR4 SO-DIMM (Non-ECC)	2 x 260 PIN DDR4 SO-DIMM (Non-ECC)
Graphics	Technology	Dual channel DDR4 2400/2133 MHz non ECC SDRAM (Only supports DDR4 2133 MHz SDRAM for SKL-S CPU)	Dual Channel DDR4 2133 MHz SDRAM	Technology Dual Channel DDR4 2666 MHz SDRAM
	Max. Capacity	Up to 32GB (16GB per SO-DIMM)	32 GB/up to 16 GB per SO-DIMM	64GB (up to 32GB per SO-DIMM)
Storage	Chipset Integrated	Integrated Intel® HD Graphics 530	Intel® HD Graphics, Supports OpenGL 5.x, DirectX12, OpenCL 2.X	Intel® UHD Graphics 630 / Intel® HD Graphics 615
2.5" HDD Bay	Interface	2 (supports 2 x 2.5" HDD/SSD, or 1 slim ODD & 1 x 2.5" HDD/SSD)	2 (supports 2 x 2.5" HDD/SSD, or 1 slim ODD & 1 x 2.5" HDD/SSD)	2 (supports 2 x 2.5" HDD/SSD, or 1 slim ODD & 1 x 2.5" HDD/SSD)
	mSATA Slot	1 (share w/ full size Mini-PCIe slot)	1 (Full-size, Half size)	-
Ethernet	Interface	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps
Controller	LAN1: Realtek RTL8111H LAN2: Realtek RTL8111H	LAN1: Intel i219LM LAN2: Intel i211AT	LAN1: Intel i219LM LAN2: Intel i211AT	LAN1: Intel i219LM LAN2: Intel i211AT
	Connector	2 (RJ-45)	2 (RJ-45)	2 (RJ-45)
Audio	Codec	Realtek ALC888, High Definition Audio (HD)	Realtek ALC888, High Definition Audio (HD)	Realtek ALC888S
Internal expansion Slot	Mini-PCIe	1 (Full-size)	1+1 (Full-size, Half-size)	-
	M.2	1 (B Key, 2242)	1 (B Key, 2242)	1 (B key, 2242, 3042) 1 (E key, 2230)
	SIM slot	-	-	1
	SD slot	-	-	-
	DP++	-	-	-
Front Panel	DP/HDMI	-	-	-
	VGA	-	-	-
	DVI	-	-	-
	COM	4 (Optional)	1 (RS232/422/485, Optional)	up to 2 (RS232/422/485, Optional)
	LAN	-	-	-
	USB	2 (USB2.0; Optional)	4 (USB2.0; optional)	up to 2 (USB3.0, Optional)
	Audio Jack	-	-	-
	Antenna (optional)	up to 2	up to 2	up to 2
	DP++	-	-	-
	DP/HDMI	1/0	1/1	2 / 1
	VGA	1	1	-
	DVI	1 (DVI-D)	-	-
	COM	-	1 (RS232, supports 5V/12V)	-
	LAN	2 (RJ-45)	2 (RJ-45)	2 (RJ-45)
	USB	4 (USB3.0); 4 (USB2.0)	4 (USB3.0)	5 USB 3.1 + 2 USB USB 3.0
Audio Jack	3 (line-in, line-out, mic-in)	3 (Mic in, Line out, Line in)	3 (Mic-in, Line-out, Line-in)	
GPIO	8 bits (Optional)	8 bits (Optional)	8 bits (Optional)	
Antenna (optional)	up to 2 (Optional)	up to 2 (Optional)	-	
Miscellaneous	LED Indicators	2 (Power LED, HDD LED)	2 (Power LED, HDD LED)	2 (Power LED, HDD LED)
	Switch	1 (Power Switch); 1 (Reset Switch)	1 (Power Switch); 1 (Reset Switch)	1 (Power Switch); 1 (Reset Switch)
	Circular Cutouts	-	-	-
Mounting		Wall mount	Wall mount	Wall mount
Power Requirements	Power Voltage	Power Voltage: 100V~240V AC input	Power Voltage: 100V~240V AC input	12V DC input
	Power Input Type (Inlet)	Power Code input	Power Code input	DC Jack (2.5Ø)
	Consumption	TBD	TBD	TBD
	Operating Temperature	0 ~ 40 °C	0 ~ 40 °C	0 ~ 40 °C
Environment	Non-operating Temperature	-20 ~ 60 °C	-20 ~ 60 °C	-20 ~ 60 °C
	Humidity	10~95% @ 40°C, non-condensing	10~95% @ 40°C, non-condensing	10~95% @ 40°C, non-condensing
	Vibration (5 ~500Hz)	1 Grms (HDD*1+ODD*1); 0.5 Grms (HDD*2)	1 Grms (HDD*1+ODD*1); 0.5 Grms (HDD*2)	1 Grms (HDD*1+ODD*1); 0.5 Grms (HDD*2)
	Shock	-	-	-
Certification		CE/FCC/CCC/CB/UL/BSMI	CE/FCC/CCC	CE/FCC/CCC/BSMI
	Physical Characteristics	Dimensions (W x H x D) Weight	250 x 98 x 255 mm 3.8kg	250 x 98 x 255 mm 3.8kg

エッジコンピュータ - EPC-B/UTX

IoTゲートウェイ



Model Name		EPC-B5505	EPC-B5587
Barebone system	Description	Fan-based 4U system with PSU	Fan-based 4U system with PSU
	Thermal Solution	Default CPU cooler: 1960047669N001 Sys Fan: 1750009361-01	Default CPU cooler: 1960047669N001 (65W) Optional CPU Cooler: 1960067860N001 (80W) Sys Fan: 1750009361-01
	CPU	i7-6700 i7-6700TE i5-6500 i5-6500TE i3-6100 i3-6100TE	*W1290E / *W1290TE *W1270E / *W1270TE *W1250E / *W1250TE i9-10900E / i9-10900TE i7-10700E / i7-10700TE i5-10500E / i5-10500TE
	BIOS	AMI 128 Mbit SPI	AMI 256 Mbit SPI
Memory	Socket	2 x 288 pin U DIMM	4 x 288 pin U DIMM
	Technology	Dual Channel DDR4 2400 MHz	Dual Channel DDR4 2400/2666/2933 MHz Non-ECC SDRAM/ ECC SDRAM
	Max. Capacity	32GB (16GB per DIMM)	128GB (32GB per DIMM)
Graphics	Chipset Integrated	Intel HD Graphics	Intel HD Graphics
Storage	2.5" HDD Bay	3 (supports 2.5" SSD, max 7 mm height)	6 (supports 2.5" SSD, max 7 mm height)
	mSATA Slot		-
Ethernet	Interface	10/100/1000 Mbps	10/100/1000 Mbps / 10 Gbps
	Controller	GbE LAN1:Realtek RTL8111G GbE LAN2:Realtek RTL8111G	LAN1: Intel I219LM LAN2: Intel I210AT LAN3/4: Intel X550-AT2
	Connector	2 (RJ-45)	4 (RJ-45)
Audio	Codec	Realtek ALC892	Realtek ALC888S
Internal expansion Slot	Mini-PCIe	-	-
	M.2	-	M.2 M-Key 2280
	SIM slot	-	-
	SD slot	-	-
Front Panel	DP++	-	-
	DP/HDMI	-	-
	VGA	-	-
	DVI	-	-
	COM	-	-
	Lan	-	-
	USB	-	4
	Audio Jack	-	-
	Remote Power Jack	-	1
	Antenna (optional)	-	-
Rear Panel	DP++	-	2
	DP/HDMI	1/0	-
	VGA	1	1
	DVI	1	-
	COM	6	6
	Lan	2	4
	USB	-	4
	Audio Jack	2	2
	GPIO	-	-
	Antenna (optional)	-	-
Miscellaneous	LED Indicators	1 Power-On LED 1 Power LED 1 Storage LED 2 LAN LED	1 Power-On LED 1 Power LED 1 Storage LED 2 LAN LED
	Switch	1 (Power Switch)	1 (Power Switch)
Power Requirements	Circular Cutouts		-
	Power Voltage	ATX AC Power-In	ATX AC Power-In
	Power Input Type (Inlet)	ATX AC Power-In	ATX AC Power-In
Environment	Consumption	TBD	TBD
	Operating Temperature	0 ~ 40°C w/o Expansion card	0 ~ 40°C w/o GPU card 0 ~ 35°C w/ GPU card
	Non-operating Temperature	-20 ~ 60°C	-20 ~ 60°C
	Humidity	10 ~ 95% @ 40 °C, non-condensing	10 ~ 95% @ 40 °C, non-condensing
	Vibration (5 ~500Hz)	3Grms w/o GPU card (Tested with 2.5" SSD & 4U Type)	3Grms w/o GPU card 1Grms w/ GPU card (Tested with 2.5" SSD & 4U Type)
Certification	Shock	10G, 11ms, half sine wave	10G, 11ms, half sine wave
		CE & CB / FCC / CCC / UL / BSMI (Certified w/o any add-on cards)	CE & CB / FCC / CCC / UL / BSMI (Certified w/o any add-on cards)
Physical Characteristics	Dimensions (W x H x D)	380 x 176 x 467 mm	380 x 176 x 467 mm
	Weight	15 Kg	15 Kg

Model Name		UTX-3117
Processor System	CPU	Intel® Apollo Lake E3900 series & N series Processor
	Core Number	Quad Core / Dual Core
	BIOS	AMI EFI 16 Mbit, SPI
Memory	Chipset	-
	Technology	Dual channel DDR3L 1866 MHz SDRAM
	Max. Capacity	8GB/ up to 8GB per DIMM
Display	Socket	2 x 204-pin DDR3L SODIMM (Non-ECC)
	Controller	Intel HD Graphics GEN9
	VGA	-
Storage	HDMI	1
	Display Port	1
	2.5" HDD bay	1 (support 2.5" HDD/SSD, max 7.5mm height)
Ethernet	mSATA	1, colay with H/S miniPCIe
	Interface	10/100/1000 GbE LANs.
	Controller	LAN1: Intel I210AT LAN2: Realtek RTL8111H
Audio	Connector	2 (RJ45)
	Chipset	Realtek ALC888, High Definition Audio(HD)
Internal expansion Slot	Connector	Mic-in, Line-out combo
	Mini-PCIe	2 (1 x F/S miniPCIe slot, 1 x H/S miniPCIe slot), 1 M.2 (E-Key)
	SIM socket	1
Front Panel	USB	2 (USB 3.0)
	Audio	Mic-in, Line-out Combo
	LAN	2
	Power button	1
Rear Panel	LED Indicators	1(HDD LED)
	HDMI	1
	VGA	- (change to DP1.2 port)
	USB	-
	USB	2 (USB3.0)
	COM	2 (1RS-232 & 1RS-422/485)
	Power jack	1 (DC12~24V)
Power	Control	1(Power button)
	Voltage	12~24VDC ± 10%
	Power Consumption	12V@0.61A
Environment	Power Adapter	AC to DC adapter 12/24V/3A
	Operating Temperature	-20 ~ 60 °C with RF module by max system performance
	Non-operating Temperature	-40 ~ 85 °C and 95% @ 40 °C Non-Condensing
Dimensions (W x H x D)		152 x 37.1 x 128 mm
Weight		1.2KG
Certification	EMC	CE/FCC/CCC
	Safety	CCC

エッジコンピュータ - EPC-S/EPC-C

EPC-S & EPC-Cシリーズ

NEW



Model Name		EPC-S101	EPC-S201	EPC-S202	EPC-C301
Barebone system	Description	3.5"-Base Slim System	2.5" Pico-Base Compact System	2.5" Pico-Base Compact System	Performance MIO-Plus System
Processor System	Compatible Motherboard	PCM-9310	MIO-2360	MIO-2361	MIO-5373
	Thermal Solution	Fanless	Fanless	Fanless	Fanless
	CPU	Intel® Celeron® N3160/N3060, Atom® x5-E8000	Intel® Celeron® N3350	Intel® Atom® x7-E3950/x5-E3930	Intel® Core™ i7-8665UE/i5-8365UE
	BIOS	AMI UEFI 64Mb SPI	AMI UEFI 64Mb SPI	AMI UEFI 64Mb SPI	AMI UEFI 256Mb SPI
Memory	Socket	1 x 204-pin SODIMM	1 x 204-pin SODIMM	N/A (On board LPDDR4)	2 x 260-pin SODIMM
	Technology	DDR3L-1600	DDR3L-1866	LPDDR4-2400	DDR4-2400
	Max. Capacity	Default 2GB, up to 8GB	8GB	Default 4GB, up to 8GB	Default 8GB/16GB, up to 32GB
Graphics	Chipset Integrated	Intel® HD Graphics	Intel® HD Graphics 500	Intel® HD Graphics 505/500	Intel® UHD Graphics 620
Storage	2.5" HDD Bay	Room for 1 x 2.5" SSD, max. 9.5mm height	-	-	-
	M.2 Slot	-	-	-	Default 128GB SATA SSD on 1 x M-Key 2280 (PCIe Gen.3 x4, SATAIII)
	mSATA Slot	Full size (opt. mPCIe)	Half size	Full size	-
	eMMC	-	-	Default 32GB, up to 64GB	-
Ethernet	Interface	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps
	Controller	LAN1: Realtek RTL8111E LAN2: Realtek RTL8111E	Intel I210	LAN1: Intel I219; LAN2: Intel I210	LAN1: Intel I219; LAN2: Intel I210 LAN3: Intel I210; LAN4: Intel I210
	Connector	RJ-45 x 2	RJ45	RJ-45 x 2	RJ-45 x 4
Audio	Codec	Realtek ALC888	Realtek ALC888	Realtek ALC888	Realtek ALC888
Internal Expansion Slot	Mini-PCIe	Full size	Full size	-	Full size
	M.2	-	-	1 x E-Key 2230 (PCIe x1, USB2.0)	1 x E-Key 2230 (PCIe x1, USB2.0) 1 x B-Key 3042 (USB2.0)
	SIM slot	1	-	-	-
Front Panel	DP/HDMI	1 x HDMI (up to 2560 x 1600 @ 60Hz)	-	1 x HDMI (up to 3840x2160 @ 30Hz)	1 x HDMI (up to 4096 x 2160 @ 30Hz) 1 x DP (up to 4096 x 2304 @ 60Hz) (Note: DP not support Hot-plug & Audio)
	VGA	1	1	-	-
	COM	-	1 (RS-232/422/485)	1 (RS-232/422/485)	2 (RS-232/422/485)
	LAN	2	1	2	4
	USB	4 (USB2.0 x 2, USB3.0 x 2)	2 x USB3.0	2 x USB3.0	8 (USB3.0 x4, USB2.0 x4)
	Audio Jack	-	Line-in/Line-out	Line-in/Line-out	Mic-in/Line-out
	SIM slot	-	-	-	1 x Nano SIM
	Antenna (optional)	up to 1	up to 2	up to 2	-
Side Panel	COM	4 (2 x RS-232/422/485, 2 x RS-232)	1 (RS-232/422/485)	1 (RS-232/422/485)	2 (1 x RS-232/422/485, 1 x RS-232)
	USB	2 (USB2.0)	-	-	-
	Audio Jack	Line-in, Line-out, Mic-in	-	-	-
	GPIO	8-bit	8-bit	2 x 8-bit	8-bit
	CAN Bus	-	-	-	2 (2.5KV isolation)
	Antenna (optional)	up to 1	-	-	up to 4
Miscellaneous	LED Indicators	2 (Power LED, HDD LED)	1 (Power LED)	1 (Power LED)	2 (Power LED, HDD LED)
	Switch	1 (Power Switch)	1 (Power Switch)	1 (Power Switch)	1 (Power Switch)
	Circular Cutouts	1	-	-	-
Mounting	Desk mount, VESA mount, DIN rail				
Power Requirements	Power Voltage	12V DC-in	12V DC-in	12V DC-in	12V DC-in
	Power Input Type (Inlet)	Phoenix DC plug-in	Phoenix DC plug-in	Phoenix DC plug-in	DC Jack with lock
	Consumption	4.5W (idle with Celeron N3060)	4.89W (idel with Celeron N3350)	8.59W (idel with Atom X7-E3950)	6.61W (Idle with i7-8665UE)
Environment	Operating Temperature	0 ~ 50 °C	0 ~ 50 °C	-20 ~ 60 °C	-20 ~ 60 °C
	Non-operating Temperature	-40 ~ 85 °C	-40 ~ 85 °C	-40 ~ 85 °C	-40 ~ 85 °C
	Humidity	Operating: 40 °C @ 95% RH, non-condensing Storage: 60 °C @ 95% RH, non-condensing	Operating: 40 °C @ 95% RH, non-condensing Storage: 60 °C @ 95% RH, non-condensing	Operating: 40 °C @ 95% RH, non-condensing Storage: 60 °C @ 95% RH, non-condensing	Operating: 40 °C @ 95% RH, non-condensing Storage: 60 °C @ 95% RH, non-condensing
	Vibration (5 ~ 500Hz)	IEC60068-2-64 random 3.0Grms IEC60068-2-6 sinusoidal 2.0G	IEC60068-2-64 random 3.0Grms IEC60068-2-6 sinusoidal 2.0G	IEC60068-2-64 random 3.0Grms IEC60068-2-6 sinusoidal 2.0G	IEC60068-2-64 random 3.0Grms IEC60068-2-6 sinusoidal 2.0G
	Shock	IEC60068-2-27 half-sine 30G/11ms	IEC60068-2-27 half-sine 30G/11ms	IEC60068-2-27 half-sine 30G/11ms	IEC60068-2-27 half-sine 30G/11ms
Certification	CE/FCC(Class B) CB/UL/CCC/BSMI/KCC				
Physical Characteristics	Dimensions	188 x 150 x 39 mm	139 x 100 x 44 mm	139 x 100 x 44 mm	170 x 118 x 70 mm
	Weight	0.95kg	0.6Kg	0.6Kg	1.5Kg

