Advantech Industrial IoT Systems and Devices Star Product Guide
Enabling Industry 4.0 & IIoT with Intelligent Automation

Cloud Platform Services
Microsoft Azure Bluemix
Business Intelligence
Machine Learning
Visualization
3rd Party Service
(AWS, Google, Ali, Baidu...)

Remote Monitoring and Management
WISE-PaaS/RMM

Security Management
WISE-PaaS/Security

Human Machine Interface
WebAccess/HMI

IT Protocol: MQTT, AMQP, CoAP

Intelligent Automation Systems
Industrial Computer and Server
IPC/ACP/AGS Series

Intelligent HMI
TPC/IPPC/FPM/WOP Series

Industrial IoT Gateways
UNO Series

Application Ready Package
WebAccess/SCADA
WA-ST/WA-SU Series

WebAccess/HMI
WA-HT Series

WebAccess/IVS
WA-HU Series

CDS-APAX/ADAM Series

WA-CT/WA-DJ Series

CDS-APAX/ADAM Series

iConnectivity
Industrial Communication
WebAccess/HMS

EKI Series

Industrial Networking
IE Multiway, Wizard, SL 30x Series
Industrial IoT Vertical Markets

The Integrated IoT Software & Solution

Industrial IoT Platforms & Devices

IA Protocol: Modbus/TCP, OPC UA, PROFIBUS
Advantech WebAccess

The IIoT Application Platform

The WebAccess family provides different software solutions to cater to different application environments. For the control level, we provide WebAccess/HMI: a standalone HMI software with more than 450 drivers to communicate with various devices, such as PLCs, meters etc. For the plant level, we provide WebAccess/SCADA: a web-based SCADA software with private cloud software architecture which integrates with WebAccess/IVS, WebAccess/NMS and WISE-PaaS/RMM and provides an open interface for vertical market applications. For the enterprise level, we provide Cloud-based WebAccess as an application platform to collect data in the cloud, through HTML5 Dashboard to display the data, and help users to extend enterprise applications with cloud services.

Advantech WebAccess Software

Advantech Cloud-based WebAccess
Cloud-based Application Platform
- Easily connects with Intelligent Devices to Cloud Platforms via MQTT, a lightweight publish/subscribe messaging protocol
- Integration with Node-RED as a visual tool for IoT to write to other devices, APIs and online services together
- Predefined nodes for easy integration with external and internal data
- Predefined nodes for data to be displayed on Cloud Dashboard and Microsoft Power BI
- Plug and play IoT devices ensure there's no need to configure projects in the cloud
- Allows multiple SCADA Nodes to be run on the same computer simultaneously. These SCADA nodes can belong to different project nodes
- Provides an open interface to extend application combining with cloud service, such as Big Data Analysis, Business Intelligence, Machine Learning, Predictive Maintenance, etc.

Advantech WebAccess/SCADA
Web-based HMI/SCADA Software
- 100% web-based engineering, monitoring and control
- Cross browser HTML5 Intelligent Dashboard
- Supports ample drivers including Advantech I/O modules, controllers and major PLCs
- Easy integration with MES & ERP, via open interfaces
- Integration with WebAccess/IVS, WebAccess/NMS and WISE-PaaS/RMM
- Google Maps and GPS location tracking integration
- Redundant SCADA, ports and devices for high availability
- Provides I/O sensor & CNC monitoring and control
- Auto-explore CNC controllers
- Supports major CNC controllers
- Provides CNC operating status monitoring
- Provides CNC availability inquiry
- Provides CNC historical alarm inquiry
- Supports NC program upload/download
- Provides CNC maintenance management

Advantech WebAccess/HMI
HMI Runtime Development Software
- Low cost Windows based HMI runtime
- More than 50 screen objects can fulfill almost all types of HMI operating and viewing needs for machine automation
- Supports up to 16 communication links for different applications
- Over 100 field proven communication drivers are provided for free
- Supports data collection, alarm monitoring, recipe handling, and operation logging
- Provides a complete set of useful macro commands. Macro programs can be embedded in objects, screens, and the global process
Intelligent HMI

Leading the HMI Innovation for Smart Factory

As we stand on the edge of the new era of Industry 4.0, Advantech, as a leading enabler of intelligent factories, will continue to advance the new generation of HMI products and solutions for different industries in the IoT world.

Advantech provide an integrated and comprehensive range of HMI products with iDoor Technology including High Performance Control Panels, Web-based Thin-client Terminals (TPC/SPC/PPC/WebOP), Industrial Monitors (FPM) for process automation, on-site operation. For vertical markets such as food & beverage, oil & gas and railway transportation, we also offer reliable domain-focused HMI which meets the required certification of IP69K, C1D2 and ENS0155.

### Web-based Thin-client Terminals

<table>
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<tr>
<th>Model</th>
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| TPC-651T   | 5.7”/ 6.5” VGA TFT LED LCD Intel® Atom™ Dual-core Thin Client Panel Computer                           | • Intel Atom™ Dual-core E3827 1.75 GHz processor with 4GB DDR3L SDRAM
• -20 ~ 60°C Wide Operating Temperature
• IP66 Front Protection and More Durable 5-wire Resistive Touch Screen with True-flat Touch Design
• Supports iDoor Technology (TPC-1251T-EHKE required)                                            |
| TPC-1051WP | 10.1” XGA TFT LED LCD Intel® Atom™ Dual-core Thin Client Panel Computer                               | • Intel Atom™ Dual-core E3827 1.75 GHz processor with 4GB DDR3L SDRAM
• -20 ~ 55°C Wide Operating Temperature
• 7H Hardness Glass Surface Widescreen with PCT Multi-touch, IP66 Front Protection and True-flat Touch Design
• Supports iDoor Technology (TPC-1251T-EHKE required)                                            |
| TPC-1251T/1551T | 12.1”/ 15” XGA TFT LED LCD Intel® Atom™ Dual-core Thin Client Panel Computer                       | • Intel Atom™ Dual-core E3827 1.75 GHz processor with 4GB DDR3L SDRAM
• -20 ~ 60°C Wide Operating Temperature
• IP66 Front Protection and More Durable 5-wire Resistive Touch Screen with True-flat Touch Design
• Supports iDoor Technology (TPC-1251T-EHKE required)                                            |
| TPC-1551WP | 15.6” WXGA TFT LED LCD Intel® Atom™ Dual-core Thin Client Panel Computer                             | • Intel Atom™ Dual-core E3827 1.75 GHz processor with 4GB DDR3L SDRAM
• 7H Hardness Glass Surface 16:9 Widescreen with PCT Multi-touch, IP66 Front Protection and True-flat Touch Design
• Supports iDoor Technology (TPC-1251T-EHKE required)                                            |
| TPC-1751T  | 17” SXGA TFT LED LCD Intel® Atom™ Dual-core Thin Client Panel Computer                               | • Intel Atom™ Dual-core E3827 1.75 GHz processor with 4GB DDR3L SDRAM (Optional: Intel® Celeron™ Quad-core J1900)
• -20 ~ 60°C Wide Operating Temperature
• IP66 Front Protection and More Durable 5-wire Resistive Touch Screen with True-flat Touch Design
• Supports iDoor Technology (TPC-1251T-EHKE required)                                            |
| TPC-2150T/2210W | 15”/ 21.5” XGA/ FHD TFT LED LCD Intel® Atom™ Quad-core Thin Client Panel Computer                | • Intel® latest Atom™ processor with 4GB DDR3L SDRAM
• Modular design for flexibility in development and maintenance
• Supports iDoor Technology
• Supports SSD & M.2 storage options
• Rugged with isolation power design                                                               |
| WebOP-3070T| 7” WVGA Cortex™-A8 Operator Panel                                                                    | • Microsoft Windows Embedded CE 6.0
• Backup memory FRAM in 128KB (64 words) without battery
• Power & Terminal I/O ports isolation protection
• Front panel flat-sealed with IP66 compliance                                                     |
| WebOP-3100T| 10.1” WSVGA Cortex™-A8 Operator Panel                                                                | • Microsoft Windows Embedded CE 6.0
• Backup memory FRAM in 128KB (64 words) without battery
• Power & Terminal I/O ports isolation protection
• Front panel flat-sealed with IP66 compliance                                                     |
| WebOP-3120T| 12” XGA Cortex™-A8 Operator Panel                                                                    | • Microsoft Windows Embedded CE 6.0
• Backup memory FRAM in 128KB (64 words) without battery
• Power & Terminal I/O ports isolation protection
• Front panel flat-sealed with IP66 compliance                                                     |
Star Product Highlights