RISC(ARM)コンピュータ - EPC-R

EPC-Rシリーズ



Model Name		EPC-R3720	EPC-R5710	EPC-R7200	EPC-R7300
Description		Arm-based Fan-less UIO40-Express System	Arm-based Fan-less System	Arm-based Fan-less UIO40-Express Barebone System	Arm-based Fan-less UIO40-Express Barebone System
Processor System	Compatible Single Board Computer	RSB-3720	-	Compatible with NVIDIA Jetson Series Module Nano / TX2 NX / Xavier NX	Compatible with NVIDIA Jetson Series Module Orin Nano / Orin NX
	Thermal Solution	Fanless	Fanless	Fanless	Fanless
	CPU	NXP Arm i.MX 8M Plus Cortex-A53 1.8 GHz	NXP Arm i.MX 8M Plus Cortex-A53 1.8 GHz	Compatible with NVIDIA Jetson Series Module Nano / TX2 NX / Xavier NX	Compatible with NVIDIA Jetson Series Module Orin Nano / Orin NX
	BIOS	Advantech boot loader	Advantech boot loader	-	-
AI Performance		2.3 TOPS NPU	2.3 TOPS NPU	472 GFLOPS for Nano 1.33 FLOPS for TX2 NX 21 TOPS for Xavier NX	Orin Nano: 20-40 TOPS Orin NX: 70-100 TOPS
Memory	Socket	On-board	On-board	On-board	On-board
	Technology	LPDDR4 4000 MT/s	LPDDR4 4000 MT/s	LPDDR4 3200 MT/s	LPDDR5
	Max. Capacity	6 GB	6 GB	Nano (4 GB) / TX2 NX (4 GB) / Xavier NX (8 GB)	Orin Nano: 8GB Orin NX: 16GB
Graphics	Chipset Integrated	Decoder: 1080p60 HEVC/H.265 Main, VP9 Profile 0/2, VP8, AVC/H.264 Baseline/Main/High Encoder: 1080p60 AVC/H.264, HEVC/H.265	Decoder: 1080p60 HEVC/H.265 Main, VP9 Profile 0/2, VP8, AVC/H.264 Baseline/Main/High Encoder: 1080p60 AVC/H.264, HEVC/H.265	Nano (128-core NVIDIA Maxwell™ GPU) TX2 NX (256-core NVIDIA Pascal™ GPU) Xavier NX (384-core NVIDIA Volta™ GPU with 48 Tensor Cores)	Orin NX/Orin Nano 4GB(1024-core NVIDIA Ampere GPU with 32 tensor cores), Orin Nano 8GB(512-core NVIDIA Ampere GPU with 16 tensor cores)
	On-board Storage	16 GB eMMC Flash for O.S. and 8 MB QSPI NOR Flash for board information	16 GB eMMC Flash for O.S. and 8 MB QSPI NOR Flash for board information	16 GB eMMC Flash for O.S.	-
Storage	mSATA Slot	-	2.5" SSD, Optional	-	-
	Interface	2 x 10/100/1000 Mbps	5 x 10/100/1000 Mbps, 1 x 1000Mbps Fiber	Up to 2 x 10/100/1000 Mbps	Up to 2 x 10/100/1000 Mbps
	Controller	NXP i.MX8M Plus integrated RGMII	NXP i.MX8M Plus integrated RGMII	NVIDIA Jetson integrated RGMII and Intel 1GbE Controller	NVIDIA Jetson integrated RGMII and Intel 1GbE Controller
Ethernet	Connector	2 x RJ45	5 x RJ45, 1 x FSP Fiber	2 x RJ45	2x RJ45
	Codec	SGTL5000	SGTL5000	-	ALC5640
Audio	Mini-PCIe	1 x Full-size (USB signal only)	1 x Full-size (USB signal only)	-	-
	M.2	1 x M.2 2230 Key E slot (USB/PCIe/SDIO/UART/I2S)	1 x M.2 2230 Key E slot (USB 2.0/PCIe/UART/I2C) 1 x M.2 3052 Key B slot (USB 3.2 Gen 1 by 1 / I2C)	1 M.2 2230 Key E Slot (USB 2.0/PCIe/UART/I2S) 1 M.2 3042 Key B Slot (USB 3.2 Gen 1 by 1 / I2C)	1 M.2 3052 Key B Slot (PCIe/USB3.2 Gen2/I2C) 1 M.2 2230 Key E Slot (USB2.0/PCIe/UART/I2C) 1 M.2 2280 Key M Slot (x4 PCIe for NVMe)
Front Panel	SIM Slot	1 x Nano SIM slot	1 x Nano SIM slot	1 x Nano SIM slot	1 x Nano SIM slot
	SD Slot	1 x Micro SD slot	1 x Micro SD slot	1 x Micro SD slot	-
	DP++	-	-	-	-
	DP/HDMI	1 x HDMI 2.0, up to 3840 x 2160 at 30Hz	1 x HDMI up to 1920 x 1080	1 x HDMI up to 3840 x 2160	1 x HDMI 2.0, Maximum Resolution 3840 x 2160 at 60Hz
	VGA	-	-	-	-
	DVI	-	-	-	-
	COM	-	-	-	-
	GPIO	-	-	-	-
	LAN	2	4 x 10/100/1000 Mbps, 1 x 1000Mbps Fiber	2	2 x USB3.2 Gen 2 Type A
	USB	1 USB 3.2 Gen 1 by 1 Type A, 1 USB 2.0 Type A	2 x USB 3.2 Gen 1 by 1 Type A, 2 x USB 2.0 Type A	2 USB 3.2 Gen 1 by 2 Type A	-
	Audio Jack	-	-	-	-
Antenna (optional)	-	2 x 4G/5G 2 x WiFi5/6	2 x Antenna holes	2 x Antenna holes	
Rear Panel/ Side Panel	DP++	-	-	-	-
	DP/HDMI	-	-	-	-
	VGA	-	-	-	-
	DVI	-	-	-	-
	COM	2 x 2-wire RS-232 w/ UIO-4032/UIO-4034, 1 x RS-485, 1 x 2-wire RS-232 w/ UIO-4030	2 x 4-wire RS-232/422/485, 1 x 2-wire RS-232/Debug port	2 x 2-wire RS-232 w/ UIO-4032/UIO-4034, 1 x RS-485, 1 x 2-wire RS-232 w/ UIO-4030	2 x 2-wire RS-232 w/ UIO-4032/UIO-4034, 1 x RS-485, 1 x 2-wire RS-232 w/ UIO-4030
	LAN	1 x 10/100/1000 Mbps w/ UIO-4032 4 x 10/100/1000 Mbps w/ UIO-4036	1 x 10/100/1000Mbps, WAN, TSN	1 x 10/100/1000 Mbps w/ UIO-4032 4 x 10/100/1000 Mbps w/ UIO-4036	1 x 10/100/1000 Mbps w/ UIO-4032 4 x 10/100/1000 Mbps w/ UIO-4036
	USB	2 x USB 2.0 w/ UIO-4032	-	2 x USB 2.0 w/ UIO-4032	2 x USB 2.0 w/ UIO-4032
	CAN bus	1 x CAN bus 2.0 A/B w/ UIO-4034	-	1 x CAN bus 2.0 A/B w/ UIO-4034	1 x CAN Bus 2.0B
	Audio Jack	-	1 x Mic, 1 x Line out, 2 x I2S/1 x I2C, support 8 channels MIC array	-	-
	GPIO	4 x DI, 4 x DO w/ UIO-4030	6	4 x DI, 4 x DO w/ UIO-4030	4 x DI, 4 x DO w/ UIO-4030
Antenna (optional)	4 x Antenna holes	2 x 4G/5G 2 x GPS/BT	2 x Antenna holes	2 x Antenna holes	
Miscellaneous	LED Indicators	1 Green LED for system power 1 Blue Programmable LED	6 Green/Orange LED for power, system, storage, 5G, 4G, Wi-Fi and fiber status	1 Green LED for system power 1 Green LED for programmable	1 Green LED for system power 1 Green LED for programmable
	Switch	1 x Reset button	1 x Reset button 1 x Recovery button	1 x Reset button	1 x Reset button
	Circular Cutouts	-	-	-	-
Mounting		Wall mount/Din Rail (optional)	Wall mount	Wall mount/Din Rail (optional)	Wall mount/Din Rail (optional)
Power Requirements	Power Voltage	12V	12V	9-24V	9-36V
	Power Input Type (Inlet)	DC-in	DC-in	DC-in	DC-in
	Consumption	9.2W	13.9W	TBD	TBD
Environment	Operating Temperature	-40 ~ 70 °C	0 ~ 50° C/-40 ~ 70 °C	-20 ~ 60 °C / -20~70 °C*	-20 ~ 60 °C
	Non-operating Temperature	-40 ~ 85 °C	-40 ~ 85 °C	-40 ~ 85 °C	-40 ~ 85 °C
	Humidity	5% ~ 95% Relative Humidity, non-condensing	5% ~ 95% Relative Humidity, non-condensing	5% ~ 95% Relative Humidity, non-condensing	5% ~ 95% Relative Humidity, non-condensing
	Vibration (5 ~ 500Hz)	IEC60068-2-64 random 2.0Grms IEC60068-2-6 sinusoidal 2.0G	IEC60068-2-64 random 2.0Grms IEC60068-2-6 sinusoidal 2.0G	IEC60068-2-64 random 2.0Grms IEC60068-2-6 sinusoidal 2.0G	TBD
	Shock	IEC60068-2-27 half-sine 10G/11ms	IEC60068-2-27 half-sine 10G/11ms	IEC60068-2-27 half-sine 10G/11ms	TBD
	Certification	CE/FCC Class B CCC/BSMI	CCC/CE/FCC Class B	CCC/CE/FCC Class B	CE/FCC Class B
Physical Characteristics	Dimensions (W x H x D)	152 x 108 x 38 mm	180 x 120 x 60 mm 180 x 120 x 85 mm(AI Card)	152 x 137 x 42 mm	152x50x173mm
	Weight	0.75KG	1.3KG/1.5KG	0.925KG	TBD

RISC(ARM)コンピュータ - EPC-R

NEW



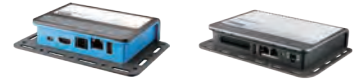
Model Name		EPC-R3220	EPC-R3430	EPC-R3710	EPC-R4680	EPC-R4760
Description		Arm-based Fan-less System	Arm-based Fan-less UIO40-Express System	Arm-based Fan-less UIO40-Express System	Arm-based Fan-less System	Arm-based Fan-less System
Processor System	Compatible Single Board Computer	-	RSB-3430	RSB-3710	RSB-4680	RSB-4760
	Thermal Solution	Fanless	Fanless	Fanless	Fanless	Fanless
	CPU	TI Arm AM3352 Cortex-A8 800 MHz	NXP Arm i.MX6 Cortex-A9 1 GHz	Rockchip Arm RK3399 Cortex-A72 1.8 GHz	Rockchip Arm RK3288 Cortex-A17 1.6 GHz	Qualcomm Arm APQ8016 Cortex-A53 1.2 GHz
	BIOS	Advantech boot loader	Advantech boot loader	Advantech boot loader	Advantech boot loader	Advantech boot loader
AI Performance		-	-	-	-	-
Memory	Socket	On-board	On-board	On-board	On-board	On-board
	Technology	DDR3 800 MT/s	DDR3L 1066 MT/s	LPDDR4 1333 MT/s	DDR3L 1333 MT/s	LPDDR3 1066 MT/s
	Max. Capacity	1 GB	1 GB	2 GB	2 GB	1 GB
Graphics	Chipset Integrated	-	2 IPUs, OpenCL ES 2.0 for 3D, Bitbit for 2D and OpenVG 1.1	Decoder: MPEG-1, MPEG-2, MPEG-4, H.263, H.264, AVS, VC-1, VP8, MVC, HEVC/H.265 decoder, 4k@60FPS Encoder: H.264 (BP@level4.0, MP, HP@level4.0), MVC and VP8	Mali-T764 GPU processor with OpenGL ES3.0, OpenCL1.1 and DirectX11	Adreno 306 GPU
Storage	On-board Storage	8 GB eMMC NAND Flash for O.S. and 4 MB SPI NOR Flash for ADV.	4 GB eMMC NAND Flash for O.S. and 4MB SPI NOR Flash for ADV.	16 GB of eMMC NAND Flash for O.S. and Advantech boot loader	8 GB eMMC NAND Flash for O.S. and Advantech boot loader	8 GB eMMC NAND Flash for O.S. and 4 MB SPI NOR Flash for Advantech boot loader
	mSATA Slot	-	-	-	-	-
Ethernet	Interface	2 x 10/100/1000 Mbps	10/100/1000 Mbps	2 x 10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps
	Controller	TIAM3352 Integrated RGMII	NXP i.MX6 Integrated RGMII	Rockchip RK3399 Integrated RGMII	Rockchip RK3288 Integrated RGMII	Microchip LAN7500
	Connector	2 x RJ45	RJ45	2 x RJ45	RJ45	RJ45
Audio	Codec	-	SGTL5000	-	Realtek ALC5660	PM8916
Internal Expansion Slot	Mini-PCIe	1 x Full-size	1 x Full-size	1 x Full-size (USB & PCIe signal)	1 x Full-size	1 x Full-size
	M.2	-	1 x M.2 Key E slot	-	1 x M.2 Key E slot (SDIO 3.0 & UART signal only)	1 x M.2 Key E slot
	SIM Slot	1 x Nano SIM slot	1 x Nano SIM slot	1 x Nano SIM slot	1	1
	SD Slot	1 x Micro SD slot	1 x Micro SD slot	1 x Micro SD slot	1 x Micro SD slot	1 x SD slot
Front Panel	DP++	-	-	-	-	-
	DP/HDMI	-	1x HDMI up to 1920 x 1080	1	-	1 x HDMI up to 1920 x 1080
	VGA	-	-	-	-	-
	DVI	-	-	-	-	-
	COM	2 x 4-wire RS-232/485	1 x 4-wire RS-232/422/485	-	4 x 4-wire RS-232	1 x 4-wire RS-232/422/485
	GPIO	6	-	-	-	-
	LAN	2	1	2	-	1
	USB	-	2 USB 2.0	1 x USB 3.2 Gen 1 by 1 Type A, 1 x USB 2.0 Type A	USB 2.0	2 USB 2.0
	Audio Jack	-	-	-	-	-
	Antenna (optional)	2 x Antenna holes	-	-	3 x antenna holes	2 x antenna holes
Rear Panel/ Side Panel	DP++	-	-	-	-	-
	DP/HDMI	-	-	-	1x HDMI up to 3840 x 2160	-
	VGA	-	-	-	1	-
	DVI	-	-	-	-	-
	COM	-	2 x 2-wire RS-232 w/ UIO-4032/ UIO-4034 1 x RS-485, 1 x RS-232 w/ UIO-4030	2 x 2-wire RS-232 w/ UIO-4032/ UIO-4034 1 x RS-485, 1 x 2 wires RS-232 w/ UIO-4030	1 x 4-wire RS-232/485 1 x 2-wire RS-232/Debug port	-
	LAN	-	1 x 10/100/1000 Mbps w/ UIO-4032 4 x 10/100/1000 Mbps w/ UIO-4036	1 x 10/100/1000 Mbps w/ UIO-4032 4 x 10/100/1000 Mbps w/ UIO-4036	1	-
	USB	1 x USB 2.0 OTG	2 x USB 2.0 w/ UIO-4032	2 x USB 2.0 w/ UIO-4032	2 x USB 2.0 Host 1 x USB 2.0 OTG	2 x USB 2.0 Host
	CAN bus	-	1 x CAN bus 2.0 A/B w/ UIO-4034	-	-	-
	Audio Jack	-	-	-	1 x Line out 1 x Mic in	-
	GPIO	-	4 x DI, 4 x DO w/ UIO-4030	4 x DI, 4 x DO w/ UIO-4030	8 x GPIO by DB9	-
Antenna (optional)	1 x Antenna holes	2 x Antenna holes	3 x Antenna holes	2 x Antenna holes	3 x Antenna holes	
Miscellaneous	LED Indicators	1 Green LED for system power 3 Red Programmable LED	-	1 Green LED for system power 1 Green Programmable LED	1 Green LED for system power 1 Orange LED for WLAN	1 Green LED for system power 1 Yellow LED for WLAN
	Switch	1 x Reset button	-	1 x Reset button	1 x Reset button 1 x Power button	-
	Circular Cutouts	-	-	-	-	-
Mounting	Wall mount/DIN rail mount (optional)	Wall mount	Wall mount/Din Rail (optional)	Wall mount	Wall mount	
Power Requirements	Power Voltage	12~24V	12V	12V	12V	9~36V
	Power Input Type (Inlet)	2-pole lockable DC-in	DC-in	DC-in	DC-in	DC-in
	Consumption	4.7W	4.05W	15W	11.6W	7.6W
Environment	Operating Temperature	-20 ~ 70 °C	-20~60 °C	0 ~ 50 °C/-20 ~ 70 °C	0 ~ 55 °C/-20 ~ 70 °C	0 ~ 40 °C
	Non-operating Temperature	-40 ~ 85 °C	-40 ~ 85 °C	-40 ~ 85 °C	-40 ~ 85 °C	-40 ~ 85 °C
	Humidity	5% ~ 95% Relative Humidity, non-condensing	5% ~ 95% Relative Humidity, non-condensing	5% ~ 95% Relative Humidity, non-condensing	5% ~ 95% Relative Humidity, non-condensing	5% ~ 95% Relative Humidity, non-condensing
	Vibration (5 ~ 500Hz)	IEC60068-2-64 random 2.0Grms IEC60068-2-6 sinusoidal 2.0G	IEC60068-2-64 random 2.0Grms IEC60068-2-6 sinusoidal 2.0G	IEC60068-2-64 random 2.0Grms IEC60068-2-6 sinusoidal 2.0G	IEC60068-2-64 random 2.0Grms IEC60068-2-6 sinusoidal 2.0G	IEC60068-2-64 random 2.0Grms IEC60068-2-6 sinusoidal 2.0G
	Shock	IEC60068-2-27 half-sine 10G/11ms	IEC60068-2-27 half-sine 10G/11ms	IEC60068-2-27 half-sine 10G/11ms	IEC60068-2-27 half-sine 10G/11ms	IEC60068-2-27 half-sine 10G/11ms
Certification	CE/FCC/BSMI/CCC/VCCI/SRRC	CE/FCC Class B CCC	CE/FCC Class B CCC/BSMI	CE/FCC Class B CCC/BSMI	CE/FCC Class B CB/UL/CCC/BSMI	
Physical Characteristics	Dimensions (W x H x D)	139 x 85 x 30 mm	174 x 108 x 25 mm	152 x 108 x 38 mm	190 x 150 x 43 mm	188 x 150 x 39 mm
Weight	0.6KG	0.48KG	0.75KG	0.95KG	1.2KG	

* -20 ~ 70 °C supports by specific Power Mode of Jetson Modules

RISC(ARM)コンピュータ - EPC-R/UBC

EPC-Rシリーズ

NEW



Model Name		EPC-R4710	EPC-R6410
Description		Arm-based Fan-less System	Arm-based Fan-less System
Processor System	Compatible Single Board Computer	RSB-4710	RSB-6410
	Thermal Solution	Fanless	Fanless
	CPU	Rockchip Arm RK3399 Cortex-A72 1.8 GHz	NXP Arm i.MX6 Cortex-A9 1 GHz
	BIOS	Advantech boot loader	Advantech boot loader
AI Performance		-	-
Memory	Socket	On-board	On-board
	Technology	LPDDR4 1333 MT/s	DDR3L 1333 MT/s
	Max. Capacity	2 GB	1 GB / 2 GB
Graphics	Chipset Integrated	Decoder: MPEG-1, MPEG-2, MPEG-4, H.263, H.264, AVS, VC-1, VP8, MVC, HEVC/H.265 vibrator: 4k@60FPS Encoder: H.264 (BP@level4.0, MP, HP@level4.0), MVC and VP8	2 IPU. OpenGL ES 2.0 for 3D, BitBit for 2D and OpenVG 1.1
	Storage	On-board Storage: 16 GB of eMMC NAND Flash for O.S. and Advantech boot loader mSATA Slot: -	8 GB eMMC NAND Flash for O.S. and 4 MB SPI NOR Flash for ADV.
Ethernet	Interface	2 x 10/100/1000 Mbps	10/100/1000 Mbps
	Controller	Rockchip RK3399 Integrated RGMII	NXP i.MX6 Integrated RMII
	Connector	2 x RJ45	RJ45
Audio	Codec	Realtek ALC5660	SGTL5000
Internal Expansion Slot	Mini-PCIe	1 x Full-size (USB signal only)	1 x Full-size
	M.2	1 x M.2 2230 Key E slot (USB/PCIe/SDIO/UART)	1 x M.2 Key E slot
	SIM Slot	1 x SIM slot	1
	SD Slot	1 x Micro SD slot	1 x SD slot
Front Panel	DP++	-	-
	DP/HDMI	-	-
	VGA	-	-
	DVI	-	-
	COM	2 x RS232/485 2 x RS232	2 x 4-wire RS-232 1 x debug port
	GPIO	-	-
	LAN	-	-
	USB	3	-
	Audio Jack	-	-
	Antenna (optional)	3	2 x antenna holes
Rear Panel/Side Panel	DP++	-	-
	DP/HDMI	2	1x HDMI up to 1920 x 1080
	VGA	-	1
	DVI	-	-
	COM	1 x RS-232/Debug 1 x RS232	1 x 4-wire RS-232/485 1 x 4-wire RS-232
	LAN	2	1
	USB	1 x USB 3.2 Gen1 1 x USB 2.0	6 x USB2.0 Host
	Audio Jack	1 x Line out 1 x Mic in	1 x Line out 1 x Mic in
	GPIO	5	-
	Antenna (optional)	2 x Antenna holes	2 x Antenna holes
Miscellaneous	LED Indicators	1 Green LED for system power 1 Yellow LED for WLAN	1 Green LED for system power
	Switch	1 x Reset button 1 x Power button	1 x Reset button 1 x Power button
	Circular Cutouts	-	-
Mounting		Wall mount	Wall mount
Power Requirements	Power Voltage	12V	12V
	Power Input Type (Inlet)	DC-in	DC-in
	Consumption	15W	9W
Environment	Operating Temperature	0 ~ 50° C / -20 ~ 70° C	0 ~ 55° C
	Non-operating Temperature	-40 ~ 85° C	-40 ~ 85° C
	Humidity	5% ~ 95% Relative Humidity, non-condensing	5% ~ 95% Relative Humidity, non-condensing
	Vibration (5 ~ 500Hz)	IEC60068-2-64 random 2.0Grms IEC60068-2-6 sinusoidal 2.0G	IEC60068-2-64 random 2.0Grms IEC60068-2-6 sinusoidal 2.0G
	Shock	IEC60068-2-27 half-sine 10G/11ms	IEC60068-2-27 half-sine 10G/11ms
	Certification	CE/FCC Class B CCC/BSMI	CE/FCC Class B CCC/BSMI
Physical Characteristics	Dimensions (W x H x D)	190 x 150 x 43 mm	200 x 230 x 50 mm
	Weight	0.95KG	2.26KG

Model Name		UBC-220	UBC-330	
Processor System	CPU	NXP Arm i.MX6 Dual Lite Cortex-A9 1 GHz	TI Arm AM3352 Cortex-A8 1 GHz	
	Technology	DDR3 800 MT/s	DDR3 800 MT/s	
Memory	Capacity	On-board DDR3 1 GB	On-board DDR3 512 MB	
	Flash	4 GB eMMC NAND Flash for O.S. and 4 MB SPI NOR Flash for Advantech boot loader	4 GB eMMC NAND Flash for O.S. and 4 MB SPI NOR Flash for Advantech boot loader	
	LVDS	1 x 24-bit LVDS, 1366 x 768 at 60Hz	-	
Graphics	HDMI	1920 x 1080 at 60Hz	-	
	VGA	-	-	
	Graphics Engine	1 x IPU. OpenGL ES 2.0 for 3D, BitBit for 2D and OpenVG 1.1	-	
	H/W Video Codec	Decoder: MPEG-4 ASP, H.264 HP, H.263, MPEG-2 MP, MJPEG BP Encoder: MPEG-4 SP, H.264 BP, H.263, MJPEG BP	-	
Ethernet	Chipset	NXP i.MX6 integrated RGMII	TI AM3352 Integrated RGMII	
	Speed	1 x 10/100/1000 Mbps	2 x 10/100/1000 Mbps	
Cellular	LTE	-	-	
WLAN	WiFi/BT	-	-	
WatchDog Timer		1~6553s, default 60s, power on/off 1s	1~6553s, default 60s, power on/off 1s	
I/O	USB	1 USB 2.0 Host, 1 USB 2.0 OTG	1 USB 2.0 Host	
	Audio	-	-	
	SDIO	1 x SD slot	1 x SD slot	
	Serial Port	1 x 4-wire RS-232	1 x 4-wire RS-232/422/485 4 x 2-wire RS-232	
	GPIO	-	4 x DIs, 4 x DOs with isolation	
	CANBus	-	1	
	I2C	-	1	
	Button	-	1 x Reset button	
	Indicator	LED	1 Power LED 1 Programmable LED	1 Power LED 1 RF status LED
		Expansion	Mini PCIe: 2 x mini PCIe slots (1 x half-size, 1 x full-size USB signal only) SD Socket: 1x SD slot SIM: 1x SIM slot Antenna Hole: 1 x Antenna hole Others: -	1x mini PCIe slot (USB signal only) 1 x SD slot - 1 x Antenna hole -
Power	Power Supply Voltage	12V	12~24V	
	Power Type	DC-in	DC-in	
	Power Consumption	4.4W (Max)	4W (Max)	
Environment	Operational Temperature	0 ~ 60° C	0 ~ 60° C	
	Operating Humidity	5%~95% Relative Humidity, non-condensing	5%~95% Relative Humidity, non-condensing	
Mechanical	Dimensions (W x D x H)	120 x 89 x 30 mm	191 x 129 x 30 mm with metal plate 166 x 117 x 30 mm without metal plate	
	Mounting	Wall mount, DIN rail, VESA 75/100 by option	Wall mount, VESA 75/100, Flexible mount with two screw holes on the metal plate	
	Weight	215g	265g	
Operating System		Linux Android	Linux	
Certifications		KC/CCC/CE/FCC/VCCI Class B	CCC/CE/FCC/BSMI Class B	

ワイヤレス電子ペーパー

電子ペーパー



Product		EPD-230, 232 (EPD-023)	EPD-332(EPD-053)	EPD-660,662 (EPD-132)	EPD-210
Display	Panel Size	2.9"	5.65"	13.3"	2.9"
	Resolution	296x128 pixels	600 x448pixels	1600 x 1200 pixels	296x128 pixels
Interface		LED x 3, Button x 3	LED x 1, Button x 1	LED x 1(2 color), Button x 5	
Dimension		100 x 47 x 17.9 mm/ 3.93 x 1.85 x 0.7 in	140 x 118.3 x 14 mm/ 5.51 x 5.64 x .55 in	235 x 328 x 23 mm/ 9.25 x 12.9 x 0.9 in	66.9 x 29.06 mm/ 2.63 x 1.14 in
Network		2.4G/IEEE802.15.4 proprietary	2.4G/IEEE802.15.4 proprietary	2.4G/Wi-Fi	NFC
Power		Battery CR2450x4	Battery CR2450x4	Battery CR2450x4	Battery-less
Operating Temperatures		0 ~ 50 °C	0 ~ 40 °C	0 ~ 40 °C	0 ~ 40 °C
Certification		CE/FCC/NCC	CE/FCC/NCC	CE/FCC/NCC	CE/FCC/BSMI
Ordering Information		EPD-230-001, EPD-232-001	EPD-332-001	EPD-660-101, EPD-662-101 EPD-660-001, EPD-662-001	EPD-210-001, EPD-210-101

無線ルーター



Product	WISE-3240	WISE-3220	WISE-3270	EPR-210
Interface	Ethernet and Wireless	Ethernet and Wireless	Ethernet and Wireless	RF reader
Protocol	IEEE 802.15.4, proprietary	2.4G Wi-Fi	4G/LTE	13.56 MHz (+/-7 KHz)
Connected Quantities	400pcs EPD-230,232,332	100pcs EPD-660,EPD-662	1 pc EPD-770	1 pc EPD-210
Power	DC12V/2A	DC12V/2A	DC12V/2A	Micro USB 5V
Operating Temperatures	-20 ~ 60 °C	-20 ~ 60 °C	-20 ~ 60 °C	0 ~ 70 °C
Dimensions	143 x 101 x 30 mm	143 x 101 x 30 mm	143 x 101 x 30 mm	121 x 74.2 x 14.5 mm
Certifications	CE/FCC/IC Class B,NCC	CE/FCC Class B, NCC	CE/FCC Class B, NCC	CE/FCC/BSMI
Ordering Info	WISE-3240IOS-41A1T for Taiwan	WISE-3220IOS-21A1T for Taiwan	WISE-3270IOS-71A1T for Taiwan	LE0-D30-RD1

電子ペーパー管理サーバー



Product	ARK-2250L A2
Description	ARK2250L, Intel i7-6600U, 1 TB HDD, 16GRAM, ADP
Software	DeviceOn/ePaper in Ubuntu 18.4
Connected Quantities	10,000pcs EPD-230/232/332 or 500pcs EPD-660,662,770
Power	DC12V/5A
Certifications	CE/FCC Class B, CCC, BSMI, UL, CCC, BSMI
Ordering Info.	ARK-2250L-EP1A2 with 500 device licenses

Product	ARK-1123H A2
Description	ARK-1123H, Intel® Celeron Quad Core J1900 SoC, 128SSD, 8GRAM, ADP
Software	DeviceOn/ePaper in Ubuntu 18.4
Connected Quantities	100pcs EPD-230/232/332 or 20pcs EPD-660,662,770
Power	DC12V/5A
Certifications	CE/FCC Class B, CCC, BSMI, UL, CCC, BSMI
Ordering Info.	ARK-1123H-EP2A2 with 500 device licenses

製品情報

Product	Zigbee Like Version	Wi-Fi Version	4G/LTE
EPD Device	EPD-230-001 EPD-232-001 EPD-332-001 EPD-230, 232 => EPD-023B2AG-NTC02 (日本向け) EPD-332 => EPD-053R2AG-NTC03 (日本向け)	EPD-660-101 /EPD-660-001 EPD-662-101/EPD-662-001 EPD-660, 662 => EPD-132B2AG-NSD01, EPD-132R2AG-NSD01 (日本向け)	EPD-770-101 EPD-780-101
Router	WISE-3240IOS-41A1E Router for EU WISE-3240IOS-41A1J Router for Japan WISE-3240IOS-41A1N Router for NA WISE-3240IOS-41A1T Router for Taiwan WISE-3240IOS-41A1C Router for China	WISE-3220IOS-21A1E Router for EU WISE-3220IOS-21A1J Router for Japan WISE-3220IOS-21A1N Router for NA WISE-3220IOS-21A1T Router for Taiwan WISE-3220IOS-21A1C Router for China	-
Server	Value Server: ARK-1123H-EP2A2, Enterprise Server: ARK-2250L-EP1A2		

デジタルサイネージ

エントリーレベル

薄型



Model Name		DS-100	DS-100 Lite	DS-066	DS-082	DS-085S	DS-085L
Processor	CPU	Rockchip RK3399	Rockchip RK3399	Intel® Celeron® J1900	AMD Ryzen™ V1807B AMD Ryzen™ V1605B AMD Ryzen™ R1606G	Intel® Core™ i7-1165G7 Intel® Core™ i5-1135G7/1145G7E Intel® Core™ i3-1115G4E Intel® Celeron® 6305E	Intel® Core™ i7-1165G7 Intel® Core™ i5-1135G7/1145G7E Intel® Core™ i3-1115G4E Intel® Celeron® 6305E
	BIOS	-	-	AMI uEFI 64 Mbit	AMI uEFI 128Mbit	AMI uEFI 128 Mbit	AMI uEFI 128 Mbit
	Chipset	-	-	Integrated with CPU	Integrated with CPU	Integrated with CPU	Integrated with CPU
Memory	Technology	LPDDR3 1600MHz	LPDDR3 1600MHz	DDR3L 1333MHz	DDR4 2400MHz	DDR4 2666MHz	DDR4 2666MHz
	Max. Capacity	2 GB on board	2 GB on board	8 GB (4 GB per SODIMM)	32 GB (16 GB per SODIMM)	32 GB (16 GB per SODIMM)	32 GB (16 GB per SODIMM)
	Socket	-	-	2 x 204-pin SODIMM	2 x 260-pin SODIMM	2 x 260-pin SODIMM	2 x 260-pin SODIMM
Display	Controller	-	-	Integrated with CPU	Integrated with CPU	Integrated with CPU	Integrated with CPU
	Graphics Engine	Mali-T860MP4	Mali-T860MP4	Intel HD Graphics	AMD Radeon HD graphics	Intel® Iris® Xe Graphics	Intel® Iris® Xe Graphics
	Graphics Memory	-	-	Shared system memory	Shared system memory	Shared system memory	Shared system memory
	Multiple Display	2	2	2	4 (V series) 3 (R series)	4	4
	Interface	1 x HDMI 2.0, 1 x HDMI 1.4	1 x HDMI 2.0, 1 x HDMI 1.4	2 x HDMI 1.4	4 x HDMI 2.0 (V series) 3 x HDMI 2.0 (R series)	4 x HDMI 2.0	4 x HDMI 2.0
	Max. Resolution	3840 x 2160 @ 60Hz 1920 x 1080 @ 60Hz	3840 x 2160 @ 60Hz 1920 x 1080 @ 60Hz	1920 x 1080 @ 60Hz	4096 x 2304 @ 60Hz	4096 x 2304 @ 60Hz	4096 x 2304 @ 60Hz
Expansion Interface	M.2	1 x 2230 E key	1 x 2230 E key	-	1 x 2242 M key for storage 1 x 2230 E key for Wi-Fi	1 x 2242 M key for storage 1 x 2230 E key for Wi-Fi	1 x 2242 M key for storage 1 x 2230 E key for Wi-Fi
	Mini PCIe	-	-	1	-	-	-
	PCIe x16	-	-	-	-	-	-
	Micro SD Card	1	1	-	-	-	-
Ethernet	Connector	2 x RJ-45	1 x RJ-45	1 x RJ-45	1 x RJ-45	2 x RJ-45	2 x RJ-45
Audio	Connector	1 x Line-out	1 x Line-out	2 x SPDIF/Line-out, Mic-in with jack sense support	1 x SPDIF/Line-out/ Mic-in with jack sense support	1 x SPDIF/Line-out/ Mic-in	1 x SPDIF/Line-out/ Mic-in
WatchDog Timer		Yes	Yes	Yes	Yes	Yes	Yes
Storage	SATA	-	-	1 x 2.5" SATA II HDD/ SSD	-	-	-
	mSATA	-	-	-	-	-	-
	eMMC	16 GB eMMC on board	16 GB eMMC on board	-	-	-	-
I/O	USB 3.0	1	1	1	2	2	2
	USB 2.0	1	1	3	2	2	6
	COM	1 x Console port	-	1 x RS-232	1 x RS-232	1	2
Power	Power Supply	DC 12V input	DC 12V input	DC 19V input	DC 19V input	DC 19V input	DC 19V input
Environment	Operating Temperature	0 ~ 45°C	0 ~ 45°C	HDD: 0 ~ 40 °C SSD: 0 ~ 50 °C (with 0.7m/s airflow)	HDD: 0 ~ 40 °C (with 0.7m/s airflow)	0 ~ 40 °C (with 0.7m/s airflow)	0 ~ 55 °C (with 0.7m/s airflow)
Physical Characteristics	Dimensions (L x W x H)	135 x 130 x 29 mm	115 x 110 x 20 mm	180 x 190 x 19 mm	180 x 190 x 19 mm	180 x 190 x 19 mm	210 x 178 x 40 mm
Operating System		Android 7.1.2	Android 7.1.2	Microsoft Windows, Linux (optional)	Microsoft Windows, Linux (optional)	Microsoft Windows, Linux (optional)	Microsoft Windows, Linux (optional)
Certifications	EMC	CE, FCC Class B, CCC, BSMI	CE, FCC Class B, CCC, BSMI	CE, FCC Class B, CCC, BSMI	CE, FCC Class B, CCC, BSMI	CE, FCC Class B, CCC, BSMI	CE, FCC Class B, CCC, BSMI
	Safety	UL, CB, CCC, BSMI	UL, CB, CCC, BSMI	UL, CB, CCC, BSMI	UL, CB, CCC, BSMI	UL, CB, CCC, BSMI	UL, CB, CCC, BSMI

統合ソフトウェア

WISE-PaaS/SignageCMS

Multimedia Management Software

System Management	Web interface, multimedia management, user-friendly interface, remote management
Interactive Content Editing	Add/edit/delete content, display control management, subtitle support
Dispatch Management	Remote dispatch, player overview, group dispatch, schedule dispatch, history search
Account Management	Add/edit/delete user, user name/password/description/main, account permissions