**TPC-1581WP/ 1881WP**

- 15.6/ 18.5” WXGA TFT LED LCD
- Intel® Core™ i7/ i3 with PCT Multi-Touch Panel Computer
  - Intel® Core™ i7-4605U/ i3-4010U with 4GB DDR3L SDRAM (4 only in 18.5”)
  - 7H Hardness Glass Surface Widescreen with PCT Multi-touch, IP66 Front Protection and True-flat Touch Design
  - Expandable System IO, Isolated Digital IO, Fieldbus and Communication by iDoor Technology
  - Built-in ikey and Home-key for an intuitive UI
  - Supports 9 – 32V DC Wide Voltage
  - Supports four USB 3.0 and HDMI for independent display

**TPC-1282T**

- 12” XGA TFT LED LCD
- Intel® Core™ i3 Touch Panel Computer
  - Intel® Core™ i3-5010U 2.10GHz with 4GB DDR3L SDRAM
  - More Durable 5-wire Resistive Touch Screen with IP66 Front Protection and True-flat Touch Design
  - Optional PCT Multi-Touch Wide Screen
  - Independent 3 Ethernet ports for IT/ OT integration
  - Supports SSD & M.2 storage options
  - TPM for cyber security
  - Rugged with isolation power design
  - PCIe, mini PCIe expansion and iDoor support

**TPC-5151T/ 5171T**

- 15”/17” XGA/SXGA TFT LED LCD
- Intel® Core™ i3 Touch Panel Computer
  - Intel® Core™ i3-6100U 2.3GHz with 8GB DDR3L SDRAM
  - Modularised design for flexibility in development and maintenance
  - TPM for cyber security
  - Rugged with isolation power design
  - PCIe, mini PCIe expansion and iDoor support
  - Supports SSD & M.2 storage options
  - Supports four USB 3.0/2.0 and Display Port for independent display
  - Independent 3 Ethernet ports for IT/ OT integration

**Multi-functional Panel PCs**

**TPC-6120**

- 12.1” XGA Intel® Core™ i5/ i3/ Celeron® Panel PC
  - Intel® 4th Generation Core™ i5/ i3/ Celeron® Processor with 2 x 204-pin SODIMM DDR3/DDR3L SDRAM (Max 16GB)
  - Built-in Resistive Touch Screen
  - Optional PCI x 1/ PCIe x 1 Expansion Kit
  - 5-wire Resistive Touch Screen

**TPC-6150/ 6120**

- 15” XGA/ 17” SXGA Intel® Core™ i5/ i3/ Celeron® Panel PC
  - Intel® Core™ i5-3610ME/ i3-3100ME/ Celeron® 1020E with Max 8GB DDR3/ DDR3L SDRAM
  - Dual HDD support Intel RAD 0/1, and Optional second HDD or SSD
  - Multiple Bus Expansion Slots, one PCIe x 4, one PCI + Optional one PCIe x 1, two PCI, Optional two PCIe x 1
  - Built-in Isolated RS-422/485 with Autoflow, Dual Intel® GbE

**TPC-8150/ 8170**

- 15” XGA/ 17” SXGA Intel® Core™ i5/ i3/ Celeron® Panel PC
  - Intel® Core™ i5-3550S/ i3-3220 with 2 x 204-pin DDR3 SDRAM (Max 8GB)
  - One PCIe x 4 or 2 PCI slot
  - Supports 6 x USB, 6 x COMs, 8 bit GPIO
  - Supports iManager, SUBIAccess and Embedded Software APIs

**PPC-3060S/ 3100S/ 3120S**

- 6.5” VGA/10.4” SVGA/12.1” XGA/ Intel Atom Dual/Quad core Fanless Panel PC
  - Intel® Atom® N2807 Dual-core 1.58GHz processor with Max 4GB DDR3 SDRAM (Max 8GB DDR3L SDRAM)
  - Entirely flat panel with Touch Screen
  - Compact Fanless Design with solid Al Alloy enclosure
  - ELO 5-wire Resistive Touch Screen
  - Supports 15 – 24V(dc) Wide Voltage

**PPC-3151**

- 15” XGA Intel® 6th Generation Core™ i5 Fanless Panel PC
  - Intel® Core™ i5-6300U 2.4GHz/Core™ i3-6100U 2.3GHz Processor with 16GB DDR4 SDRAM Entirely flat panel with Touch Screen
  - Supports one PCIe x 4 / PCI x 1 Bus Expansion
  - Built-in isolated RS-422/485 with Autoflow
  - Supports 9 – 32Vdc Wide Voltage

**PPC-4151W/ 4211W**

- 15.6" WXGA/ 21.5" FHD Intel® Core™ i5/ Celeron® with PCT Multi-Touch Wide Screen Fanless Panel PC
  - Intel® Core™ i5-4300U 2.9GHz/ Celeron® 2980U 1.6GHz Processor with Max 8GB DDR3L SDRAM
  - Entirely flat panel with PCT Touch screen
  - Supports one PCIe x 4 / PCI x 1 Bus Expansion
  - Built-in isolated RS-422/485 with Autoflow

**PPC-6151C**

- 15” XGA Intel® 6th Gen. Core i Panel PC with selectable Mini-ITX Motherboard
  - Intel® 6th Gen. Core i processor up to 45W TDP (socket type)
  - True-flat IP65 front bezel, optional Resistive or P-cap touch screen
  - Optional selectable Mini-ITX M/B for different features and prices
  - Optional AC power supply or 24 Vc input
  - Supports dual expansion slots (one PCIe x 4 or two PCI)

**High Performance Control Panels**

**TPC-3100/ 3120**

- 10.4” SVGA/ 12.1” XGA/ Intel® Atom™ Dual-core Fanless Panel PC
  - Intel® Atom™ Dual-core 2955U 1.83GHz Processor with Max 4GB DDR3 SDRAM
  - Fanless Design and Low Power Consumption
  - 5-wire Resistive Touch Screen
  - Optional PCI x 1/ PCIe x 1 Expansion Kit
  - Automatic data flow control over RS-485

**PPC-3105/ 3170/ 3190**

- 15” XGA/ 17” / 19” SXGA Intel® Atom™ Quad-core Fanless Panel PC
  - Intel® Atom™ Quad-core E3845 1.9GHz Processor with Max 8GB DDR3L SDRAM
  - -20 ~ 60°C Wide Operating Temperature
  - 5-wire Resistive Touch Screen
  - Built-in PCI x 1/ PCIe x 1 Expansion Slot
  - Built-In Isolated RS-422/485 with Autoflow
  - Optional CF and CFast module

**Configurable Panel PC**

**TPC-5151T**

- 15” XGA Intel® 6th Gen. Core i Panel PC
  - Intel® Core™ i5-3550S/ i3-3220 with 2 x 204-pin DDR3 SDRAM
  - Supports dual expansion slots (one PCIe x 4 or two PCI)

**PPC-4015/ 4021W**

- 15” XGA/ 17” SXGA Intel® Core™ i5/ i3/ Celeron® Panel PC
  - Intel® Core™ i5-3610ME/ i3-3100ME/ Celeron® 1020E with Max 8GB DDR3/ DDR3L SDRAM
  - Dual HDD support Intel RAD 0/1, and Optional second HDD or SSD
  - Multiple Bus Expansion Slots, one PCIe x 4, one PCI + Optional one PCIe x 1, two PCI, Optional two PCIe x 1
  - Built-in Isolated RS-422/485 with Autoflow, Dual Intel® GbE
**Star Product Highlights**

- **SPC-1881WP**
  All around IP65 18.5” Stationary Panel with Intel® i5 Processor
  - Intel® Core™ i5-4300U 1.9GHz with 4GB DDR3L SDRAM
  - All around IP65 protection with waterproof M12 connector
  - Built-in ikey and home-key for an intuitive UI
  - 7H Hardness Glass Surface Widescreen with PCT
  - 1 x RS-232/ 1 x USB/ 2 x LAN/ 24V dc-in with Waterproof M12 connector