WISE-DeviceOn

Device Monitoring and Management

Device Management	Instant device monitoring and troubleshooting, regular inspections, predictive maintenance, data acquisition, device management
Monitoring & Control	Real-time monitoring, device list and status, SW/HW health monitoring, HDD predictive maintenance, device events
Update Management	OTA upgrade support, software remote patching and upgrade, update status report
Alert & Action	SMS notifications, email notifications, event log

デジタルサイネージ

マルチディスプレイ

モジュラー

エッジクラウド



Model Name		DS-580	DS-980	DS-200	DS-280	DS-211	EIS-S230-E1DS2A1
Processor	CPU	Intel® Atom™ x7-E3950	Intel® Core™ i7-6700TE Intel® Core™ i5-6500TE Intel® Core™ i3-6100TE	Intel® Core™ i5-8400H Intel® Core™ i3-8100H Intel® Celeron® G4930E	Intel® Core™ i7-6822EQ Intel® Core™ i5-6442EQ Intel® Core™ i3-6102EQ Intel® Celeron® G3902E	Rockchip RK3399	Intel® Core™ i7-7700
	BIOS	AMI uEFI 64 Mbit	AMI uEFI 128 Mbit	AMI uEFI 128 Mbit	AMI uEFI 128 Mbit	-	AMI uEFI 128 Mbit
	Chipset	Integrated in CPU	Intel Q170	Intel QM370	Intel QM170	-	Integrated with CPU
Memory	Technology	DDR3L 1866MHZ	DDR4 2133MHZ	DDR4 2400MHZ	DDR4 2133MHZ	LPDDR4-3200	DDR4 2666MHZ
	Max. Capacity	16 GB (8 GB per SODIMM)	32 GB (16 GB per SODIMM)	32 GB (16 GB per SODIMM)	32 GB (16 GB per SODIMM)	2GB/4GB on-board	16 GB (8 GB per SODIMM)
	Socket	2 x 204-pin SODIMM	2 x 260-pin SODIMM	2 x 260-pin SODIMM	2 x 260-pin SODIMM	-	2 x 260-pin SODIMM
Display	Controller	NVIDIA GeForce GT1030	Integrated with CPU	Integrated with CPU	Integrated with CPU	-	Integrated with CPU
	Graphic Engine	-	Intel HD Graphics 530	Intel UHD Graphics 630	Intel HD Graphics 530/510	Mali-T860MP4	Intel® HD Graphics 630
	Graphics Memory	2G GDDR5 (on board memory)	Shared system memory	Shared system memory	Shared system memory	-	Shared system memory
	Multiple Display	4	3+ (Up to 9 with a graphics card)	3	3	2	2
	Interface	2 x HDMI 2.0, 2 x HDMI 1.4	1 x HDMI 2.0, 2 x HDMI 1.4	1 x PCIe x8 (98 pin), 1 x Mini DP++	1 x JAE TX25 (80 pin), 1 x HDMI 2.0, 1 x DP	1 x JAE TX25 (80 pin), 1 x HDMI 2.0	1 x HDMI 1.4, 1 x VGA
	Max. Resolution	3840 x 2160 @ 60Hz	4096 x 2160 @ 60Hz	4096 x 2304 @ 60Hz	4096 x 2304 @ 60Hz	3840 x 2160 @ 60Hz	3840x2160@30Hz
Expansion Interface	M.2	1 x 2230 E key	1 x 2230 E key	1 x 2242 M key for storage 1 x 2230 E key for Wi-Fi	-	1	1 x 2230 E key for Wi-Fi
	Mini PCIe	1	1	-	1	1	2
	PCIe x16	-	1	-	-	-	NA
	Micro SD Card	-	-	-	-	1	NA
Ethernet	Connector	2 x RJ-45	2 x RJ-45	1 x RJ-45	2 x RJ-45	2 x RJ-45	4 x RJ-45
Audio	Connector	2 x SPDIF/Line-out, Mic-in with jack sense support	2 x SPDIF/Line-out, Mic-in with jack sense support	1 x SPDIF/Line-out, Mic-in with jack sense support	1 x Line-out with jack sense support	-	1 x Line-out, 1 x Mic-in
WatchDog Timer		Yes	Yes	Yes	Yes	Yes	Yes
Storage	SATA	1 x 2.5" SATA III HDD/SSD	1 x 2.5" SATA III HDD/SSD (top); 1 x 2.5" SATA III SSD (bottom), supports RAID 0/1	-	1 x 2.5" SATA III HDD/SSD	-	2
	mSATA	Mini PCIe colay mSATA	Mini PCIe colay mSATA	-	Mini PCIe colay mSATA	16GB /64GB eMMC on board	2
I/O	USB 3.0	2	4	5 (4 x via bracket, 1 x SDM connector)	3	1	8
	USB 2.0	2	2	-	-	1	0
	COM	1 x RS-232	1 x RS-232/2 x RS-485/422 with extension cable	1 x RS-232 via SDM connector (Tx/Rx only)	-	1 x RS-232	4
Power	Power Supply	DC 19V input	DC 12V input	DC 12V input (via SDM Connection)	DC 12V-19V input (via OPS connector)	DC 12V input (via OPS connector)	DC 9-36V
Environment	Operating Temperature	HDD: 0 ~ 40 °C SSD: 0 ~ 50 °C (with 0.7m/s airflow)	0 ~ 40 °C	0 ~ 55 °C	HDD: 0 ~ 40 °C SSD: 0 ~ 50 °C	0 ~ 60°C	0 ~ 60 °C
Physical Characteristics	Dimensions (L x W x H)	220 x 150 x 40 mm	267.6 x 205 x 88 mm	175 x 100 x 20 mm / (SDM-L compliant)	200 x 119 x 30 mm	200 x 119 x 30 mm (OPS compliant)	156.5 x 205 x 230 mm
Operating System		Windows 10, Linux (optional)	Microsoft Windows, Linux (optional)	Microsoft Windows, Linux (optional)	Microsoft Windows, Linux (optional)	Android 7.1.2	Microsoft Windows, Linux (optional)
Certifications	EMC	CE, FCC Class B, CCC, BSMI	CE, FCC Class B, CCC, BSMI	CE, FCC Class B	CE, FCC Class B, CCC, BSMI	CE, FCC Class B	CE, FCC Class B, CCC, BSMI
	Safety	UL, CB, CCC, BSMI	UL, CB, CCC, BSMI	N/A	UL, CB, CCC	CCC	UL, CB, CCC, BSMI

デジタルサイネージ ディスプレイ

FaceView

AI Facial Recognition

Advanced Face Property	Age, gender, emotion, ID, head pose, facial mask
Customer/List Enrollment	Input by webcam, photos, and db files
VIP/Blacklist Notification	Live-view, e-mail, and mobile apps
Model Complexity*	Ultra High, Very High, and High
Accuracy**	99.50%~ 94.12%

* Accuracy: Ultra high>Very high>High; Speed: Ultra high<Very high<High

**Results depend on selected model complexity and false accept rate (1E-6~1E-4)



DSD-7055

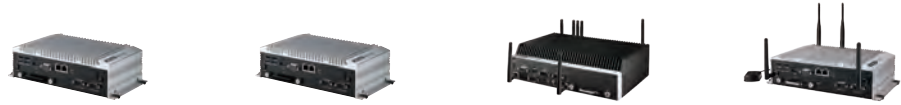
55" full HD display with Intel SDM compliance



VUE-5000 Series

32"~86" full HD large format displays

車載・鉄道・路線監視ソリューション



Application		Outdoor NVR			In-Vehicle
Model Name		ARK-2121S	ARK-2151S	ARK-2250S	ARK-2121V
Processor System	CPU	Intel Atom® E3845	4th Gen Intel® Core™ i5 4300U	6th Gen Intel® Core™ i5-6442EQ/i7-6822EQ	Intel Atom® E3825/E3845
	Frequency	1.91 GHz	1.9 GHz	1.9GHz/2.0GHz	1.33 GHz / 1.91 GHz
	Core Number	4	2	4	2/4
	BIOS	AMI EFI 64 Mbit	AMI EFI 128 Mbit	AMI UEFI 128Mbit	AMI EFI 64 Mbit
Memory	Chipset	SoC	SoC	QM170	SoC
	Technology	DDR3L 1333 MHz	DDR3L 1600 MHz	DDR4 2133MHz	DDR3L 1066/1333 MHz
	Max. Capacity	8 GB	8 GB	32 GB	8 GB
Display	Socket	1 x 204-pin SO-DIMM	1 x 204-pin SO-DIMM	2 x 260-pin SODIMM	1 x 204-pin SODIMM
	VGA	1 (up to 1600 x 1200)	1 (up to 1920 x 1200)	-	1 (up to 1600 x 1200)
	DDI (HDMI/DVI/DisplayPort)	1 x lockable HDMI, up to 1080P	1 x lockable HDMI, up to 4K at 24 Hz	2 x lockable HDMI, up to 1080P	1 x lockable HDMI, up to 1080P
Expansion Interface	Multiple Display	Dual	Dual	Dual	Dual
	MiniPCIe / M.2	1 x Full-size Mini PCIe 1 x Full-size Mini PCIe 2 x Full-size Mini PCIe w/SIM holders	1 x Half-size Mini PCIe 1 x Full-size Mini PCIe 2 x Full-size Mini PCIe w/SIM holders	1 x M.2 (2230 E Key) 2 x Full-size Mini PCIe w/SIM holders	1 x Full-size Mini PCIe 1 x Full-size Mini PCIe 2 x Full-size Mini PCIe w/SIM holders
Other	SIM socket	2	2	2 (accessible)	2
	GPS	-	-	-	Supports GPS, GLONASS, GALILEO and OZSS signals
	G-Sensor	-	-	-	Optional
	PoE	4 x 10/100 Mbps PoE	4 x 10/100 Mbps PoE	Optional extended modules 4/8 GbE PoE (M12 D/X-coded)	4 x 10/100 Mbps PoE (E3845)
Ethernet	CANBus	-	-	optional	optional
	Controller	GbE 1: Intel I210-IT GbE 2: Intel I210-IT	GbE 1: Intel I218 GbE 2: Intel I210-IT	GbE 1: Intel i219 GbE 2: Intel i210	GbE 1: Intel I210-IT GbE 2: Intel I210-IT
Audio	Audio Interface	HD Audio	HD Audio	HD Audio	HD Audio
	Connector	3 (Line-in, Line-out, Mic-in)	3 (Line-in, Line-out, Mic-in)	3 (Line-in, Line-out, Mic-in)	3 (Line-in, Line-out, Mic-in)
WatchDog Timer	3G Voice	-	-	-	1 x Line-out, 1 x Mic-in
	Yes	Yes	Yes	Yes	Yes
Storage	SATA	1 x 2.5" removable drive bay	1 x 2.5" removable drive bay	1 x 2.5" removable drive bay Optional 2nd 2.5" drive bay in extended modules	1 x 2.5" removable drive bay
	mSATA	1 x Full-size mSATA	1 x Full-size mSATA	1 x Full-size mSATA	1 x Full-size mSATA
I/O	USB 3.0	1	2	3	1
	USB 2.0	3	2	-	3
	GPIO	6 x DI & 2 x DO with isolation	6 x DI & 2 x DO with isolation	4 x DI & 4 x DO with isolation	6 x DI & 2 x DO with isolation
	COM Port	2 x (RS-232/422/485)	2 x (RS-232/422/485)	3 x RS-232/422/485	2 x isolated RS-232/422/485 2 x RS-232/422/485 (E3825) 2 x RS-232/422/485 (E3845)
	LAN	2 x RJ45	2 x RJ45	2 x RJ45	2 x RJ45
Power	Power Supply Voltage	9 ~ 36 V _{DC} w/ isolation	9 ~ 36 V _{DC} w/ isolation	12 ~ 24 V _{DC} w/ isolation	9 ~ 36 V _{DC} w/power ignition management
	Connector	3-pin Phoenix	3-pin Phoenix	5-pin Phoenix	3-pin Phoenix
	Power Adaptor	AC to DC, 19 V _{DC} , 120W	AC to DC, 19 V _{DC} , 120W	AC to DC, 24Vdc, 150W	AC to DC, 19 V _{DC} , 120W
	Regulation	-	-	-	ISO 7637-2 lev.4
Environment	Operating Temperature (air flow 0.7 m/sec)	-30 ~ 60 °C	-20 ~ 60 °C	-20 ~ 70 °C	-30 ~ 70 °C (E3825) -30 ~ 60 °C (E3845)
	Vibration Resistance	IEC 60068-2-64	IEC 60068-2-64	MIL-STD 810G, Method 514.6	IEC 60721-3-5 Class 5M3
	Shock Protection	IEC 60068-2-27	IEC 60068-2-27	MIL-STD 810G, Method 514.6	IEC 60721-3-5 Class 5M3
Physical Characteristics	Dimensions (W x H x D)	264 x 69.2 x 133 mm	264 x 75.1 x 133 mm	260 x 73 x 160 mm 260 x 99.6 x 160 mm with 2nd stack	264 x 69.2 x 133 mm
Operating System	Microsoft Windows	Yes (Win7, 10)	Yes (Win7, 10)	Yes (Win7, 10)	Yes (Win7, 10)
	Linux	Yes (by Project)	Yes (by Project)	Yes (by Project)	Yes (by Project)
APIs	WISE-PaaS/DeviceOn	Yes	Yes	Yes	Yes
Certification	EMC	CE/FCC Class A, CCC, BSMI	CE/FCC Class A, CCC, BSMI	CE/FCC Class B, CCC, BSMI	CE/FCC Class A, CCC, BSMI
	Safety Certifications	CB, UL, CCC, BSMI	CB, UL, CCC, BSMI	CB, UL, CCC, BSMI, NEMA TS2	UL, CCC, BSMI, CB, E-Mark

車載・鉄道・路線監視ソリューション

NEW



Application		In-Vehicle			Rolling Stock	
Model Name		ARK-2151V	ARK-2250V	TS-206	ARK-2231R	ARK-2250R
Processor System	CPU	4th Gen Intel® Celeron® 2980U/Core i5-4300U	6th Gen Intel® Core™ i5-6442EQ/i7-6822EQ	6th Gen Intel® Core™ i5-6300U/i7-6600U	Intel Atom® E3845	6th Gen Intel® Core™ i5-6442EQ/i7-6822EQ
	Frequency	1.6 GHz / 1.9 GHz	1.9GHz/2.0GHz	2.4GHz/2.6GHz	1.91GHz	1.9GHz/2.0GHz
	Core Number	2	4	2 / 2	4	4
	BIOS	AMI EFI 128 Mbit	AMI UEFI 128 Mbit	AMI UEFI 128Mbit	AMI EFI 64-bit	AMI UEFI 128 Mbit
	Chipset	SoC	QM170	SoC	SoC	QM170
Memory	Technology	DDR3L 1333/1600 MHz	DDR4 2133MHz	DDR3L 1600MHz	DDR3L 1333	DDR4 2133MHz
	Max. Capacity	8 GB	32GB	16GB	8GB	32GB
	Socket	1 x 204-pin SODIMM	2 x 260-pin SODIMM	2 x 204-pin SODIMM	1 x 204-pin SODIMM	2 x 260-pin SODIMM
Display	VGA	1 (up to 1920 x 1200)	1 (up to 1920 x 1200)	1 (Up to 1920 x 1200)	1 (up to 2560 x 1600)	-
	DDI (HDMI/DVI/DisplayPort)	1 x lockable HDMI, up to 4K at 24 Hz	1 x lockable HDMI, up to 1080P	1x lockable HDMI, Up to 1080P	1 x lockable HDMI, up to 1080P	2 x lockable HDMI, up to 1080P
	Multiple Display	Dual	Dual	Dual	Dual	Dual
Expansion Interface	MiniPCIe / M.2	1 x Half-size Mini PCIe 1 x Full-size Mini PCIe 2 x Full-size Mini PCIe w/ SIM holders	1 x M.2 (2230 E Key) 2 x Full-size Mini PCIe w/ SIM holders	2 x Full-size Mini PCIe, 2 x Full-size Mini PCIe w/SIM holder	1 x Full-size Mini PCIe 1 x Full-size Mini PCIe 1 x Full-size Mini PCIe w/SIM holder	1 x M.2 (2230 E Key) 2 x Full-size Mini PCIe w/SIM holders
	SIM socket	2	2 (accessible)	3	1 (accessible)	2 (accessible)
Other	GPS	Support GPS, GLONASS, GALILEO and QZSS signals	Support GPS, GLONASS, GALILEO, BeiDou and QZSS signals	Optional	Support GPS, GLONASS, GALILEO, BeiDou and QZSS signals	Support GPS, GLONASS, GALILEO, BeiDou and QZSS signals
	G-Sensor	Optional	Optional	Optional	Optional	Optional
	PoE	4 x 10/100 Mbps PoE (4300U)	Optional extended modules 4/8 GbE PoE (M12 D/X-coded)	4 x 10/100 Mbps PoE (6600U)	Optional extended modules 4/8 GbE PoE (M12 D/X-coded)	Optional extended modules 4/8 GbE PoE (M12 D/X-coded)
	CANBus	optional	optional	Optional	optional	optional
Ethernet	Controller	GbE 1: Intel I218 GbE 2: Intel I210-IT	GbE 1: Intel i219 GbE 2: Intel i210	GbE1: Intel I219LM, GbE2: Intel I210-IT	GbE 1: Intel I210-IT GbE 2: Intel I210-IT	GbE 1: Intel i219 GbE 2: Intel i210
Audio	Audio Interface	HD Audio	HD Audio	HD Audio	HD Audio	HD Audio
	Connector	3 (Line-in, Line-out, Mic-in)	3 (Line-in, Line-out, Mic-in)	3 (Line-in, Line-out, Mic-in)	DB9 (Line-in, Line-out, Mic-in)	DB9 (Line-in, Line-out, Mic-in)
	3G Voice	1 x Line-out, 1 x Mic-in	-	1 x Line-out, 1 x Mic-in	-	-
WatchDog Timer	Yes	Yes	Yes	Yes	Yes	
Storage	SATA	1 x 2.5" removable drive bay	1 x 2.5" removable drive bay Optional 2nd 2.5" drive bay in extended modules	1x 2.5" removable drive bay	1 x 2.5" removable drive bay Optional 2nd 2.5" drive bay in extended modules	1 x 2.5" removable drive bay Optional 2nd 2.5" drive bay in extended modules
	mSATA	1 x Full-size mSATA	1 x Full-size mSATA	1x Full-size mSATA	1 x Full-size mSATA	1 x Full-size mSATA
I/O	USB 3.0	2	3	2	1 (Water-proof)	1 (Type A female)
	USB 2.0	2	-	2	2 (M12 A-Coded)	2 (M12 A-Coded)
	GPIO	6 x DI & 2 x DO with isolation	4 x DI & 4 x DO with isolation	6xDI & 2xDO with isolation	1 x 8bit DIO	1 x 8bit DIO
	COM Port	2 x isolated RS-232/422/485 2 x RS-232/422/485 (2980U) 2 x RS-232/422/485 (4300U)	3 x RS-232/422/485	2x isolated RS-232/422/485, 2x RS-232/422/485 (6300U), 2x RS-232/422/485 (6600U)	2 x RS-232/422/485	2 x RS-232/422/485
	LAN	2 x RJ45	2 x RJ45	2 x RJ45	2 x M12 X-code	2 x M12 X-code
Power	Power Supply Voltage	9 ~ 36 V _{DC} w/power ignition management	12/24 V _{DC} w/power ignition management	12/24Vdc w/power ignition management	24 V _{DC} (48 V _{DC} , 72 V _{DC} , 110 V _{DC} optional)	24 V _{DC} (48 V _{DC} , 72 V _{DC} , 110 V _{DC} optional)
	Connector	3-pin Phoenix	5-pin Phoenix	3-pin Phoenix	M12 A-coded	M12 A-coded
	Power Adaptor	AC to DC, 19 V _{DC} , 120W	AC to DC, 24Vdc, 150W	AC to DC, 24Vdc, 150W	AC to DC, 24Vdc, 180W	AC to DC, 24Vdc, 180W
	Regulation	ISO 7637-2 lev.4	ISO 7637-2 Lev.4	ISO 7637-2 lev.4	EN50155 S2&C1	EN50155 S2&C1
Environment	Operating Temperature (air flow 0.7 m/sec)	-20 ~ 60 °C	-20 ~ 70 °C	-20 ~ 60 °C	-40 ~ 70 °C (EN50155 TX)	-40 ~ 70 °C (EN50155 TX)
	Vibration Resistance	IEC 60721-3-5 Class 5M3	IEC 60721-3-5 Class 5M3, MIL-STD 810G	IEC 60721-3-5 Class 5M3	IEC61373 Category1, Class B	IEC61373 Category1, Class B
	Shock Protection	IEC 60721-3-5 Class 5M3	IEC 60721-3-5 Class 5M3, MIL-STD 810G	IEC 60721-3-5 Class 5M3	IEC61373 Category1, Class B	IEC61373 Category1, Class B
Physical Characteristics	Dimensions (W x H x D)	264 x 75.1 x 133 mm	260 x 73 x 160 mm 260 x 99.6 x 160 mm with extension module	264 x 76.1 x 133 mm	260 x 57 x 160 mm 260 x 83.6 x 160 mm with extension module	260 x 73 x 160 mm 260 x 99.6 x 160 mm with extension module
Operating System	Microsoft Windows	Yes (Win7, 10)	Yes (Win7, 10)	Yes (Win 7, 10)	Yes (Win7, 10)	Yes (Win7, 10)
	Linux	Yes (by Project)	Yes (by Project)	Yes (by Project)	Yes (By project)	Yes (By project)
APIs	WISE-PaaS/DeviceOn	Yes	Yes	Yes	Yes	Yes
Certification	EMC	CE/FCC Class A, CCC, BSMI	CE/FCC Class B, CCC, BSMI	CE/FCC Class B, CCC, BSMI	CE/FCC, CCC, BSMI, EN50121-3-2	CE/FCC, CCC, BSMI, EN50121-3-2, EN50121-4
	Safety Certifications	UL, CCC, BSMI, CB, E-Mark	CB, UL, CCC, BSMI, E-Mark	UL, CCC, BSMI, CB, E-Mark	UL, CCC, BSMI, CB, EN50155	UL, CCC, BSMI, CB, EN50155

ワイヤレスモジュール

4G LTE CAT4



Model Name	AIW-344		
Part Number	AIW-344FQ-N01	AIW-344FQ-E01	AIW-344FQ-J01
Form Factor	mini PCI-e FMC	mini PCI-e FMC	mini PCI-e FMC
SIM Slot	no	no	no
Radio Technology	CAT4	CAT4	CAT4
Downlink/ Uplink	150Mbps/50Mbps	150Mbps/50Mbps	150Mbps/50Mbps
Frequency Band	LTE FDD: Band 2,4,5,12,13,17,66,71 WCDMA: Band 2,4,5	FDD-LTE: Band 1,3,5,7,8,20,28 TDD-LTE: Band 38,40,41 HSPA/UMTS: Band 1,5,8 GSM/GPRS/EDGE850/900/1800MHz	LTE FDD: band1,3,8,11,18, 19,21,26,28 LTE TDD: Band41 WCDMA/HSPA+: Band1,6,8,19
Main Chipset	Qualcomm MDM9X07	Qualcomm MDM9X07	Qualcomm MDM9X07
Operating Temperature	Extended: -40 ~ 85 °C	Extended: -40 ~ 85 °C	Extended: -40 ~ 85 °C
Signal Protocol	USB 2.0	USB 2.0	USB 2.0
Support Area	US	EU	JP

NEW


Model Name	AIW-346	
Part Number	AIW-346 FQ-N01	AIW-346 FQ-N02
Form Factor	Full-size Mini PCIe	M.2 3052
SIM Slot	Yes	Yes
Radio Technology	LTE CAT4+GPS	LTE CAT4+GPS
Downlink/ Uplink	FDD LTE Max150Mbps(DL) / 50Mbps(UL)	FDD LTE Max150Mbps(DL) / 50Mbps(UL)
Frequency Band	4G LTE bands: 2/4/5/12/13/14/66/71 WCDMA bands: 2/4/5	4G LTE bands: 2/4/5/12/13/14/66/71 WCDMA bands: 2/4/5
Main Chipset	Qualcomm MDM9X07	Qualcomm MDM9X07
Operating Temperature	-30~80°C (Operating)	-30~80°C (Operating)
Signal Protocol	USB 2.0	USB 2.0
Support Area	US	US

ワイヤレスモジュール

5G

NEW



Model Name	AIW-355		
Part Number	AIW-355DQ-N01	AIW-355DQ-E01	AIW-355DQ-C01
Form Factor	M.2 3052 B-key	M.2 3052 B-key	M.2 3052 B-key
SIM Slot	no	no	no
Radio Technology	5G NR SUB6/LTE FDD/LTE TDD/WCDMA	5G NR SUB6/LTE FDD/LTE TDD/WCDMA	5G NR SUB6/LTE FDD/LTE TDD/WCDMA
Downlink/Uplink	Max DL peak rate 4.1 Gbps DL 4*4 NR Sub6 EN-DC Max UL peak rate 525Mbps	Max DL peak rate 4.1 Gbps DL 4*4 NR Sub6 EN-DC Max UL peak rate 525Mbps	Max DL peak rate 4.1 Gbps DL 4*4 NR Sub6 EN-DC Max UL peak rate 525Mbps
Frequency Band	NR: n2, n5, n7, n12, n14, n25, n41, n48, n66, n71, n78 LTE FDD: Band 2, 4, 5, 7, 12, 13, 14, 17, 25, 26, 29, 30, 66, 71 LTE TDD: Band 41, 42, 43, 48 LAA Band 46 Receiver only WCDMA: B1, 2, 4, 5, 8 GNSS: Support GPS, GLONASS, BDS, Galileo, QZSS	NR: n1, n3, n5, n8, n20, n28, n38, n41, n77, n78, n79 LTE FDD: Band 1, 3, 5, 7, 8, 19, 20, 28 LTE TDD: Band 38, 40, 41, 42, 43 WCDMA: B1, 3, 5, 8, 19 GNSS: support GPS, GLONASS, Galileo, BDS, QZSS	NR: n1, n28, n41, n77, n78, n79 LTE FDD: Band 1, 2, 3, 5, 7, 8 LTE TDD: Band 34, 39, 40, 41 WCDMA: B1, 2, 5, 8 GNSS: support GPS, GLONASS, Galileo, BDS, QZSS
Main Chipset	Qualcomm SDX55	Qualcomm SDX55	Qualcomm SDX55
Operating Temperature	-30 ~ 75 °C	-30 ~ 75 °C	-30 ~ 75 °C
Signal Protocol	USB 3.0/3.1	USB 3.0/3.1	USB 3.0/3.1
Support Area	US	EU	China

5G Antenna



Part Number	1750009372-01
Size(cm)	16.7*2.5
Support frequency	5G(sub 6GHz) dipole antenna
Antenna gain	1.78 dBi @ 699~ 960MHz 3.27 dBi @ 1710~2700MHz 0.18 dBi @ 3300 MHz 4.02 dBi @ 5150~5850MHz
Polarization	Linear
Connector	SMA Male
Impedance	50 ohm

Wi-Fi 6

NEW



Model Name	AIW-166K1/K2
Part Number	AIW-166K1/K2
Form Factor	M.2 2230 A-E key
Wireless Standard	802.11 a/b/g/n/ac/ax+BT5.2
Chipset	6E AX210 (no-Vpro/Vpro)
Signal Protocol	PCI-e/USB 2.0
Antenna	2 x antennas
Operating Voltage	3.3V
Temperature Range	0 ~ 70 °C
Dimensions (LxWxH)	22 x 30 x 2.2 mm
Security	WPA2*; WPA3* Authentication Protocols 802.1x EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPv0 -MSCHAPv2 (EAP-SIM, EAP-AKA, EAP-AKA') Encryption 128-bit AES-CCMP, 56-bit AES-GCMP
SISO/MIMO	MIMO
Data Rate	1201Mbps in 802.11ax
Bluetooth	BT 5.2
O.S Supported	Linux / Windows 10/ Chrome OS
Host Connector Type	M.2 2230

ワイヤレスモジュール

Wi-Fi/Bluetooth



Model Name	AIW-154	EWM-W162	EWM-W159	EWM-W193	AIW-165
Part Number	AIW-154BN	EWMm-W162M201E	EWM-W159M201E	EWM-W193H01E	EWM-W159M201E
Form Factor	M.2 2230 A-E key	M.2-2230 (A-E key)	M.2 2230 (A-E Key)	M.2 2830 A-E key	M.2 2830 A-E key
Wireless Standard	802.11 ac + BT 5.0	802.11 ac/a/b/g/n + BT 4.2	802.11ac+ BT5.0	802.11 ac + BT 5.0	802.11ax + BT5.3
Chipset	NXP 88W8997	88W8897	RTL 8822CE-CG	RTL8822CE-CG	NXP 88W9098
Signal Protocol	PCIe/UART	Wi-Fi: PCIe BT: USB Differential	Wi-Fi: PCIe BT: USB Differential	Wi-Fi: PCIe BT: USB Differential	PCIe / UART
Antenna	2 x IPEX MHF 4 connectors	2 x I-PEX MHF4 connectors	2 x I-PEX MHF4 connectors	2 x MHF4 connectors	3 x I-PEX MHF4 connectors
Operating Voltage	3.3V	DC 3.3V ± 5%	DC 3.3V ± 5%	DC 3.3V±-5%	3.3V
Temperature Range	-30 ~ 85 °C	-30 ~ 85 °C (Operating)	Extended operating temperature: 0~70°C	-30 ~ 85 °C (Operating)	-40 ~ 85 °C
Dimensions (L x W x H)	22 x 30 x 2.2 mm	22 x 30 x 2.2 mm	22 x 30 x 2.2 mm	26.6 x 29.8 x 2.7 mm	28 x 30 x 3.95 mm
Security	WAPI WEP 64-bit and 128-bit encryption with H/W TKIP processing WPA/WPA2/WPA3 (Wi-Fi Protected Access)	64/128-bit WEP, WPA, WPA2, 802.1x, TKIP and AE	WAPI, 64/ 128-bit WEP, WPA/WPA2 TKIP and AES	WAPI, 64/ 128-bit WEP, WPA/WPA2 TKIP and AES	WPA/WPA2 (Wi-Fi Protected Access) / WAPI / WEP 64-bit with H/W TKIP
SISO/MIMO	2T2R MIMO	2T2R MIMO	2T2R MIMO	2T2R MIMO	2T2R MIMO
Data Rate	867Mbps	867Mbps	867Mbps	867Mbps	1.2 Gbps
O.S Supported	Linux	Windows 10 & Linux	Windows 10 & Linux	Windows 10 & Linux	Linux

モジュールキット



Model Name	EWM-W192		
Part Number	EWM-W192K1	EWM-W192K2	EWM-W192K5
Form Factor	M.2 2230 A-E key	M.2 2230 A-E key	M.2 2230 A-E key
Wireless Standard	802.11 a/b/g/n/ac+BT5.0	802.11 a/b/g/n/ac+BT5.0	802.11 a/b/g/n/ac+BT5.0
Chipset	Intel® AC9260(no vPro)	Intel® AC9260(supports Intel vPro)	Intel® AC9260(no vPro)
Signal Protocol	PCI-e/USB 2.0	PCI-e/USB 2.0	PCI-e/USB 2.0
Antenna	2 x antenna	2 x antenna	2 x antenna
Operating Voltage	3.3V	3.3V	3.3V
Temperature Range	0 ~ 70 °C	0 ~ 70 °C	-40 ~ 85 °C
Dimensions (LxWxH)	22 x 30 x 2.2 mm	22 x 30 x 2.2 mm	22 x 30 x 2.2 mm
Security	WPA* and WPA2*, 802.1X (EAP-TLS, TTLS, PEAP, EAP-SIM, EAP-AKA, EAP-AKA') 64-bit and 128-bit WEP, TKIP, 128-bit AES-CCMP, 128-bit and 256-bit AES-GCMP Wi-Fi Direct* Encryption and Authentication WPA2-PSK, AES-MIMO	WPA* and WPA2*, 802.1X (EAP-TLS, TTLS, PEAP, EAP-SIM, EAP-AKA, EAP-AKA') 64-bit and 128-bit WEP, TKIP, 128-bit AES-CCMP, 128-bit and 256-bit AES-GCMP Wi-Fi Direct* Encryption and Authentication WPA2-PSK, AES-MIMO	WPA* and WPA2*, 802.1X (EAP-TLS, TTLS, PEAP, EAP-SIM, EAP-AKA, EAP-AKA') 64-bit and 128-bit WEP, TKIP, 128-bit AES-CCMP, 128-bit and 256-bit AES-GCMP Wi-Fi Direct* Encryption and Authentication WPA2-PSK, AES-MIMO
SISO/MIMO	MIMO	MIMO	MIMO
Data Rate	802.11ac: up to 1200 Mbps	802.11ac: up to 1200 Mbps	802.11ac: up to 1200 Mbps
O.S Supported	Windows 10	Windows 10	Windows 10
Package	Intel AC9260 dual band 802.11AC 2*2 WiFi/BT5.0 M.2 2230 module card*1+ cables*2+certification ready dipole antenna*2	Intel AC9260 dual band 802.11AC 2*2 WiFi/BT5.0 M.2 2230 module card*1+ cables*2+certification ready dipole antenna*2	Intel AC9260 dual band 802.11AC 2*2 WiFi/BT5.0 M.2 2230 module card*1+ cables*2+certification ready dipole antenna*2

ワイヤレスモジュール

GPS



Model Name	EWM-G109	EWM-G110
Part Number	EWM-G109H01E	EWM-G110H01E
Form Factor	Half Size Mini PCI-e	Half Size Mini PCI-e
GPS Type	Hardware standalone	Hardware standalone
Signal Protocol	USB	USB
Chipset	NEO-M8N	NEO-M8U+3D inertial sensors
Operating Temperature	-40 ~ 85 °C	-40 ~ 85 °C
RF Receiver Type	GPS module, multi-GNSS (GPS, Beidou, GLONASS, Galileo, QZSS and SBAS)	GPS module, multi-GNSS (GPS, Beidou, GLONASS, Galileo, QZSS and SBAS)
GPS Acquisition	Cold starts: 26s / Aided starts: 2	Cold starts: 26s / Aided starts: 2
GPS Accuracy	Aided starts: 2	Aided starts: 2
GPS Sensitivity	Tracking: -167 dBm / Cold starts: -148 dBm / Reacquisition: -160 dBm	Tracking: -167 dBm / Cold starts: -148 dBm / Reacquisition: -160 dBm

アンテナ (オプション)



Part Number	1750008717-01	1750008303-01
Dimensions	10.9 x 1 cm	16.7 x 2.5 cm
Support Frequency	Wi-Fi dual band antenna (2.4Ghz and 5Ghz)	4G LTE dipole antenna
Antenna Gain	2.89 dBi @ 2.4-2.5GHZ 3.58dBi @ 5.15-5.85GHz	0.9 dBi @ 700 ~ 960 MHz 2.0 dBi @ 1710 ~ 2700 MHz
Polarization	Linear	Linear
Connector	RP-SMA male	SMA Male
Impedance	50 ohm	50 ohm

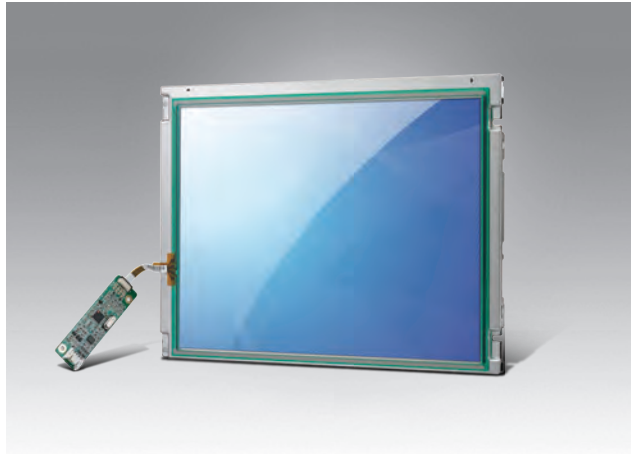
Wi-Fi拡張ケーブル



Part Number	1750008767-01
Length (cm)	150 cm/59 in
Cable Type	Wi-Fi cable
Cable Loss	0.62dB@2500MHz for 1Meter
Polarization	Linear
Connector	SMA(F)/SMA(M)
Impedance	50 ohm

ディスプレイ

IDK-1000



Industrial Touch LCD Kits

Features

- 5.7"~28" industrial grade LCD kits with LED backlight
- Suitable for indoor applications
- LVDS signal interface
- Resistive/Projected Capacitive touchscreen support
- Touch controller included with USB cable
- Full compatibility with embedded boards