- **SPC-1840WP**
  All around IP65 18.5” Stationary Panel with AMD® Dual-core Processor
  - All around IP65 18.5” Stationary Panels with AMDR Dual-core Processor
  - 7H Hardness Glass Surface Widescreen with PCT
  - Built-in ikey and Home-key for an Intuitive UI
  - Robust design with All Around IP65 design, VESA support
  - 1 x RS-232/ 1 x USB/ 2 x LAN/ 24Vdc-in with Waterproof M12 connector

- **TPC-8100TR**
  10.4” EN50155 Railway Panel Computer
  - Intel® Atom N2600 Dual-core processor 1.6G GHz processor
  - All around IP65 with waterproof M12 connector
  - Wide operating temperature: -30 ~ 70°C
  - ENS0155 & EN45545 Compliance for railway application

**Industrial Monitors**

- **FPM-7151W**
  15” WXGA Industrial Monitor with PCT, Direct VGA+DVI ports
  - 16.9 WXGA Backlight LCD with True-flat Seamless Design
  - 7H Hardness Glass Surface with PCT Multi-touch and IP66 Front Protection
  - Supports multi-touch via USB interface in Windows 7/8
  - Robust design with SECC chassis and Magnesium alloy front panel

- **FPM-7181W**
  18.5” WXGA Industrial Monitor with PCT, Direct VGA+DVI ports
  - 16.9 WXGA Backlight LCD with True-flat Seamless Design
  - 7H Hardness Glass Surface with PCT Multi-touch and IP66 Front Protection
  - Supports multi-touch via USB interface in Windows 7/8
  - Robust design with SECC chassis and Magnesium alloy front panel

- **FPM-7061T**
  6.5” VGA Industrial Monitor with Resistive Touchscreen, Direct-VGA/DP
  - 6.5” VGA 50K Lifetime LED Backlight LCD with Anti-glare Screen and Tempered Glass
  - IP66 Certified Front Panel Protection with True-flat Seamless Design
  - -20 ~ 60°C Wide Operating Temperature
  - Robust Design with SECC Chassis and Aluminum Front Panel
  - Combination RS-232 & USB Interface for Touchscreen Function

- **FPM-7121T**
  12.1” XGA Industrial Monitor with Resistive Touchscreen, Direct-VGA/DP
  - 12.1” XGA 50K Lifetime LED Backlight LCD with Anti-glare Screen and Tempered Glass
  - IP66 Certified Front Panel Protection with True-flat Seamless Design
  - -20 ~ 60°C Wide Operating Temperature
  - Robust Design with SECC Chassis and Aluminum Front Panel
  - Combination RS-232 & USB Interface for Touchscreen Function

- **FPM-7151T**
  15” XGA Industrial Monitor with Resistive Touchscreen, Direct-VGA/DP
  - 15” XGA 50K Lifetime LED Backlight LCD with Anti-glare Screen and Tempered Glass
  - IP66 Certified Front Panel Protection with True-flat Seamless Design
  - -20 ~ 60°C Wide Operating Temperature
  - Robust Design with SECC Chassis and Aluminum Front Panel
  - Combination RS-232 & USB Interface for Touchscreen Function
**Star Product Highlights**

**Control Cabinet PCs**

**UNO-1252G/ 1251G**
- Micro Size DIN-Rail Industrial IoT Gateway
- Intel® Quark / TI Coretex A8 processor with 256MB memory
- 2 x LAN, 2 x USB, 2 x mPCIe, 3 x COM, 3 x CAN, 2 x microSD, 1 x microSIM (UNO-1252G)
- 2 x LAN, 1 x USB, 1 x mPCIe, 2 x COM, 1 x CAN, 1 x microSD, 1 x microSIM (UNO-1251G)
- Programmable OLED display for indicating system status (UNO-1252G)

**UNO-1372G**
- Intel® Atom Quad-Core Small-Size DIN-Rail Controller
- Intel® Atom E3845 1.91GHz processor with 4GB DDR3L memory
- 3 x GbE, 3 x mPCIe, 2 x USB2.0, 1 x USB3.0, 1 x RS-232, 1 x RS-422/485, 1 x VGA, 1 x HDMI, 8 x DI/O, 1 x Line-out, 1 x iDoor
- Exchangeable RTC battery with easily access at top side

**UNO-3382G/3384G**
- Intel® Core™ i7/ Celeron Book Mount Automation Computer
- Intel® 4th Generation Core™ i7/ Celeron processors with 4GB/8GB DDR3L memory
- 2 x GbE, 2 x USB2.0, 2 x USB3.0, 1 x RS-232/422/485, 1 x DP, 1 x HDMI, 2 x mPCIe, 1 x CFast, 2 x iDoor (UNO-3384: 2 x PCI/PCIe)
- Dual hot-swappable HDD/SSD slots with thumb screws for easy maintenance
- Supports DIN-rail, stand, wall and book mounting

**UNO-2272G**
- Intel® Atom™/Celeron Palm-Size Automation Computer
- Intel® Atom™ N2800/ Celeron J1900 Processors up to 2.41 GHz with 2GB DDR3/ DDR3L Memory
- 1 x GbE, 3 x USB 2.0/3.0, 1 x RS-232, 1 x VGA or HDMI, Audio
- Compact fanless design

**Embedded Automation PCs**

**UNO-2362G/ 2372G**
- AMD® Dual Core T40E Small-Size Automation Computer
- AMD® Dual Core T40E 1.0GHz processor with 2GB DDR3 SO-DIMM built-in memory
- 1 x GbE, 4 x USB 2.0, 1 x RS-232, 1 x RS-485, 1 x mPCIe, 1 x DP, 1 x HDMI
- Daisy-chain for Ethernet with auto-bypass protection enabled

**UNO-2483G/2473G**
- Intel® Core™ i7/i3/ Celeron/ Atom™ Regular-Size Automation Computer
- Intel® 4th Gen Core™ i7/i3/Celeron J1900/ Atom™ processors up to 1.9GHz with 4GB/8GB DDR3L built-in memory
- 4 x GbE, 4 x USB 2.0/3.0, 2 x RS-232, 2 x RS-422/485, 3 x mPCIe, 1 x VGA, 1 x HDMI, audio (UNO-2483G)
- Chassis grounding protection

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To stay at the leading edge of Industry 4.0, Advantech’s UNO Series is more than just an embedded automation computer. With their advanced communication capabilities they easily connect to the cloud as intelligent IoT gateways in smart factories. The cloud-enabled embedded IoT Gateway, coming with iDoor technology, not only provides scalable computing power for filed site control but also fully supports different PLCs running divergent protocols by integrating with IoT Software WebAccess/HMI for remote management. With seamless connection, aggregation, data filtering and transmission to the cloud, the micro size and different mounting way of embedded IoT gateway also fit in any control cabinets or equipment without space limitations.
## Star Product Highlights

### PCM-2300MR
- MR4A16B, MRAM, 2MByte
- 2MB MRAM Storage
- Speed 6 MB/Sec

### PCM-27J3AU
- Audio with Mic-in, Line-in/out
- 3-Port Audio Stereo
- mPCIe, 3.5 mm Jack

### PCM-26D2CA
- SJA1000 CANBus, CANOpen, DB9 x 2
- CAN 2.0 A/B
- 1Mbps, 16MHz

### PCM-24S2WF
- Atheros AR9462, 802.11 a/b/g/n 2T2R w/ Bluetooth 4.0
- Atheros AR9462
- 802.11 a/b/g/n 2T2R w/ Bluetooth 4.0

### PCM-24S33G
- 6-band HSPA Cellular Module, GPS, SIM Holder, SMA x 2
- 3.75G HSPA + GPS
- Dual-SIM card holder with switch for redundancy

### PCM-24R1TP
- Intel 82574L, GbE, IEEE 1588 PTP, RJ45 x 1
- 1 port GbE LAN
- IEEE 1588 precision time protocol ready

### PCM-24R2GL
- Intel i350 mPCIe, GbE, IEEE 802.3ab, RJ45 x 2
- 2 port GbE LAN
- Intel i350
- Max. 15.4 DC power output per port