Specifications

	IDK-1105	IDK-065	IDK-1107		IDK-1108	IDK-1110W	IDK-1110		IDK-1112	IDK-1115WP		IDK-1115		IDK-1119	IDK-1121					
Size	5.7"	6.5"	7"		8.4"	10.1"		10.4"		12.1"		15.6"		19"	21.5"					
Resolution	640x480 (VGA)	640x480 (VGA)	800x480 (WVGA)	800x480 (WVGA)	1024x600 (WSVGA)	800x600 (SVGA)	1024x600 (WSVGA)	1280x800 (WXGA)	800x600 (SVGA)	1024x768 (XGA)	1024x768 (XGA)	800x600 (SVGA)	1024x768 (XGA)	1366x768 (HD)	1920x1080 (FHD)	1024x768 (XGA)	1024x768 (XGA)	1280x1024 (SXGA)	1920x1080 (FHD)	1920x1080 (FHD)
Brightness (cd/m2)	500	800	400	400	500	450	500	500	400	500	500	450	500	500	450	500	500	350	300	250
Colors	262K	262K / 16.2M	262K / 16.2M	262K / 16.2M	262K / 16.2M	262K / 16.2M	262K	262K / 16.2M	262K / 16.2M	16.2M	16.2M	262K / 16.2M	262K / 16.2M	262K	16.2M	262K / 16.2M	262K / 16.2M	16.7M	16.7M	16.7M
Viewing Angle (H/V°)	140/100	160/140	178/178 (Full view)		150/140	160/140	120/140	170/170 (Full view)	160/130	176/176 (Full view)	176/176 (Full view)	160/140	178/178 (Full view)	160/150	170/170 (Full view)	178/178 (Full view)	178/178 (Full view)	170/160	178/178 (Full view)	178/178 (Full view)
Contrast Ratio	250:1	600:1	750:1	700:1	600:1	600:1	500:1	800:1	700:1	1000:1	1000:1	700:1	1000:1	600:1	800:1	2500:1	2500:1	1000:1	5000:1	1000:1
Response Time (ms)	50	25	25	25	25	30	25	25	20	25	25	35	25	11	25	23	23	5	25	14
Signal Interface	LVDS	LVDS	LVDS	LVDS	LVDS	LVDS	LVDS	LVDS	LVDS	LVDS	LVDS	LVDS	LVDS	LVDS	2 Channel LVDS	LVDS	LVDS	2 Channel LVDS	2 Channel LVDS	2 Channel LVDS
Backlight Type	LED	LED	LED	LED	LED	LED	LED	LED	LED	LED	LED	LED	LED	LED	LED	LED	LED	LED	LED	LED
Backlight Life (hrs)	30,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	30,000	50,000	50,000	70,000	70,000	50,000	50,000	30,000
Power Consumption (W)	1.8	3.86	2.47	2.47	3.57	2.94	7.99	6.18	4.8	7.47	7.47	6.7	9.62	12.1	16	12.8	12.8	20.55	19.82	11.05
Dimensions (mm)	127 x 98 x 8	153 x 118 x 11	170 x 110 x 6	170 x 110 x 6	165.5 x 104.44 x 8.97	203 x 143 x 8	235 x 146 x 8	231 x 153 x 7	243 x 184 x 7	225.5 x 176.3 x 8.7	225.5 x 176.3 x 8.7	279 x 209 x 9	261 x 240 x 8.4	364 x 216 x 9.3	364 x 216 x 9.3	327 x 254 x 9.1	327 x 254 x 9.1	396 x 324 x 18	497 x 292 x 13	498 x 292 x 11
Weight (g)	200	170	182.8	182.8	160	250	320	360	365	320	320	580	490	720	1050	960	960	1670	2300	1685
Touchscreen	4-Wire Resistive	4-Wire Resistive	4-Wire Resistive	P-cap	4-Wire Resistive	4-Wire Resistive	4-Wire Resistive	P-cap	4-Wire Resistive	4-Wire Resistive	P-cap	5-Wire Resistive	P-cap	P-cap	P-cap	5-Wire Resistive	P-cap	5-Wire Resistive	5-Wire Resistive	P-cap
Durability (touches)	1 million	1 million	1 million	50 million ~	1 million	1 million	1 million	50 million ~	1 million	1 million	50 million ~	10 million	50 million ~	50 million ~	50 million ~	10 million	50 million ~	10 million	10 million	50 million ~
Surface Hardness	3H	3H	3H	Mohs 5H	3H	3H	3H	Mohs 5H	3H	3H	Mohs 5H	3H	Mohs 5H	Mohs 5H	Mohs 5H	3H	Mohs 5H	3H	3H	Mohs 5H
Transparency	80%	82.50%	82.50%	90%	83%	82.50%	82.50%	91%	82.50%	82.50%	90%	80%	88%	87%	87%	80%	91%	80%	80%	91%
Environment	Operating Temperature (°C)	-20 ~ 70	-10 ~ 60	-5 ~ 60	-20 ~ 70	-20 ~ 70	-10 ~ 60	-5 ~ 60	-20 ~ 65	-10 ~ 60	-10 ~ 60	-10 ~ 60	-20 ~ 70	-20 ~ 70	-20 ~ 70	-20 ~ 70	-20 ~ 70	0 ~ 50	0 ~ 60	0 ~ 50

ディスプレイ

IDK-2000

High Brightness Industrial LCD Kits



Features

- 8.4" ~ 21.5" industrial grade LCD kits with LED backlight
- 1200 nits for outdoor applications
- LVDS signal interface
- Resistive touch
- Auto-dimming light sensor (optional)
- Full compatibility with embedded boards

Specifications

		IDK-2108	IDK-2110		IDK-2112		IDK-2115	IDK-2117	IDK-2119	IDK-2121
LCD Display	Size	8.4"	10.4"		12.1"		15"	17"	19"	21.5"
	Resolution	800 x 600 (SVGA)	800 x 600 (SVGA)	1024 x 768 (XGA)	800 x 600 (SVGA)	1024 x 768 (XGA)	1024 x 768 (XGA)	1280 x 1024 (SXGA)	1280 x 1024 (SXGA)	1920 x 1080 (FHD)
	Brightness (cd/m ²)	1200	1200	1300	1200	1200	1200	1200	1200	1200
	Colors	262K / 16.2M	262K / 16.2M	262K / 16.2M	262K / 16.2M	262K / 16.2M	262K / 16.2M	16.2M	16.7 M	16.7M
	Viewing Angle (H/V°)	160/140	160/130	170/170	160/140	178/178 (Full view)	178/178 (Full view)	170/160	170/160	178/178 (Full view)
	Contrast Ratio	600:1	500:1	700:1	700:1	1000:1	2000:1	1000:1	1000:1	5000:1
	Response Time (ms)	30	35	30	35	25	25	5	5	16
	Signal Interface	LVDS	LVDS	LVDS	LVDS	LVDS	LVDS	2 Channel LVDS	2 Channel LVDS	2 Channel LVDS
	Backlight Type	LED	LED	LED	LED	LED	LED	LED	LED	LED
	Backlight Life (hrs)	50,000	50,000	70,000	50,000	50,000	50,000	50,000	50,000	50,000
	Power Consumption (W)	5.85	7.1	16.05	8.92	18	18.12	19.12	35.42	46.8
Dimensions (mm)	203.0 x 142.5 x 8.0	236.0 x 176.9 x 5.7	230 x 180.2 x 12.3	279 x 209.0 x 9.0	260.5 x 240 x 8.4	326.5 x 253.5 x 9.1	358.5 x 296.5 x	396 x 324 x 17.8	495.6 x 292.2 x 11.7	
Weight (g)	260	495	480	600	540	1060	1300	1770	2050	
Touchscreen	Touchscreen	4-Wire Resistive	5-Wire Resistive	5-Wire Resistive	5-Wire Resistive	P-cap	5-Wire Resistive	5-Wire Resistive	5-Wire Resistive	5-Wire Resistive
	Durability (touches)	1 millions	1 million	1 million	10 million	50 million ~	10 million	10 million	10 million	10 million
	Surface Hardness	3H	3H	3H	3H	Mohs 5H	3H	3H	3H	3H
	Transparency	82.50%	82.50%	82.50%	80%	88%	80%	80%	80%	80%
Environment	Operating Temperature (°C)	-20 ~ 70	-10~60	-10~60	-20 ~ 70	-20 ~ 70	-20 ~ 70	0 ~ 50	0 ~ 50	0 ~ 55

ディスプレイ

IDS-3100

Open Frame Monitors



- 6.5" ~ 27" industrial grade LCD panel with LED backlight
- Slim open frame design with integrated bracket
- VGA/DVI/HDMI interfaces
- P-cap and resistive touch screen options
- Rear/VESA mount
- Optional high brightness solution
- Easy integration with embedded box PCs



Specifications

Model	IDS-3106		IDS-3110				IDS-3112			IDS-3115			IDS-3117		IDS-3118W		IDS-3119	IDS-3121W		IDS-3127W		
LCD Display	Screen Size	6.5"	10.4"	10.4"	10.4"		12.1"	12.1"	12.1"		15"	15"	15"	17"	17"	18.5"	19"	21.5"	27"			
	Resolution	640 x 480 (VGA)	800 x 600 (SVGA)	800 x 600 (SVGA)		1024 x 768 (XGA)	800 x 600 (SVGA)	800 x 600 (SVGA)		1024 x 768 (XGA)	1024 x 768 (XGA)	1024 x 768 (XGA)	1024 x 768 (XGA)	1280 x 1024 (SXGA)	1280 x 1024 (SXGA)	1366 x 768 (HD)	1280 x 1024 (SXGA)	1920 x 1080 (FHD)	1920 x 1080 (FHD)			
	Colors	16.2M	16.2M	16.2M	16.2M		16.2M	16.2M	16.2M		16.2M	16.7M	16.2M	16.7M	16.7M	16.7M	16.7M	16.7M	16.7M	16.7M		
	Viewing Angle (H/V)	160/140	160/130	160/140	176/176		160/140	160/140	160/140		176/176	176/176	176/176	170/160	170/160	170/160	170/160	170/160	178/178	178/178		
	Contrast Ratio	600:1	500:1	700:1	1000:1		700:1	700:1	700:1		2000:1	2500:1	2500:1	1000:1	800:1	1000:1	1000:1	1000:1	1000:1	3000:1		
	Response Time (ms)	25	35	30	25		35	35	16		16	23	23	5	30	5	5	5	5	20		
	Brightness (cd/m ²)	800	230	400	500		450	450	600		300	500/1200	500/1200	250	350	300	350	250	300	300		
	Backlight Type	LED	LED	LED	LED		LED	LED	LED		LED	LED	LED	LED	LED	LED	LED	LED	LED	LED		
	Backlight Life	50,000	30,000	50,000	50,000		50,000	50,000	50,000		70,000	70,000	70,000	40,000	50,000	50,000	50,000	50,000	30,000	30,000		
	Dimensions (mm) (without touch)	215 x 160 x 32.1	279.4 x 220 x 30	279.4 x 220 x 30	279.4x220x30		320.2 x 252 x 30.7	320.2 x 252 x 30.7	320.2 x 252 x 30.7		362 x 288 x 32.8	362 x 288 x 32.8	362 x 288 x 32.8	400 x 344.7 x 33.4	400 x 344.7 x 33.4	478 x 303 x 33	438 x 369.7 x 34.3	546.6 x 299.2 x 45.5	619.6 x 362.3 x 19.6			
Weight (kg) (without touch)	0.8	0.95	1	1		1.6	1.6	1.6		3.8	3.8	3.8	4.1	3.45	5	5.2	6	5.6				
Environment	Operating Temperature (°C)	0-50	0-45	-20-60	-20-60		0-45	-20-60	-20-60		0-45	-20-60	-20-60	0-45	-20-60	0-55	0-45	0-45	0-45			
	Storage Temperature (°C)	-20-60	-20-60	-30-70	-30-70		-20-60	-30-70	-30-70		-20-60	-30-70	-30-70	-20-60	-30-70	-20-60	-20-60	-20-60	-20-60	-20-60		
Touchscreen (Optional)	Humidity (non-condensing)	5-95% @ 40°C	5-95% @ 40°C	5-95% @ 40°C	5-95% @ 40°C		5-95% @ 40°C	5-95% @ 40°C	5-95% @ 40°C		5-95% @ 40°C	5-95% @ 40°C	5-95% @ 40°C	5-95% @ 40°C	5-95% @ 40°C	90% @ 40°C	5-95% @ 40°C	5-95% @ 40°C	5-95% @ 40°C			
	Type	4-Wire Resistive	5-Wire Resistive	5-Wire Resistive	5-Wire Resistive	P-cap	5-Wire Resistive	5-Wire Resistive	5-Wire Resistive	P-cap	5-Wire Resistive	5-Wire Resistive	P-cap	5-Wire Resistive	5-Wire Resistive	5-Wire Resistive	P-cap	5-Wire Resistive	5-Wire Resistive	P-cap	Glass	P-cap
	Transparency	80%	81%	81%	81%	90%	80%	80%	80%	90%	80%	80%	89%	80%	80%	80%	86%	80%	80%	87%	90%	87%
Surface Hardness	3H	3H	3H	3H	5H	3H	3H	3H	7H	3H	3H	5H	3H	3H	3H	6H	3H	3H	7H	6H	6H	
System	I/O Ports	VGA x 1; DVI x 1; 12 V _{DC} Jack x 1; USB x 1 (USB is reserved for the connection to enable touch usage only)	VGA x 1; DVI x 1; 12 V _{DC} ; Jack x 1; USB x 1; RS-232 x 1 (USB & RS-232 are reserved for the connection to enable touch usage only)																			VGA x 1; DVI x 1; DP x 1; 12 V _{DC} ; Jack x 1; USB x 1; (USB is reserved for the connection to enable touch usage only)
	OSD	Keys: Power on/off, Menu/Enter, Left/Up, Right/Down, Exit/Auto, Source Menu Functions: Brightness, Contrast, Screen Setting, Color Temp, OSD Language, VGA/DVI, Reset, Auto Adjust																				
Power	36W power adapter, with AC 100 ~ 240V input and DC +12V @ 3A output										60W power adapter, with AC 100 ~ 240V input and DC +12V @ 5A output											

ディスプレイ

IDS-3200

Panel Mount Monitors



Features

- 6.5" ~ 21.5" industrial grade LCD panel with LED backlight
- Rugged metal front frame design
- VGA/DVI/HDMI interfaces
- P-cap and resistive touch screen options
- Panel/VESA mount
- Optional high brightness solution
- Easy integration with embedded box PCs



Specifications

Model	IDS-3206	IDS-3210	IDS-3212	IDS-3215	IDS-3217	IDS-3218W	IDS-3219	IDS-3221W									
LCD Display	Screen Size	6.5"	10.4"	10.4"	12.1"	12.1"	12.1"	15"	15"	15"	17"	17"	18.5"	19"	21.5"		
	Resolution	640 x 480 (VGA)	800 x 600 (SVGA)	800 x 600 (SVGA)	800 x 600 (SVGA)	800 x 600 (SVGA)	1024 x 768 (XGA)	1024 x 768 (XGA)	1024 x 768 (XGA)	1024 x 768 (XGA)	1280 x 1024 (SXGA)	1280 x 1024 (SXGA)	1366 x 768 (HD)	1280 x 1024 (SXGA)	1920 x 1080 (FHD)		
	Colors	16.2M	16.2M	16.2M	16.2M	16.2M	16.2M	16.2M	16.7M	16.7M	16.7M	16.7M	16.7M	16.7M	16.7M		
	Viewing Angle (H/V°)	160/140	160/130	160/140	160/140	160/140	160/140	176/176	176/176	176/176	176/176	170/160	170/160	170/160	170/160	178/178	
	Contrast Ratio	600:1	500:1	700:1	700:1	700:1	700:1	2000:1	2500:1	2500:1	2500:1	1000:1	800:1	1000:1	1000:1	1000:1	
	Response Time (ms)	25	35	30	35	35	16	16	23	23	23	5	30	5	5	5	
	Brightness (cd/m²)	800	230	400	450	450	600	300	500	500	500	250	350	300	350	250	
	Backlight Type	LED	LED	LED	LED	LED	LED	LED	LED	LED	LED	LED	LED	LED	LED	LED	
	Backlight Life	50,000	30,000	50,000	50,000	50,000	50,000	70,000	70,000	70,000	70,000	40,000	50,000	50,000	50,000	30,000	
	Dimensions (mm)	219 x 171.8 x 37.66	290.2 x 237.64 x 35.1	290.2 x 237.64 x 35.1	323.7 x 262.4 x 36.5	323.7 x 262.4 x 36.5	323.7 x 262.4 x 36.5	365 x 291 x 38	365 x 291 x 38	365 x 291 x 39.2	425 x 357.5 x 39	425 x 357.5 x 39	482 x 307 x 39.2	449.7 x 374.4 x 40.4	551 x 341.6 x 51.7		
Weight (kg) (without touch)	1.2	1.95	2	3	3	3	4.8	4.3	4.5	4.45	4.85	5	6	6.2			
Environment	Operating Temperature (°C)	0~50	0~45	-20~60	0~45	-20~60	-20~60	0~45	-20~60	-20~60	0~45	-20~60	0~55	0~45	0~45		
	Storage Temperature (°C)	-20~60	-20~60	-30~70	-20~60	-30~70	-30~70	-20~60	-30~70	-30~70	-20~60	-30~70	-20~60	-20~60	-20~60		
	Humidity (non-condensing)	5~95% @ 40°C	5~95% @ 40°C	5~95% @ 40°C	5~95% @ 40°C	5~95% @ 40°C	5~95% @ 40°C	5~95% @ 40°C	5~95% @ 40°C	5~95% @ 40°C	5~95% @ 40°C	5~95% @ 40°C	5~95% @ 40°C	5~95% @ 40°C	5~95% @ 40°C		
Touchscreen (optional)	Type	4-Wire Resistive	5-Wire Resistive	5-Wire Resistive	5-Wire Resistive	5-Wire Resistive	5-Wire Resistive	P-cap	5-Wire Resistive	5-Wire Resistive	P-cap	5-Wire Resistive	5-Wire Resistive	5-Wire Resistive / P-cap (two columns)	5-Wire Resistive	5-Wire Resistive	P-cap
	Transparency	80%	81%	81%	80%	80%	80%	90%	80%	80%	89%	80%	80%	80% / 86% (two columns)	80%	80%	87%
	Surface Hardness	3H	3H	3H	3H	3H	3H	7H	3H	3H	5H	3H	3H	3H / 6H (two columns)	3H	3H	7H
System	I/O Ports	VGA x 1; DVI x 1; 12 V _{cc} Jack x 1; USB x 1 (USB is reserved for the connection to enable touch usage only)	VGA x 1; DVI x 1; 12 V _{cc} Jack x 1; USB x 1; RS-232 x 1 (USB & RS-232 are reserved for the connection to enable touch usage only)														
	OSD	Keys: Power on/off, Menu/Enter, Left/Up, Right/Down, Exit/Auto, Source Menu Functions: Brightness, Contrast, Screen Setting, Color Temp, OSD Language, VGA/DVI, Reset, Auto Adjust															
	Power	36W power adapter, with AC 100 ~ 240V input and DC +12V @ 3A output							60W power adapter, with AC 100 ~ 240V input and DC +12V @ 5A output								