### PCM-24U2U3
- USB 3.0 mPCIe card, USB-A type x 2
- 2 port USB 3.0
- USB A type

### PCM-24R2EI
- Hilscher netX100 FieldBus mPCIe, EtherCAT, RJ45 x 2
- Real-time fieldbus EtherCAT protocol
- Supports Master/Slave

### PCM-26R2EC
- Hilscher netX100 FieldBus mPCIe, EtherCAT, RJ45 x 2
- Real-time fieldbus EtherCAT protocol
- Supports Master/Slave

### PCM-24R2PE
- Intel i350, GbE, PoE IEEE 802.3af, PD, RJ45 x 2
- 2 port PoE (Power Over Ethernet)
- 15.4 DC power output per port

### PCM-24D2R/ PCM-24D2R4
- OXPCIe952 UART, Isolated RS-232, RS-422/485, DB9 x 2
- 2,000 VDC isolation protection
- RTS/CTS/Xon/Xoff flow control

### PCM-24S33G
- 6-band HSPA Cellular Module, GPS, SIM Holder, SMA x 2
- 3.75G HSPA + GPS
- Dual-SIM card holder with switch for redundancy

### PCM-26D2CA
- SJA1000 CANBus, CANOpen, DB9 x 2
- CAN 2.0 A/B
- 1Mbps, 16MHz

### PCM-24D4R2/ PCM-24D4R4
- OXPCIe954 UART, Non-isolated RS-232, RS-422/485, DB37 x 1
- Non-isolation 4 COM ports with expansion cable
- 50 bps – 921.6 kbps serial speed (RS-422/485)

### PCM-26R2EI
- Hilscher netX100 FieldBus mPCIe, EtherNet/IP, RJ45 x 2
- Real-time fieldbus EtherNet/IP protocol
- Supports Master/Slave

### PCM-26R2PN
- Hilscher netX100 FieldBus mPCIe, PROFINET, RJ45 x 2
- Real-time fieldbus PROFINET protocol
- Supports Master/Slave

### PCM-26R2PL
- Hilscher netX100 FieldBus mPCIe, POWERLINK, RJ45 x 2
- Real-time fieldbus POWERLINK protocol
- Supports Slave

### PCM-23U1DG
- Internal Locked USB 2.0 Port for Dongle, USB x 1
- 1 port internal USB 2.0 for security key
- USB A type w/ lock

### PCM-27D24DI
- Digital I/O, Isolated 16DI/8DO, DB37 x 1
- 16DI, 8DO
- 2,500 VDC isolation protection

### PCM-242U2U3
- USB 3.0 mPCIe card, USB-A type x 2
- 2 port USB 3.0
- USB A type

### PCM-23U1DG
- Internal Locked USB 2.0 Port for Dongle, USB x 1
- 1 port internal USB 2.0 for security key
- USB A type w/ lock

### PCM-24U2U3
- USB 3.0 mPCIe card, USB-A type x 2
- 2 port USB 3.0
- USB A type

### PCM-242U2U3
- USB 3.0 mPCIe card, USB-A type x 2
- 2 port USB 3.0
- USB A type
Intelligent Systems and Platforms

Infrastructure of IoT Era

With diverse innovative technologies ranging from cloud computing (industrial servers, video servers), edge computing (fanless, slim, and portable devices), to high-performance embedded systems, Advantech’s Industrial Cloud Services and System Design-to-Order Services (System DTOS) transform embedded systems into intelligent systems equipped with smart, secure, energy-saving features. Advantech’s intelligent systems are designed to satisfy vertical markets in the intelligent transportation, factory automation/machine automation, cloud infrastructure, and intelligent video application sectors.

Industrial Computers

ACP-4020
4U Rackmount Chassis for Half-Size SBCs or ATX Motherboards
- Compact 4U rackmount chassis (348 mm depth)
- Supports 14-slot BP for half-size SBC or ATX/MicroATX motherboard
- Shock-resistant disk drive bay holds 1 internal 2.5” and 2 front-accessible 3.5” drives, and 1 slim optical disk drive
- 2 front-accessible USB 3.0 ports
- Front-accessible system fan
- Built-in intelligent system module for fan control and remote management

ACP-4340
4U Rackmount Chassis with 4 Hot-Swappable Drive Trays for Full-Size SHBs/SBCs or ATX/MicroATX Motherboards
- Supports PICMG backplane with up to 14 slots or ATX/Micro-ATX motherboard
- Shock-resistant disk drive bay holds four hot-swappable 3.5” and 2.5” SAS/SATA disk trays, 1 slim optical disk drive, and 1 2.5” internal drive
- 2 front-accessible USB 3.0 ports
- Front-accessible system fan
- LED indicators and alarms for system fault detection
- Built-in intelligent system module for fan control and remote management

HPC-7442
4U Rackmount Chassis with up to 8 SAS/SATA HDD Trays for EATX/ATX Motherboards
- Shock-resistant disk drive bay holds 4 hot-swappable 3.5” and 2.5” SAS/SATA disk drives, 1 slim optical disk drive, and 1 3.5” internal drive
- Supports 80 PLUS-certified single/redundant power supply
- Front-accessible system fan
- LED indicators and alarms for system fault detection
- Optional storage upgrade kit with 8 hot-swappable HDD trays

Server-Grade IPCs

ASMB-823
Intel® Xeon® E5 ATX Server Board
- LGA2011 ATX server board with Intel® Xeon® E5-2600 v3 dual processor
- DDR4 2133 MHz RDIMM, up to 192 GB
- 4 PCIe x 16 (Gen 3), 2 PCIe x 8 (Gen 2), and 1 PCIe x 4 (Gen 2) slots
- 9 SATA III and 6 USB 3.0 ports

ASMB-923
Intel® Xeon® E5 EATX Server Board
- LGA 2011 EATX server board with Intel® Xeon® E5-2600 v3 dual processor
- DDR4 2133 MHz RDIMM, up to 256 GB
- 4 PCIe x 16 (Gen 3), 2 PCIe x 8 (Gen 3) and 1 PCIe x 4 (Gen 2) slots
- 10 SATA III and 4 USB 3.0 ports

GPU Server

AGS-923
2U GPU Server with Dual Intel® Xeon® E5 Processors
- Supports NVIDIA Tesla, GRID, Quadro, AMD FirePro, and Advantech DSP cards
- 8 DIMM sockets for DDR4 (ECC) at 2133 MHz, up to 256 GB
- Supports 4 FH/LD double-depth PCIe x 16 expansion cards and 1 FH/LD single-depth PCIe x 8 expansion card
- 8 hot-swappable SATA/SAS HDD bays
- Quad GbE LAN (1 sharing IPMI function) ports
Machine Vision Systems

**AIIS-1200P/U**
- Fanless Vision System with Intel® Celeron® SoC CPU and 2-Channel GigE PoE or 2-Channel USB 3.0 Camera Interface
  - Intel® Celeron® SoC CPU
  - IEEE 802.3af-compliant 2-channel GbE PoE for GigE camera/2-channel controller for USB 3.0 camera
  - Compact and lightweight (less than 0.9)

**AIIS-5410P**
- Fanless Vision System with Intel® Core™ i7/i5/i3 CPU, 4-Channel GigE PoE Camera Interface, and PCI or PCIe Expansion Slot
  - 6th Generation Intel® Core™ i7/i5/i3 BGA4440 processor
  - 4-channel GbE PoE
  - Powered device auto detection and classification

**MODULAR INDUSTRIAL COMPUTER**

**MIC-7500 + i-Module**
- Compact Fanless System with 6th Generation Intel® Core™ I Processor
  - 6th Generation Intel® Core™ i7/i5/i3 BGA type CPU with QM170 chipset
  - Supports MIC-75 series i-Modules, isolation COM modules, and 32-bit GPIO modules

**TRANSPORTATION SYSTEMS**

**ITA-1711**
- Fanless AFC System with Intel® Celeron™ J1900 Processor, Dual GbE, and Dual Display Ports
  - Wide 9 ~ 36 Vc input range
  - 2 GbE, 6 USB 2.0, and 10 COM ports
  - Supports RS-232/422/485 with serial port automatic flow control
  - Up to 4 GB of DDR3 memory, with optional NVRAM
  - Supports one 2.5" HDD

**ITA-2230**
- EN50121-4-Compliant 2U Fanless System with 3rd Gen Intel® Core™ i Processor
  - Intel® Core™ i7 processor with 4 GB of DDR3 memory
  - Compliant with EN 50121-4 railway EMC standards
  - Supports 3 ITAM modules, 1 PCI104, and 1 miniPCIe slot for expansion
  - Wide operating temperature range (-25 ~ 60°C)
  - Supports single/dual power module

**ITA-5831**
- EN 50155-Certified Compact Fanless System with 6th Generation Intel® Core™ i Processor
  - Intel® Quad-Core™ i7 processor with 8 GB of DDR4 memory
  - Satisfies EN 50155 Tx (-40 ~ 70°C) and IEC 61373 body mount Class B standards
  - Compliant with EN 50121-3-2 rolling stock EMC standard
  - Ruggedized communication and power port connectors (M12)
  - Supports easy swap storage and I/O modules

**INDUSTRIAL MOTHERBOARDS**

**AIMB-705**
- LGA1151 6th Generation Intel® Core™ i7/i5/i3/Pentium ATX with DVI/VGA, DDR4, SATA III, USB 3.0, and 6 COMs
  - Intel® 6th Generation Core™ i7/i5/i3/Pentium® processor
  - Dual-channel (non-ECC) DDR4 at 1866/2133 MHz, up to 32GB
  - Supports VGA and DVI outputs

**AIMB-785**
- LGA1151 6th Generation Intel® Core™ i7/i5/i3/Celeron® ATX with Triple Display, DDR4, and SATA III
  - Intel® Core™ i7/i5/i3/Celeron®-Pentium® processor with Q170 chipset
  - 4 DIMM sockets support DDR4 at 1866/2133 MHz, up to 64 GB
  - Supports triple displays (VGA/2 DVI-D) and dual GbE LANs

**ASMB-585**
- LGA 1151 Intel® Xeon® E3 v5/6th Generation Core™ Micro ATX Server Board with 4 DDR4, 1 PCIe x 16, 3 PCIe x 4, Quad LANs, and USB 3.0
  - Micro ATX Server Board with Intel® Xeon® E3-1200 v5/Core™ i5/i7 processor
  - 4 DIMM sockets support DDR4 (ECC/non-ECC) at 2133/1866/1600 MHz, up to 64 GB

**SINGLE SLOT BOARD COMPUTERS**

**PCE-3029**
- LGA 1151 6th Generation Intel® Core™ i7/i5/i3 Half-Size SHB with PCIe 3.0, Dual Independent Displays, Dual GbE LANs, SATA III, m-SATA, and USB 3.0
  - Compliant with PICMG 1.3
  - Intel® Core™ i7/i5/i3/Celeron®-Pentium® processor with H110 chipset
  - Dual-channel (non-ECC) DDR4 at 1866/2133 MHz, up to 32 GB

**PCE-5029**
- LGA 1151 6th Generation Intel® Core™ i7/i5/i3 PICMG 1.3 SHB with DDR4, Dual LANs, USB 3.0
  - Intel® 6th Core™ i7/i5/i3 processor with H110 chipset
  - Dual-channel (non-ECC) DDR4 at 1866/2133 MHz, up to 32 GB
  - Supports PCIe 3.0, USB 3.0, and SATA 3.0

**PCE-5129**
- LGA 1151 6th Generation Intel® Core™ i7/i5/i3 SHB with DDR4, Dual LANs, USB 3.0, M.2, Triple Displays, and AMT
  - Intel® Core™ i7/i5/i3 LGA1151 processor with Q170 chipset
  - Dual-channel (non-ECC) DDR4 at 1866/2133 MHz, up to 32 GB
  - Supports PCE 3.0, M.2, USB 3.0, SATA3.0, and SW Raid 0/1/5/10
Industrial Communication

Simplify the Way You Connect

Advantech’s Industrial Communication products draw on over 20 years of experience to provide reliable wired and wireless communication (3G, GPRS, and WLAN) for mission critical applications. These products include: Industrial Ethernet Switches, Industrial Wireless AP/Client, Media Converters, Serial Device Servers, Cellular IP Gateways, and Modbus Gateways. They are also capable of securely transmitting critical and sensitive information, remotely monitoring and controlling networked devices and emphasizing high communication capabilities for industrial applications.

WebAccess/NMS
Newwork Management System
- Cross Web Browser Compatible
- Online Google map and offline OpenStreetMap support
- Supports all Advantech Ethernet-based products
- Automatically generated topology
- PoE, ring, wireless, cellular connection indication

EKI-1331/1334
Industrial HSPA+ Gateway/Router
- Universal five-band UMTS/HSPA+ 850/900/1800/1900/2100 MHz
- Protocols converting between serial and Ethernet: Modbus RTU & TCP
- Provides NAT and VPN
- EMC Level III for industrial standards

EKI-6331AN/6332GN
802.11N WiFi AP/Bridge/Client
- Compliant with IEEE 802.11 a/n and 802.11 b/g/n
- High output power
- Fast roaming
- IP55 waterproof

EKI-1521/1522/1524/CI/I
1-port/2-port/4-port RS-232/422/485 Serial Device Server
- 2 x 10/100 Mbps Ethernet ports for LAN redundancy
- VCOM, TCP server, TCP Client, UDP and RFC2217 operating modes
- I models support a wide operating temperature; CI models support isolation and wide operating temperature

EKI-1361/1362
1/2-port RS-232/422/485 to 802.11b/g/n WLAN Serial/Mobus Device Servers
- Links any serial device to an IEEE 802.11b/g/n network
- Provides 1/2 x RS-232/422/485 port
- SECures data access with WEP, WPA, and WPA2
- Supports LAN Ad-Hoc and Infrastructure modes
- MB version supports Modbus TCP and Modbus RTU

EKI-1528I/CI-DR
8-port RS-232/422/485 Din Rail Serial Device Server
- 2 x 10/100 Mbps Ethernet port for LAN redundancy
- VCOM, TCP server, TCP Client, UDP and RFC2217 operating mode
- I models support a wide operating temperature; CI models support isolation and wide operating temperature

Industrial Wireless AP/ Clients
Serial Device Servers
WLAN Device Servers
Modbus Gateways
**Star Product Highlights**

**EKI-7428G-4CI**
24G+4G Combo ports Industrial Rackmount Managed Switch
- 40 ports for Fast Deployment
- Management: SNMP v1/v2c/v3, WEB, Telnet, Standard MIB
- -40 ~ 70°C wide-range operating temperature
- Dual 12-48 Vdc power input
- Redundancy: Gigabit X-Ring Pro (ultra high-speed recovery time < 20 ms), RSTP/STP (802.1w/1D), MSTP

**EKI-7710E/G-2C**
8FE / 8G +2G Combo Ports / 8FE / 8G + 4G SFP Ports Industrial Managed Switch
- 8 Gigabit ports + 2 Gigabit Copper/SFP combo ports (EKI-7710G)
- 8 Fast Ethernet / Gigabit ports + 4 Gigabit SFP ports (EKI-7712G)
- 10M function enables fast deployment

**EKI-7712E/G-4F**
16FE / 16G + 4G SFP Ports Industrial Managed Switch
- 16 Fast Ethernet / Gigabit ports + 4 Gigabit SFP ports
- Redundancy: X-Ring Pro (recovery time < 20 ms)
- 10M function enables fast deployment

**EKI-7428G-4CPI**
24G PoE ports +4G Combo ports Industrial Rackmount Managed Switch
- 24 x IEEE 802.3 af/at PoE Gigabit ports + 4 x Gigabit Copper/SFP combo ports
- 10M for Fast Deployment
- Management: SNMP v1/v2c/v3, WEB, Telnet, Standard MIB
- -40 ~ 70°C wide-range operating temperature
- Dual 48 Vdc power input