ディスプレイ

IDS-3300 Series



Features

- Front IP65 for waterproof and dustproof
- 5-wire resistive and P-cap touch screen solution or tempered smudge resistant protected glass
- Multiple signal interfaces with HDMI, VGA and DVI
- Slim mechanical design with integrated brackets
- Panel/VESA mount



Specifications

Model		IDS-3315		IDS-3319
LCD Display	Screen Size	15"		19"
	Resolution	1024 x 768 (XGA)		1280 x 1024 (SXGA)
	Colors	16.2M		16.7M
	Viewing Angle (H/V°)	176/176		170/160
	Contrast Ratio	2500:1		1000:1
	Response Time (ms)	16		5
	Brightness (cd/m2)	500		350
	Backlight Type	LED		LED
	Backlight Life	70,000		50,000
	Dimensions (mm)	365 x 291 x 46		605 x 485 x 165
	Weight (kg)	4.5		6
Environment	Operating Temperature (°C)	-20~60		0~45
	Storage Temperature (°C)	-30~70		-20~60
	Humidity (non-condensing)	5~95% @ 40°C		5~95% @ 40°C
Touchscreen	Type	5-Wire Resistive	P-cap	5-Wire Resistive
	Transparency	80%	89%	80%
	Surface Hardness	3H	5H	3H
System	I/O Ports	HDMI x 1, VGA x 1; DVI x 1; 12 V _{DC} Jack x 1; USB x 1; RS-232 (USB and RS-232 is reserved for the connection to enable touch usage only)		
	OSD	OSD Key: Power on/off, Menu/Enter, Left/Up, Right/Down, Exit/Auto, Source Menu Functions: Brightness, Contrast, Screen Setting, Color Temp, OSD Language, VGA/DVI, Reset, Auto Adjust		
	Power	60W power adapter, with AC 100 ~ 240V input and DC +12V @ 5A output		

ディスプレイ

IDP31 Series



Proflat 100% Flat Touch Monitors

Features

- 10.1", 15", 15.6", 21.5", 23.8", 27" industrial grade LCD panel with LED backlight
- 100% flat front glass for easy maintenance
- Elegant rounded edge design, no need for additional enclosures
- HDMI/VGA/DVI/DP(23.8"&27") interface
- Projected capacitive touch screen for multi-touch
- Stand/VESA mount, panel mount
- LED strip surrounded(23.8"&27")

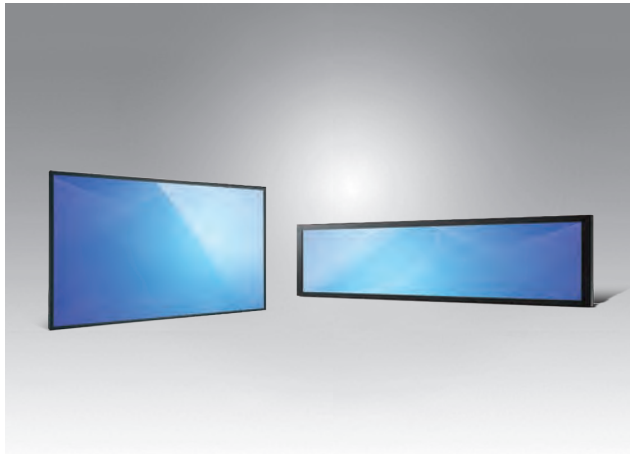
Specifications

	IDP31-101W	IDP31-150	IDP31-156W		IDP31-215W		IDP31-238W	IDP31-270W			
LCD Display	Screen Size	10.1	15"	15.6"	15.6"	21.5"	21.5"	23.8"	27"		
	Resolution	1280 x 800 (WXGA)	1024 x 768 (XGA)	1920 x 1080 (FHD)	1366 x 768 (HD)	1920 x 1080 (FHD)	1920 x 1080 (FHD)	1920 x 1080 (FHD)	1920 x 1080 (FHD)		
	Colors	16.2M	16.2M	16.2M	16.2M	16.7M	16.7M	16.7M	16.7M		
	Viewing Angle (H/V°)	170/170	176/176	170/170	160/150	178/178	178/178	178/178	178/178		
	Contrast Ratio	800:1	2500:1	800:1	800:1	1000:1	1000:1	1000:1	3000:01:00		
	Response Time (ms)	11	16	25	11	14	22	14	20		
	Brightness (cd/m2)	500	500	450	500	250	250	350	300		
	Backlight Type	LED	LED	LED	LED	LED	LED	LED	LED		
	Backlight Life	50,000	70,000	50,000	50,000	30,000	50,000	30,000	30,000		
	Dimensions (mm)	330 x 170 x 360	356.1 x 280 x 425	510 x 175 x 410	485 x 165 x 365	620 x 200 x 410	620 x 180 x 480	579.04 x 348.46 x 56.05	647.60 x 386.15 x 56.57		
Environment	Operating Temperature (°C)	-20~65	-20~60	-20~60	-10~55	0~45	0~60	0~45	0~45		
	Storage Temperature (°C)	-25~70	-30~70	-30~70	-20~60	-20~60	-20~60	-20~60	-20~60		
	Humidity (non-condensing)	10~90% @ 40°C	5~95% @ 40°C	10~90% @ 40°C	10~90% @ 40°C	5~95% @ 40°C	5~80% @ 50°C	5~95% @ 40°C	5~95% @ 40°C		
Touchscreen	Type	P-cap	P-cap	P-cap	P-cap	P-cap	P-cap	Glass	P-cap	Glass	P-cap
	Transparency	90%	86%	86%	80%	86%	85%	90%	88%	90%	88%
	Surface Hardness	7H	6H	6H	7H	7H	7H	6H	6H	6H	6H
System	I/O Ports	HDMI; 12 V _{DC} Jack x 1; USB x 1	HDMI x 1; VGA x 1; DVI-D x 1; Audio x 1 (audio output 3W) 12 V _{DC} Jack x 1; USB x 1		HDMI 12 VDC Jack x 1; USB x 1	HDMI x 1; VGA x 1; DVI-D x 1; Audio x 1 (audio output 3W) 12 V _{DC} Jack x 1; USB x 1	HDMI 12 V _{DC} Jack x 1; USB x 1	DP x 1; VGA x 1; DVI-D x 1; 12 V _{DC} Jack x 1; USB x 1 (USB is reserved for the connection to enable touch usage only)			
		(USB is reserved for the connection to enable touch usage only)									
	OSD	Keys: Power on/off, Menu/Enter, Left/Up, Right/Down, Exit/Auto, Source									
		Menu Functions: Brightness, Contrast, Screen Setting, Color Temp, OSD Language, Reset, Auto Adjust	Menu Functions: Brightness, Contrast, Screen Setting, Color Temp, OSD Language, VGA/DVI, Reset, Auto Adjust				Menu Functions: Brightness, Contrast, Screen Setting, Color Temp, OSD Language, Reset, Auto Adjust	Menu Functions: Brightness, Contrast, Screen Setting, Color Temp, OSD Language, VGA/DVI, Reset, Auto Adjust			
Power	60W power adapter, with AC 100 ~ 240V input and DC +12V @ 5A output										

ディスプレイ

DSD-3000/DSD-5000/DSD-7000 Series

Digital Signage Displays



Features

- 28" ~ 65" size options
- Wide viewing angle
- Fanless design
- HDMI/VGA/DVI/DP interface
- Optional optical touch support
- Stand/wall mount
- Portrait & landscape modes support

Specifications

		DSD- 3032	DSD-3042	DSD- 5028	DSD- 5038	DSD-7055
LCD Display	Size	32"	42"	28"	38"	55"
	Resolution	1920 x 1080	1920x1080	1920 x 360	1920 x 538	1920 x 1080
	Colors	16.7 M	16.7M	16.7M	16.7M	16.7M
	Viewing Angle (H/V°)	178/178	178/178	178/178	176/176	178/178
	Contrast Ratio	3000:1	4000:1	1200:1	4000:1	4000:1
	Response Time (ms)	8	8	8	9.5	8
	Brightness	500	500	700	800	500
	Backlight Type	LED	LED	LED	LED	LED
	Backlight Life (hrs)	50,000	50,000	50,000	50,000	50,000
	Dimensions (mm)	743.6 x 438.11 x 73	1007.12x614.61x82.25	738x 167.5 x 44.5	980.9 x 303.2 x 44.35	1242.4 x 722 x 53
Weight (kg)	14	18		6.4	17	
Touchscreen (Optional)	Type	Optical Touch	Optical Touch	-	-	-
	Durability	10 million touches	10 million touches	-	-	-
	Surface Hardness	7H	7H	-	-	-
	Transparency	92%	92%	-	-	-
Environment	Temperature (Operating)	5 ~ 45 °C	5 ~ 45 °C	0 ~ 45 °C	0 ~ 45 °C	0~40 °C
	Temperature (Storage)	-20 ~ 55 °C	-20 ~ 55 °C	-10 ~ 60 °C	-10 ~ 60 °C	-20~60 °C
	Humidity	20 ~ 80 % RH	20 ~ 80 % RH	20 ~ 80 % RH	20 ~ 80 % RH	10 ~ 80 % RH
System	I/O Ports	HDMI/VGA/DisplayPort	HDMI/VGA/DisplayPort	VGA/DVI/HDMI	VGA/DVI	DVI/DP/HDMI/Audio/VGA/SDM Slot
	OSD control	RS-232/RS-485/Remote	RS-232/RS-485/Remote	RS-232	RS-232	RS232
	Power Consumption (W)	80	130	40	76	95(w/o SDM)

ディスプレイ

CRV430W-CurveView™

43" 4K Curved Monitors



Features

- 43" in Ultra HD 3840 x 2160
- Curved concave format monitors
- Totally unique industrial design
- Compelling user experience
- Large format, deep curved sizes
- Integrated Projected Capacitive (PCAP) Multi-touch
- VGA, Display port, HDMI interface
- Optional design of C shape and J shape
- Custom bending and monitor configuration available

Introduction

CurveView™ is the latest in a series of exciting product innovations from Advantech Display Systems. The introduction of deep curved profiles to a large area display creates exciting opportunities for industrial and user interface design alike. Packaged together with an industrial grade video card and power supply, CurveView™ is available with Triptic™ HDMI 1.4, HDMI 2.0, Display Port and Analog RGB and can be specified with or without 10-point multi-touch overlay. All products can be used in either portrait or landscape mode and are cleverly packaged in such a way that no further mechanical parts are needed other than a VESA mount to create a display system. The use of a metal chassis provides a rugged and stable platform to build solutions for the widest range of applications.

Typical Applications

- Casino slot machines
- Information kiosks
- Digital advertising
- Way-finders and digital assistants
- Medical
- Gaming

Specifications

CRV-430 (43" 1500R Concave Monitor)			
Model	CRV-430W (C type)	CRV-430JP (J type)	Notes
Backlight	LED	LED	Light Source
Resolution	Ultra HD 3840 x 2160	Ultra HD 3840 x 2160	Native resolution. Other resolutions supported by A/D card scaling
Brightness	450 cd/m ²	450nits	Measured at typ. operating voltage
Viewing angle	89/89/89/89	89/89/89/89	Left/Right/Up/Down
Contrast Ratio (Resp.Time)	1100:1 (14ms)	1100:1(14ms)	In laboratory conditions
Touch Screen (optional)	4mm Multi-touch PCT (10 touches)	4mm Multi-touch PCT (10 touches)	Projected capacitive glass overlay
Operating Temp	0 ~ 50 °C	0 ~ 50 °C	Professional use
Input / Output	HDMI 1.4, HDMI 2.0, Display Port, VGA		

Display

This LCD module has a TFT active matrix type liquid crystal panel 3840 x 2160 pixels, and diagonal size of 43 inch. This module supports 3840 x 2160 mode. Each pixel is divided into red, green and blue subpixels or dots which are arranged in vertical stripes. Grayscale or the brightness of the sub-pixel color is determined with a 10-bit gray scale signal for each dot. The CRV-CurveView™ has been designed to apply the 10-bit V by one interface method. It is intended to support displays where narrow bezel width, long life, wide viewing angle, high color saturation, and high color depth are very important.

Display Characteristics

Items	Specification	Specification	Unit
Active Screen Size	43	43	inch
Display Area	941.184(H) x 529.416(V)	941.184(H) x 529.416(V)	mm
Outline Dimension	998.70(H) x 586.1(V) x 162.5(D)	1030.98(H) x 610.1(V) x 141.45(D)	mm
Driver Element	a-Si TFT active matrix	a-Si TFT active matrix	-
Display Colors	10 bits (1.07B)	10 bits (1.07B)	colors
Number of Pixels	3840 x 2160	3840 x 2160	Pixel
Pixel Pitch	0.2451(H) x 0.2451(W)	0.2451(H) x 0.2451(W)	mm
Pixel Arrangement	RGB vertical stripe	RGB vertical stripe	-
Display Operation Mode	Normally Black	Normally Black	-
Surface Treatment	Anti-Glare, 3H	Anti-Glare, 3H	-
Display Orientation	Portrait/Landscape Enable	Portrait/Landscape Enable	-

SSD & DRAM

SQFlash シリーズ

SATA SSD

ハイパフォーマンス

組み込み



Model Name	SQF-S25 840 series	SQF-SM8 840 series	SQF-SMS 840 series	SQF-S25 830 series	SQF-SMS 830 series	SQF-SM8 830 series	SQF-S25 640 series
Form Factor	2.5" SATA SSD	M.2 2280 SATA SSD (NGFF)	mSATA SSD (MO-300A)	2.5" SATA SSD	mSATA SSD (MO-300A)	M.2 2280 SATA SSD (NGFF)	2.5" SATA SSD
Transfer Protocol	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s
Connector	7 + 15 pin SATA	M.2 with B+M key SATA pin-out	Mini PCIe with SATA pin-out	7 + 15 pin SATA	Mini PCIe with SATA pin-out	M.2 with B+M key SATA pin-out	7 + 15 pin SATA
Flash Type	3D TLC / sTLC	3D TLC / sTLC	3D TLC / sTLC	SLC / Ultra MLC / MLC	SLC / Ultra MLC / MLC	SLC / Ultra MLC / MLC	Ultra MLC / MLC / 3D TLC / sTLC
Maximum Power Consumption	720 mA	900 mA	900 mA	1,080 mA	1,260 mA	1,260 mA	530 mA
Capacity	240GB ~ 7.6TB	240GB ~ 1.9TB	120GB ~ 1.9TB	64GB ~ 2TB	32GB ~ 512GB	32GB ~ 512GB	16GB ~ 1TB
Maximum Read / Write Performance (MB/s)	Sequential: 550 / 530 Random IOPS@4K: 100K/90K	Sequential: 550 / 530 Random IOPS@4K: 100K/90K	Sequential: 550 / 520 Random IOPS@4K: 100K/90K	Sequential: 550 / 530 Random IOPS@4K: 100K / 100K	Sequential: 540 / 480 Random IOPS@4K: 88K / 91K	Sequential: 540 / 480 Random IOPS@4K: 88K / 91K	Sequential: 560 / 490 Random IOPS@4K: 86K / 91K
Op. Temperature	0 ~ 70 °C / -40 ~ 85 °C	0 ~ 70 °C / -40 ~ 85 °C	0 ~ 70 °C / -40 ~ 85 °C	0 ~ 70 °C / -40 ~ 85 °C	0 ~ 70 °C	0 ~ 70 °C	0 ~ 70 °C / -40 ~ 85 °C
DeviceOn/SQ Manager	Supported	Supported	Supported	Supported	Supported	Supported	Supported
Shock	1,500G, Peak / 0.5 ms	1,500G, Peak / 0.5 ms	1,500G, Peak / 0.5 ms	1,500G, Peak / 0.5 ms	1,500G, Peak / 0.5 ms	1,500G, Peak / 0.5 ms	1,500G, Peak / 0.5 ms
Vibration	20G, Peak / 80 ~2,000 Hz	20G, Peak / 80 ~2,000 Hz	20G, Peak / 80 ~2,000 Hz	20G, Peak / 80 ~2,000 Hz	20G, Peak / 80 ~2,000 Hz	20G, Peak / 80 ~2,000 Hz	20G, Peak / 80 ~2,000 Hz

組み込み



Model Name	SQF-SM8 640 series	SQF-SM4 640 series	SQF-SMS 640 series	SQF-SHM 640 series	SQF-S10 640 series	SQF-SLM 640 series	SQF-SUS 640 series
Form Factor	M.2 2280 SATA SSD (NGFF)	M.2 2242 SATA SSD (NGFF)	mSATA SSD (MO-300A)	H/S mSATA SSD (MO-300B)	CFast	Half-Slim SSD	Micro SSD
Transfer Protocol	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s
Connector	M.2 with B+M key SATA pin-out	M.2 with B+M key SATA pin-out	Mini PCIe with SATA pin-out	Mini PCIe with SATA pin-out	CFast Type-I	7 + 15 pin SATA	Onboard
Flash Type	Ultra MLC / MLC / 3D TLC / sTLC	Ultra MLC / MLC / 3D TLC / sTLC	Ultra MLC / MLC / 3D TLC / sTLC	Ultra MLC / MLC / 3D TLC / sTLC	Ultra MLC / MLC / 3D TLC / sTLC	Ultra MLC / MLC / 3D TLC / sTLC	Ultra MLC / MLC / 3D TLC
Maximum Power Consumption	750 mA	500 mA	750 mA	500 mA	500 mA	500 mA	500 mA
Capacity	16GB ~ 1TB	16GB ~ 512GB	16GB ~ 1TB	16GB ~ 512GB	16GB ~ 512GB	16GB ~ 512GB	4GB ~ 128GB
Maximum Read / Write Performance (MB/s)	Sequential: 560 / 490 Random IOPS@4K: 86K / 91K	Sequential: 560 / 500 Random IOPS@4K: 86K / 91K	Sequential: 560 / 490 Random IOPS@4K: 86K / 91K	Sequential: 560 / 490 Random IOPS@4K: 86K / 91K	Sequential: 560 / 470 Random IOPS@4K: 82K / 82K	Sequential: 560 / 490 Random IOPS@4K: 86K / 91K	Ultra MLC: 490/190 MLC: 480/190
Op. Temperature	0 ~ 70 °C / -40 ~ 85 °C	0 ~ 70 °C / -40 ~ 85 °C	0 ~ 70 °C / -40 ~ 85 °C	0 ~ 70 °C / -40 ~ 85 °C	0 ~ 70 °C / -40 ~ 85 °C	0 ~ 70 °C / -40 ~ 85 °C	0 ~ 70 °C / -40 ~ 85 °C
DeviceOn/SQ Manager	Supported	Supported	Supported	Supported	Supported	Supported	Supported
Shock	1,500G, Peak / 0.5 ms	1,500G, Peak / 0.5 ms	1,500G, Peak / 0.5 ms	1,500G, Peak / 0.5 ms	1,500G, Peak / 0.5 ms	1,500G, Peak / 0.5 ms	1,500G, Peak / 0.5 ms
Vibration	20G, Peak / 80 ~2,000 Hz	20G, Peak / 80 ~2,000 Hz	20G, Peak / 80 ~2,000 Hz	20G, Peak / 80 ~2,000 Hz	20G, Peak / 80 ~2,000 Hz	20G, Peak / 80 ~2,000 Hz	20G, Peak / 80 ~2,000 Hz