**PROFINET or EtherNet/IP supporting Industrial Ethernet Switches**

**EKI-5500/5600-EI**
Entry-Level Managed Switch Support EtherNet/IP Protocol
- EtherNet/IP protocol
- EDS files / AOI available
- FactoryTalk® compliant Faceplate
- Dual 12 ~ 48 VDC power input and P-Fail relay
- EMS level 3 protection

**EKI-5500/5600-PN**
Enter-Level Managed Switch Support PROFINET Protocol
- Real-time PROFINET protocol
- Media Redundancy (MP/M) Master/Salve
- GSD files available
- -40 ~ 70°C wide-range operating temperature
- IEEE 802.3az Energy Efficient Ethernet (EEE)

**Viewable Unmanaged Ethernet Switches**

**EKI-9512/P 9516/P**
EN-50155 M12 Managed Switch
- eMark certified
- Port-based QoS for deterministic data transmission
- Dual power input
- IEEE 802.3az Energy Efficient Ethernet (EEE)
- -40 ~ 75°C operating temperature range
- Dual Power input
- Communicates with SCADA software via Modbus/TCP

**EKI-9228G**
IEC-61850 Industrial Rackmount Managed Switch
- 16 x Gigabit RJ-45 ports + 4 Gigabit x SFP ports + 8 x Gigabit Combo ports
- SFP socket for Easy and Flexible Fiber Expansion
- Redundancy: Gigabit X-Ring (ultra high-speed recovery time < 20 ms), RSTP/STP (802.1w/1D), MSTP
- Dual wide range AC/DC power input

**Industrial PoE Switches**

**EKI-7428G-4CPI**
24G PoE ports +4G Combo ports Industrial Rackmount Managed Switch
- 24 x IEEE 802.3 af/at PoE Gigabit ports + 4 x Gigabit Copper/SFP combo ports
- 10M for Fast Deployment
- Management: SNMP v1/v2c/v3, WEB, Telnet, Standard MIB
- -40 ~ 70°C wide-range operating temperature
- Dual 48 Vdc power input

**EKI-7710E/G-2C**
8FE / 8G +2G Combo Ports / 8FE / 8G + 4G SFP Ports Industrial Managed Switch
- 8 Gigabit ports + 2 Gigabit Copper/SFP combo ports
- 8 Fast Ethernet / Gigabit ports + 4 Gigabit SFP ports
- 10M function enables fast deployment
- IP30
- Management: SNMP v1/v2c/v3, WEB, Telnet, Standard MIB, Private MIB

**Viewable Unmanaged Ethernet Switches**

**EN50155 Railway Switches**

**EKI-9512/P 9516/P**
EN-50155 M12 Managed Switch
- eMark certified
- Port-based QoS for deterministic data transmission
- Dual power input
- IEEE 802.3az Energy Efficient Ethernet (EEE)

**ekm 528 / 529P/5624P**
In-Vehicle Viewable Unmanaged Switch
- eMark certified
- Port-based QoS for deterministic data transmission
- Dual power input
- IEEE 802.3az Energy Efficient Ethernet (EEE)
- -40 ~ 75°C operating temperature range
- Dual Power input
- Communicates with SCADA software via Modbus/TCP

**ekm 9228G**
IEC-61850 Industrial Rackmount Managed Switch
- 16 x Gigabit RJ-45 ports + 4 Gigabit x SFP ports + 8 x Gigabit Combo ports
- SFP socket for Easy and Flexible Fiber Expansion
- Redundancy: Gigabit X-Ring (ultra high-speed recovery time < 20 ms), RSTP/STP (802.1w/1D), MSTP
- Dual wide range AC/DC power input
Industrial Networking

Seamless Data Connectivity from the Network Edge to the Network Core

The Advantech B+B SmartWorx line of industrial networking products provides robust, reliable, sophisticated connectivity all the way from the network edge to the network core. They transfer data between copper, fiber and wireless connection and translate multiple generations of data networking protocols, whether the data comes from legacy serial and Modbus devices or the latest Industrial Internet of Things equipment. Where wired connections are threatened by harsh environments, Advantech B+B SmartWorx provides ruggedized devices that will keep your data flowing and isolated devices that will stop electrical transients (surges) cold. When wired connectivity is impractical, we provide a host of industrial grade wireless solutions to ensure data can still be transmitted and received wherever it’s needed. Whatever your data networking challenges may be, we can provide the answers.

Star Product Highlights

1. Fiber Media Conversion
   - MiniMc series
     - Miniature Ethernet Fiber Media Converters
     - Compact, simple and flexible
     - 10/100 or 10/100/1000 Mbps
     - Fixed fiber (MM850 SC, SM1310 SC) and SFP
     - Link Fault Pass Through for remote troubleshooting
     - Powering options: DC jack, terminal block or USB/PoE
     - -40 to 80°C wide operating temperature ("IE" models)
   - PoE/PoE Giga MiniMc
     - PoE Switching Media Converter
     - Rugged, standalone, compact enclosure
     - IEEE 802.3af PoE (15.4W) / IEEE 802.3at PoE+ (25.5W)
     - 10/100/1000 Mbps
     - Fixed fiber and SFP
     - PoE Reset on Fiber LOS (configurable)
     - Link Fault Pass Through for remote troubleshooting
   - IE Multiway
     - Optical Gigabit Ethernet Demarcation
     - Multi-function (Gigabit switch, 1+1 protection, dual copper to fiber media/mode converter)
     - OAM, Vlans, Q-in-Q and SNMP management
     - Extended temperature rating (-40 to +80°C)
     - 5-24Vdc or 48Vdc (terminal block)

2. Wireless Sensing
   - Wzzard series
     - Wireless Networking I/O & Sensors – Intelligent Sensing Platform
     - Ultra low power 802.15.4e SmartMesh IP technology
     - Rugged, IP66, fiber reinforced polyester PBT enclosure
     - MQTT and JSON IoT protocol to application platform
     - UL Class 1/Division 2 for hazardous locations

3. USB Conversion
   - 485USBTB-2W & 485USB9F-2W
     - In-line USB to RS-485 Converters
     - High retention USB connectors
     - Perfect for field service applications
     - Small – fits easily into any laptop bag
     - USB port powered
   - UH104 & UH401
     - 4-port USB 2.0 Hub & 1-port 4KV Isolator
     - High retention USB connectors
     - Ultra-compact
     - -40 to 80°C wide operating temperature
     - 15 kV ESD protection

4. Serial Conversion
   - 485DRCI, 485OPDRI & 232OPDRI
     - Triple isolated Serial Converter & Repeaters
     - Three-way 2KV optical isolation (input, output, power)
     - Wide -40 to +80°C temperature range
     - UL Class 1/Division 2 for hazardous locations
     - 10-48 Vdc input power range

5. LTE Routers & Gateways
   - SL 30x series
     - SmartSTART Routers & Gateways
     - LTE/UMTS/HSPA+/UMTS/HSDPA/GPRS/EDGE
     - Wi-Fi (optional)
     - Two SIM card holders
     - VPN and Python support
     - Low-power mode
     - UL Class 1/Division 2 for hazardous locations
   - SR 3xx series
     - SmartFLEX Routers & Gateway
     - LTE/UMTS/HSPA+/UMTS/HSDPA/GPRS/EDGE
     - Wi-Fi (optional); GPS receiver (wired version not included)
     - Two SIM card holders; + MicroSD card holder
     - PoE PSE (optional)
     - VPN and Python support
     - Low-power mode
     - UL Class 1/Division 2 for hazardous locations

6. Serial Conversion
   - 485DRCI, 485OPDRI & 232OPDRI
     - Triple isolated Serial Converter & Repeaters
     - Three-way 2KV optical isolation (input, output, power)
     - Wide -40 to +80°C temperature range
     - UL Class 1/Division 2 for hazardous locations
     - 10-48 Vdc input power range
Control IPCs

Scalable PC-based Automation Controllers for Smart Factory

Advantech’s APAX series is designed for industry 4.0, which leverages embedded computing technology and modular system design. It features flexible I/O expansion, real-time I/O control and Fieldbus, network capability through various interfaces.

The APAX series can bridge Operational Technology (OT) and Information Technology (IT) together by providing an integrated control system and open environment that users can add their knowledge and software, such as database or MES interface to it.

Control IPCs

APAX-5580
Embedded Control IPC
- Intel® Haswell Core i7/i3/Celeron processors up to 1.7GHz with 4GB DDR3L memory
- 2 x mPCIe interfaces for telecommunication
- One key operating system recovery
- Supports up to 8 local and 32 remote COM ports
- 2 x LAN, 2 x USB3.0, 1 x VGA, 1 x SD slot, 1 x COM port and 2 x mPCIe slots

APAX-5580CDS
CODESYS-ready Control Platform
- Supports CODESYS V3.5 RTE
- Onboard Fieldbus support: EtherCAT, PROFINET, Ethernet/IP
- PLC-graded RTC battery for 10 years
- Supports up to 8 local and 32 remote COM port
- Supports max 32 APAX I/O expansion, up to 768 digital I/O, 192 analog input

APAX-5070/5071/5072
Fieldbus Communication Coupler
- APAX-5070 supports 1ms Modbus response time
- Flexible Modbus mapping table
- Supports UDP data streaming and event alarms

PCIe Modules for APAX-5580

APAX-5435
iDoor Interface Module
- Supports Fieldbus and telecommunication by Advantech iDoor Technology
- Supports mSATA for data storage

APAX-5490
RS-232/422/485 Module
- Change RS-232/422/485 mode by hardware switch
- Auto flow control in RS-485 mode
- Isolation protection

APAX-5430
SATA HDD Module
- SATA I/II/III 2.5” HDD/SDD
- Supports RAID 0/1

APAX I/O Modules

APAX-5090
Communication Module by Local Bus
- 4 x RS-232/422/485 ports
- Up to 32 visual COM port with APAX-5580
- Supports distributed topology with APAX bus

APAX-5017H
12-ch High Speed Analog Input Module
- Voltage and current inputs including ±10V and 4~20mA
- Each channel can be configured with different input types and ranges
- 100/1000 sampling rate per channel

APAX-5080
4/8-ch High Speed Counter Module
- 5 counter modes: Up, Up/Down, Pulse/Direction, A/B phase, Frequency from 0.1Hz-1MHz
- 4 x DI channels for counter gate inputs
- 4 x DO channels for alarm outputs
TagLink-enabled IIoT Data Gateway

Powering Smarter and Safer Data Acquisition Tasks

TagLink is software dedicated to Industrial IoT applications. The name represents the two key features necessary for making data transition easier. ‘Tags’ are for users to make customized and advanced settings changes, while ‘Link’ means the software makes the data link between edge devices and the cloud become smarter and safer.

With integrated applications for protocols and software, and the open SDK/API, TagLink is dedicated technology for future IIoT Data Gateway applications. Currently Advantech has two IIoT Data Gateways with TagLink: the ADAM-3600 series with 20~50 local I/O points for Oil, Gas and Water industries, and the small but robust ECU-1152 for Power and Energy applications.

Multi-protocol DA&C System

ADAM-3600-C2G
8 AI / 8 DI / 4 DO / 4-Slot Expansion, 2 x LAN, 3 x COM and Dual Wireless
- Supports Industrial Protocols: DNP3, IEC-60870-5-104, Modbus
- Supports IT Protocols OpenVPN / HTTP/HTTPS (RESTful) / WASCADA
- TI Cortex A8 600MHz CPU with DDR3L 256MB RAM
- RT-Linux OS with TagLink realtime database
- Onboard IO- 8AI / 8DI / 4DO with 4-Slot I/O expansion flexibility
- Internal 2 x Mini-PCIe Interface for Dual Wireless Networking
- Certified Wireless Solution Zigbee / Wi-Fi / 3G / 4G / GPRS / GPS
- IEC61131-3 & C programming language SDK support
- Wide operation temperature -40~70°C
- Supports iCDManager for remote connectivity diagnosis
- TagLink Studio for off-line configuration and remote deployment and on-line monitoring
- SQLite database for data logger on SD card

Expansion I/O Modules

ADAM-3600 Series I/O Expansion Modules
ADAM-3600 is with 20 points on-board IO, and 4-slot for IO expansion modules. It provides versatile IO combination without occupying extra space in the cabinet.
- ADAM-3617 4-ch Analog Input Module
- ADAM-3618 4-ch Thermocouple Module
- ADAM-3624 4-ch Analog Output Module
- ADAM-3651 8-ch Digital Input Module
- ADAM-3656 8-ch Digital Output (Sink type) Module

Power & Energy Automation Gateway

ECU-1152
4 DI / 4 DO, 2 x LAN, 6 x COM, and Wireless
- Supports Industrial Protocols: DNP3, IEC-60870-5-104, Modbus
- Supports IT Protocols OpenVPN / HTTP/HTTPS (RESTful) / WASCADA
- TI Cortex A8 800MHz Processor with DDR3L 512MB RAM
- 2 x 10/100MB LAN, 6 x RS-232/485 COM, 4 x DI, 4 x DO
- 1 x Mini-PCIe for 3G/GPRS/GPS
- Supports RT-Linux OS, with TagLink realtime database
- Wide operation temperature -40~70°C
- TagLink Studio for off-line configuration and remote deployment and on-line monitoring
- SQLite database for data logger on SD card
IoT Wireless I/O Modules

Providing IoT Wireless Smart Devices from I/O to Sensor

As wireless applications become a more common and preferred solution, Advantech has introduced a variety of wireless remote I/O devices to the market to become an important IoT enabler. With the Wi-Fi-based WISE-4000 series and the WSN-based ADAM-2000 series, users are free from worrying about a wired layout and extra associated costs, for a more flexible deployment. Furthermore, the WISE-4000 series brings an authentic IoT experience to the market. By realizing an “Anytime, Anywhere” solution, users can retrieve data via mobile devices and can now configure modules and troubleshoot from mobile devices to save time.

IoT Wireless I/O Modules

WISE-4050
4-ch Digital Input and 4-ch Digital Output
IoT Wireless I/O Module
- 2.4 GHz IEEE 802.11b/g/n WLAN
- Protocols: Modbus/TCP, TCP/IP, UDP, DHCP, HTTP
- RESTful web API in JSON format for IoT integration
- Supports both wireless client and server modes that can be accessed directly without AP or router
- Supports file-based cloud storage and local logging
- Supports mobile device web configuration with HTML5
- 10~30VDC power with reverse protection

WISE-4060
4-ch Digital Input and 4-ch Relay Output
IoT Wireless I/O Module
- 2.4 GHz IEEE 802.11b/g/n WLAN
- Protocols: Modbus/TCP, TCP/IP, UDP, DHCP, HTTP
- RESTful web API in JSON format for IoT integration
- Supports both wireless client and server modes that can be accessed directly without AP or router
- Supports file-based cloud storage and local logging
- Supports mobile device web configuration with HTML5
- 10~30VDC power with reverse protection

WISE-4012
4-ch Universal Input and 2-ch Digital Output
IoT Wireless I/O Module
- 2.4 GHz IEEE 802.11b/g/n WLAN
- 4-ch UI: 0~10V, 0~20mA, 4~20mA, digital input
- RESTful web API in JSON format for IoT integration
- Web Services: REST, HTML5, JavaScript, JSON
- Supports both wireless client and server modes that can be accessed directly without AP or router
- Supports file-based cloud storage and local logging
- Supports mobile device web configuration with HTML5

WISE-4012E - IoT Developer Kit
6-ch Universal Input/Output IoT Wireless I/O Module for IoT Developer
- 2.4 GHz IEEE 802.11b/g/n WLAN
- 2-ch 0~10V Input, 2-ch DI, and 2-ch Relay Output
- Includes WebAccess with demo project for developer
- Includes extension board for simulating sensor status
- Includes micro USB cable for power input
- Supports both wireless client and server modes that can be accessed directly without AP or router
- Supports mobile device web configuration

M2M (Machine to Machine) I/O Modules

ADAM-2520Z/2510Z
Wireless Modbus RTU Gateway
- 2.4 GHz IEEE 802.15.4 compliant RF
- Outdoor range up to 1,000 m
- Supports battery input with 2 x AA alkaline batteries
- Supports Modbus RTU protocol
- Network capacity with 32 nodes (routers & end devices)
- Supports Star/ Tree/ Mesh Network Topologies