SSD & DRAM

NVMe SSD

ハイパフォーマンス

組込み



Model Name	SQF-C25 920 series	SQF-CM8 920 series	SQF-C3A 720 series	SQF-C4M 720 series	SQF-C8B 720 series	SQF-C8M 720 series	SQF-CFX 720 series	SQF-CMS 710 series
Form Factor	2.5" U.2 NVMe SSD	M.2 2280 NVMe SSD (NGFF)	M.2 2230 NVMe SSD (NGFF)	M.2 2242 NVMe SSD (NGFF)	M.2 2280 NVMe SSD (NGFF)	M.2 2280 NVMe SSD (NGFF)	CFexpress card	Full-size Mini PCIe SSD
Transfer Protocol	PCIe Gen3 x4	PCIe Gen3 x4	PCIe Gen3 x2	PCIe Gen3 x4	PCIe Gen3 x2	PCIe Gen3 x4	PCIe Gen3 x2	PCIe Gen3 x2
Connector	U.2 NVMe Interface (SFF 8639)	M.2 M-key with PCIe pin-out	M.2 A+E key with PCIe pin-out	M.2 M key with PCIe pin-out	M.2 B+M key with PCIe pin-out	M.2 M key with PCIe pin-out	CFexpress (Type B)	Mini PCIe with PCIe pin-out
Flash Type	3D TLC	3D TLC	3D TLC / sTLC	3D TLC / sTLC	3D TLC / sTLC	3D TLC / sTLC	3D TLC / sTLC	3D TLC
Maximum Power Consumption	790 mA	2,430 mA	910 mA	1160 mA	1370 mA	1370 mA	1160 mA	957 mA
Capacity	240GB ~7.6TB	240GB ~1.9TB	32GB ~ 512GB	32GB ~ 2TB	32GB ~ 2TB	32GB ~ 2TB	32GB ~ 1TB	64GB ~ 1TB
Maximum Read / Write Performance (MB/s)	Read: upto 3,200 Write: upto 3,000	Read: upto 3,200 Write: upto 2,700	Read: upto 850 Write: upto 780	Read: up to 1,730 Write: up to 1,560	Read: up to 1,700 Write: up to 1,480	Read: up to 1,730 Write: up to 1,560	Read: up to 1,420 Write: up to 1,200	Read: upto 1,560 Write: upto 1,000
Op. Temperature	0 ~ 70 °C -40 ~ 85 °C	0 ~ 70 °C -40 ~ 85 °C	0 ~ 70 °C -40 ~ 85 °C	0 ~ 70 °C -40 ~ 85 °C	0 ~ 70 °C -40 ~ 85 °C	0 ~ 70 °C -40 ~ 85 °C	0 ~ 70 °C -40 ~ 85 °C	0 ~ 70 °C -40 ~ 85 °C
DeviceOn/SQ Manager	Supported	Supported	Supported	Supported	Supported	Supported	Supported	Supported
Shock	1,500G, Peak / 0.5 ms	1,500G, Peak / 0.5 ms	1,500G, Peak / 0.5ms	1,500G, Peak / 0.5ms	1,500G, Peak / 0.5ms	1,500G, Peak / 0.5ms	1,500G, Peak / 0.5ms	1,500G, Peak / 0.5 ms
Vibration	20G, Peak / 80 ~2,000 Hz	20G, Peak / 80 ~2,000 Hz	20G, Peak / 80~2,000Hz	20G, Peak / 80~2,000Hz	20G, Peak / 80~2,000Hz	20G, Peak / 80~2,000Hz	20G, Peak / 80~2,000Hz	20G, Peak / 80 ~2,000 Hz

PATA/SD/eMMC/USB



Model Name	SQF-P10 P8/ P9	SQF-P25 P9	SQF-ISD	SQF-MSD	SQF-MM5	SQF-MMC	SQF-UPD
Form Factor	CF card	2.5" PATA SSD	Industrial SD	Industrial Micro SD	Industrial eMMC 153ball	Industrial eMMC 100ball	USB Pen Drive
Interface	IDE / PCMCIA	IDE	SD	SD	eMMC	eMMC	USB
Transfer Protocol	UDMA 2 / UDMA 4 / UDMA 5	UDMA 4	SD 6.x	SD 6.x	eMMC 5.x	eMMC 5.x	USB 3.1/2.0/1.1
Connector	CF Type-I	44-pin Male	SD 9-pin	SD 9-pin	onboard	onboard	USB type
Flash Type	SLC / Ultra MLC / MLC	SLC / Ultra MLC / MLC	SLC / Ultra MLC / MLC / 3D TLC / sTLC	SLC / Ultra MLC / MLC / 3D TLC / sTLC	Ultra MLC / MLC / 3D TLC / sTLC	MLC	MLC 3D TLC / sTLC
Maximum Power Consumption	160 mA	210 mA	100 mA	200 mA	200 mA	200 mA	190 mA
Capacity	256MB ~ 512 MB 1GB ~ 64GB	4GB ~ 512GB	1GB ~ 256G	1GB ~ 256GB	4GB ~ 128GB	4GB ~ 128GB	4GB ~ 256GB
Maximum Read / Write Performance (MB/s)	4 channel: 83/87 2 channel: 43/40 1 channel: 22/15	SLC: 65/55 MLC: 63/28	Read: up to 100 Write up to 90	Read: up to 100 Write: up to 90	Read: up to 250 Write: up to 150	Read: up to 250 Write: up to 150	MLC: TBD
Op. Temperature	0 ~ 70 °C / -40 ~ 85 °C	0 ~ 70 °C / -40 ~ 85 °C	-25 ~ 85 °C / -40 ~ 85 °C	-25 ~ 85 °C / -40 ~ 85 °C	-25 ~ 85 °C / -40 ~ 85 °C / -40 ~ 105 °C	-25 ~ 85 °C / -40 ~ 85 °C / -40 ~ 105 °C	0 ~ 70 °C
DeviceOn/SQ Manager	Supported	Supported	Not Supported	Not Supported	Not Supported	Not Supported	Not Supported
Shock	1,500G, Peak / 0.5 ms	1,500G, Peak / 0.5 ms	1,500G, Peak / 0.5 ms	1,500G, Peak / 0.5 ms	1,500G, Peak / 0.5 ms	1,500G, Peak / 0.5 ms	1,500G, Peak / 0.5 ms
Vibration	20G, Peak / 80 ~2,000 Hz	20G, Peak / 80 ~2,000 Hz	5G, Peak / 10 ~2,000 Hz	5G, Peak / 10 ~2,000 Hz	5G, Peak / 10 ~2,000 Hz	20G, Peak / 80 ~2,000 Hz	15G, Peak / 10 ~2,000 Hz

SSD & DRAM

SQRAM シリーズ

組込みDRAMモジュール

SODIMM

UDIMM



Model	SQR-SD5N	SQR-SD4N	SQR-SD4M	SQR-SD3N	SQR-SD3M	SQR-UD5N	SQR-UD4N	SQR-UD4M	SQR-UD3N	SQR-UD3M
DDR	DDR5	DDR4	DDR4	DDR3L	DDR3L	DDR5	DDR4	DDR4	DDR3L	DDR3L
DIMM Type	SODIMM	SODIMM	SODIMM	SODIMM	SODIMM	UDIMM	UDIMM	UDIMM	UDIMM	UDIMM
Pin Number	262pin	260pin	260pin	204pin	204pin	288pin	288pin	288pin	240pin	240pin
Frequency(MHz)	4800	3200/2666/2400	3200/2666/2400	1866/1600	1866/1600	4800	3200/2666/2400	3200/2666/2400	1866/1600	1866/1600
Capacity	8/16/32GB	2/4/8/16/32GB	4/8/16GB	2/4/8GB	2/4/8GB	8/16/32GB	2/4/8/16/32GB	4/8/16GB	2/4/8GB	2/4/8GB
Voltage	1.1V	1.2V	1.2V	1.35V	1.35V	1.1V	1.2V	1.2V	1.35V	1.35V
Operating Temperature	0 ~ 85 °C	0 ~ 85 °C	-20 ~ 85 °C	0 ~ 85 °C	-20 ~ 85 °C	0 ~ 85 °C	0 ~ 85 °C	-20 ~ 85 °C	0 ~ 85 °C	-20 ~ 85 °C
DeviceOn/SQ Manager	Developing	Supported				Developing	Supported			

堅牢型DRAMモジュール

Rugged SODIMM

SODIMM

UDIMM



Model	SQR-YD4	SQR-SD5I	SQR-SD4I	SQR-SD3I	SQR-HS4N	SQR-SD2I	SQR-SD1M	SQR-UD4I	SQR-UD3I
DDR	DDR4	DDR5	DDR4	DDR3L	DDR4	DDR2	DDR1	DDR4	DDR3L
DIMM Type	Rugged SODIMM	SODIMM	SODIMM	SODIMM	SODIMM	SODIMM	SODIMM	UDIMM	UDIMM
Pin Number	260pin	262pin	260pin	204pin	260pin	200pin	200pin	288pin	240pin
Frequency(MHz)	2666/3200	4800	3200/2666/2400	1866/1600	3200/2666	800/667	400/333	3200/2666/2400	1866/1600
Capacity	16/32GB	16/32GB	4/8/16/32GB	2/4/8GB	8/16/32GB	1/2GB	512MB/1GB	4/8/16/32GB	2/4/8GB
Voltage	1.2V	1.1V	1.2V	1.35V	1.2V	1.8V	2.5V	1.2V	1.35V
Operating Temperature	0 ~ 85 °C -40 ~ 85 °C	-40 ~ 85 °C	-40 ~ 85 °C	-40 ~ 85 °C	0 ~ 85 °C	-40 ~ 85 °C	-20 ~ 85 °C	-40 ~ 85 °C	-40 ~ 85 °C
Value-Added Service	Real-time DRAM Software support								
DeviceOn/SQ Manager	Supported	Developing	Supported						

ハイパフォーマンス & サーバー向け DRAMモジュール

LRDIMM

RDIMM

UDIMM ECC

Rugged SODIMM

SODIMM ECC



Model	SQR-LD4N	SQR-RD5N	SQR-RD4N	SQR-RD4I	SQR-UD4N (ECC)	SQR-VU4N	SQR-UD3N (ECC)	SQR-YD4 (ECC)	SQR-SD4 (ECC)	SQR-SD3 (ECC)
DDR	DDR4	DDR5	DDR4	DDR4	DDR4	DDR4	DDR3L	DDR4	DDR4	DDR3L
DIMM Type	LRDIMM	RDIMM	RDIMM	RDIMM	UDIMM	UDIMM VLP	UDIMM	Rugged SODIMM	SODIMM	SODIMM
Pin Number	288pin	288pin	288pin	288pin	288pin	288pin	240pin	260pin	260pin	204pin
Frequency(MHz)	2666	4800	3200/2666	2666/2400	3200/2666	2666	1600	2666/3200	3200/2666	1600
Capacity	64/128GB	16/32/64GB	8/16/32GB	8/16/32GB	4/8/16/32GB	8/16GB	4/8GB	16/32GB	4/8/16/32GB	4/8GB
Voltage	1.2V	1.1V	1.2V	1.2V	1.2V	1.2V	1.35V	1.2V	1.2V	1.35V
Operating Temperature	0 ~ 85 °C	0 ~ 85 °C	0 ~ 85 °C	-40 ~ 85 °C	0 ~ 85 °C -40 ~ 85 °C	0 ~ 85 °C -40 ~ 85 °C	0 ~ 85 °C	0 ~ 85 °C -40 ~ 85 °C	0 ~ 85 °C -40 ~ 85 °C	0 ~ 85 °C -40 ~ 85 °C
Function	ECC	ECC	ECC	ECC	ECC	ECC	ECC	ECC	ECC	ECC
Register	Yes	Yes	Yes	Yes	x	x	x	x	x	x
DeviceOn/SQ Manager	Not supported					Supported				

拡張モジュール

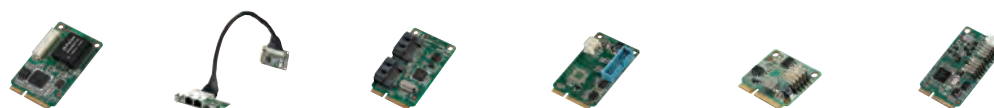
EXMシリーズ

アダプター



Model Name	EXM-CMPF1 (A key)	EXM-CMPF1 (E key)	EXM-110 (EMIO-100TL)
Type	M.2 (NGFF) to mPCIe (PCIe+USB) adapter	M.2 (NGFF) to mPCIe (PCIe+USB) adapter	LVDS to 1-Ch RGB TTL port
Communication Interface	PCIe and USB	PCIe and USB	18/24-bit LVDS
Interface Connector	MiniPCIe thru PCIe and USB	MiniPCIe thru PCIe and USB	External 18/24-bit LVDS, DF13-20DP-1.25V
Channel Connector	1 (2230/2242 A key)	1 (2230/2242 E key)	1
Operating Temperature	-40 ~ 85 °C	-40 ~ 85 °C	-10 ~ 70 °C
Storage Temperature	-40 ~ 85 °C	-40 ~ 85 °C	-40 ~ 85 °C
LED Status	Activated indicator	Activated indicator	-
Dimensions (L x W x H)	50.59 x 30 x 15 mm	50.5 x 30 x 15 mm	50.5 x 30 x 15 mm

PCIe



Model Name	EXM-510 (EMIO-100E)	EXM-523	EXM-520 (EMIO-200SA)	EXM-521 (EMIO-200U3)	EXM-522	EXM-540
Type	PCIe to 1-Ch Giga LAN port	PCIe to 2-Ch Giga LAN port	PCIe to 2-Ch SATA III port	PCIe to 2-Ch USB 3.0 port	PCIe to 2-Ch USB 2.0 port	PCIe to 4-Ch USB 2.0 port
Communication Interface	PCIe	PCIe	PCIe	PCIe	PCIe	PCIe
Interface Connector	MiniPCIe thru PCIe	MiniPCIe thru PCIe	MiniPCIe thru PCIe	MiniPCIe thru PCIe	H/S MiniPCIe thru PCIe	MiniPCIe thru PCIe
Channel Connector	1	2	2	2	2	4
Operating Temperature	-40 ~ 85 °C	0 ~ 70 °C	-10 ~ 70 °C	-40 ~ 85 °C	-40 ~ 85 °C	-40 ~ 85 °C
Storage Temperature	-40 ~ 85 °C	-40 ~ 85 °C	-40 ~ 85 °C	-40 ~ 85 °C	-40 ~ 85 °C	-40 ~ 85 °C
LED Status	Reserve the LED signal for external usage	Reserve the LED signal for external usage	Activated indicator	-	-	-
Dimensions (L x W x H)	50.5 x 30 x 20 mm	50.5 x 30 x 20 mm + iDoor PCB Board	50.5 x 30 x 20 mm	50.5 x 30 x 15 mm	26.65 x 30 x 15 mm	50.5 x 30 x 15 mm

USB



Model Name	EXM-310 (EMIO-100P)	EXM-311 (EMIO-100S)	EXM-321 (EMIO-210S)	EXM-322 (EMIO-220S)	EXM-320 (EMCB-200U)
Type	USB to 1-Ch Parallel port	USB to 1-Ch High Speed Serial COM port	USB to 2-Ch High Speed RS-232 port	USB to 2-Ch High Speed RS-422/RS-485 port	USB to 2-Ch CANBus port
Communication Interface	Combo USB (Internal/External)	Combo USB (Internal/External)	Combo USB (Internal/External)	Combo USB (Internal/External)	Combo USB (Internal/External)
Interface Connector	Internal USB port: MiniPCIe thru USB External USB port: 2.0 mm, 1x4-pin, male type wafer box	Internal USB port: MiniPCIe thru USB External USB port: 2.0 mm, 1x4-pin, male type wafer box	Internal USB port: MiniPCIe thru USB External USB port: 2.0 mm, 1x4-pin, male type wafer box	Internal USB port: MiniPCIe thru USB External USB port: 2.0 mm, 1x4-pin, male type wafer box	Internal USB port: MiniPCIe thru USB External USB port: 2.0 mm, 2x5-pin, male header
Channel Connector	1	1	2	2	2
Operating Temperature	0 ~ 70 °C	-40 ~ 85 °C	-40 ~ 85 °C	-40 ~ 85 °C	-40 ~ 85 °C
Storage Temperature	-40 ~ 85 °C	-40 ~ 85 °C	-40 ~ 85 °C	-40 ~ 85 °C	-40 ~ 85 °C
LED Status	Activated indicator	Activated indicator	Power On/Off: Red LED COM-1 working : Green LED COM-2 working: Green LED	Power On/Off: Red LED COM-1 working : Green LED COM-2 working: Green LED	Activated indicator
Dimensions (L x W x H)	50.5 x 30 x 15 mm	50.5 x 30 x 20 mm	50.5 x 30 x 15 mm	50.5 x 30 x 20 mm	50.5 x 30 x 15 mm

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