ADAM-2031Z
Wireless Temperature & Humidity Sensor Node
- 2.4 GHz IEEE 802.15.4 compliant RF
- Low duty cycle and low power consumption
- Outdoor range up to 110 m
- Supports battery input with 2 x AA alkaline batteries
- Built-in temperature/ humidity sensor input

ADAM-2051Z/2051PZ
Wireless 8-ch Digital Input Node with Power Amplifier
- 2.4 GHz IEEE 802.15.4 compliant RF
- Outdoor range up to 1,000 m
- Supports battery input with 2 x AA alkaline batteries
- 10KΩ input resistance

ADAM-2017PZ
Wireless 6-ch Analog Input Node with Power Amplifier
- 2.4 GHz IEEE 802.15.4 compliant RF
- 6-ch differential input: ±150mV, ±500mV, ±1V, ±5V, ±10V, ±20mA, 0~20mA, 4~20 mA
Remote I/O Modules

Providing Remote I/O Connectivity with RS-485 and Ethernet, with More Options

When "Internet of things" is no longer just a slogan, Advantech’s versatile products boost clients’ production performance by meeting different application needs. With a typical automation network using RS-485 to transmit serial signals the ADAM-4000 & robust ADAM-4100 series, and the designed for harsh environments. Robust RS-485 based ADAM-4100 series, Ethernet based ADAM-6000 series and Daisy-chain Ethernet based ADAM-6200 series, managing field devices becomes easier and the field site status can be identified, tracked and altered remotely. There are over 1 million ADAMs in the world, in various industries such as industrial automation, environmental and facility management, intelligent transportation system, and so on and their record of being highly efficient devices is well proven.

Daisy-chain Ethernet I/O Modules

ADAM-6200 Series
- Daisy chain connection with auto-bypass protection
- Auto-calibration without providing any input
- Web language support: HTML5, Java Script, XML
- Support GCL and Peer-to-Peer
- Group configuration capability to set up multiple modules at one time
- DI/O LED Indication
- Safe value settings for DO or Relay failure

Module Selection
Isolated Analog I/O Modbus TCP Module
- ADAM-6217: 8-ch AI
- ADAM-6224: 4-ch AO & 4-ch DI
Isolated Digital I/O Modbus TCP Module
- ADAM-6250: 8-ch DI & 7-ch DO
- ADAM-6251: 16-ch DI
- ADAM-6256: 16-ch DO
Relay Output Modbus TCP Module (with DI)
- ADAM-6260: 6-ch RL
- ADAM-6266: 4-ch RL & 4-ch DI

Real-time Ethernet I/O Modules

ADAM-6100 Series
- Daisy chain connection functionality
- Supports PROFINET or Ethernet/IP protocol
- Coupler-free design
- GSD, LSK and EDS file ready for network commissioning
- 2,500 Vdc isolation protection

Module Selection
(profinet:pn, ethernet/ip:ei)
Isolated Analog I/O Module
- ADAM-6117/EI/PN: 8-ch AI
Relay Output Module
- ADAM-6160/EI/PN: 6-ch RL
Isolated Digital I/O Module
- ADAM-6150/EI/PN: 8-ch DI & 7-ch DO
- ADAM-6151/EI/PN: 16-ch DI
- ADAM-6156/EI/PN: 16-ch DO

Smart Ethernet I/O Modules

ADAM-6000 Series
- Modbus TCP/IP, UDP and HTTP protocol
- Embedded web server
- Data stream and event trigger
- GCL and Peer-to-Peer
- Support C#.NET, VB.NET

Module Selection
Isolated Analog I/O Modbus TCP Module
- ADAM-6017: 8-ch AI & 2-ch DO
Isolated Digital I/O Modbus TCP Module
- ADAM-6050: 12-ch DI & 6-ch DO
Relay Output Modbus TCP Module
- ADAM-6060: 6-ch DI & 6-ch Relay
- ADAM-6066: 6-ch DI & 6-ch Power Relay

RS-485 I/O Modules

ADAM-4000/4100 Series
ADAM-4000
- Supports Modbus RTU protocol
- Over Voltage Protection: ±35 Vdc
- Isolation Voltage: 3000 Vdc
ADAM-4100
- Wide operating temperature: -40 ~ 85°C (-40 ~ 185 °F)
- 1KV surge, 3KV EFT, 8KV ESD Protection
- High common mode voltage: 200Vdc
- Burn-out Detection

Module Selection
Isolated Analog I/O Module
- ADAM-4117: Robust 8-ch AI
- ADAM-4024: 4-ch AO & 4-ch DI
Isolated Thermocouple/RTD Input Module
- ADAM-4118: Robust 8-ch TC
- ADAM-4015: 6-ch RTD module
Isolated Digital I/O Module
- ADAM-4051: 16-ch DI
- ADAM-4055: 8-ch DI & 8-ch DO
Power & Energy Automation

Ensure Reliable P&E Automation with IEC 61850-3 Compliant Products

Advantech’s new product line for the power and energy market features a range of devices developed to provide the best solutions in this modern marketplace. Advantech’s IEC 61850-3 compliant computers, extension cards and gateway products are specifically designed to meet the critical requirements of power and energy applications. The powerful ECU-4000 and UNO-4600 series automation computers are primarily designed for use in smart substations. The ECU-1152 and 4552, designed for renewable energy situations, have built in Taglink software which enables them to act as intelligent power automation gateways.

P&E Automation Computer

**ECU-4784**
TUV IEC-61850-3 Certified Power Automation Computer with Intel Haswell Core i7 Processor and I/O Expansion Slots
- More processor for selection: Intel® Haswell Core i7 4650U/Core i7 4100U/ Celeron 2980U/ Ivy Bridge i7 3612QE
- 8 x 10/100/1000MB LAN, 2 x RS-232- and 8 x RS-232/422/485 COM
- 2 x I/O Expansion Slots
- Supports iCDManager/ VT/D/ AMT/ TPM

**ECU-4674**
IEC-61850-3 Compliant Power Automation Computer with Intel Atom N2600 Processor and PCI-104 Expansion Slot
- Intel® Atom™ N2600 1.6GHz Processor
- 2 x 10/100/1000MB, 6 x 10/100MB LAN, 2 x RS-232, 16 x RS-232/485 COM
- 8 x Isolated Di, 8 x Isolated DO, 1 x IRIG-B, 1 x PCI-104 Expansion Slot
- Supports iCDManager function

**UNO-4673A/4683**
IEC-61850-3 Certified Power Automation Computer with Intel® Atom™ D510/ Core i7 Processor and I/O Expansion Slots
- Intel® Atom™ D510 1.66 GHz Processor (UNO-4673A)/ Intel® Core i7 2.0 GHz Processor (UNO-4683)
- 2 x 10/100/1000MB, 4 x 10/100MB LAN, 2 x RS-232/422/485 COM
- 3 x I/O Expansion Slots

P&E Automation Extension Cards

**ECU-P1524PE**
Gigabit Base Ethernet Card with HSR/PRP Protocol for ECU-4784
- 2xSFP(1000Mbps Base-X) Ethernet Port
- 2xSFP(HSR/PRP Protocol, Jumper for selection)
- Operating Temperature: -25~ 70°C

**ECU-P1761**
4 x DI, 4 x Relay Output and 1 x IRIG-B Card for ECU-4784
- 4 x Isolated Digital Input (Wet contact)
- 4 x Isolated Relay Output (Form C)
- 1 x IRIG-B(BCN)
- Operating Temperature: -25~ 70°C

**UNOP-1514C/RE/PE**
4 x Fiber Optic/RJ-45/SFP Ethernet Card for ECU-4784/UNO-4673A/4683
- 100MB Base-FX, Up to 2km, 4 x SC type Fiber (1514C)
- 10/100/1000MB RJ-45 type (1514RE)
- 1000Mbps SFP type (1514PE)
- Operating Temperature: -20~ 70°C

P&E Automation Gateways

**ECU-1152**
Power Automation Gateway with Cortex A8 Processor, 2xLAN, 6xCOM, and Wireless Communication on-board DI/DO and Wireless
- TI Cortex A8 800MHz Processor
- 2x10/100MB LAN, 6xRS-232/485 COM
- 1x Mini-PCIe for 3G/GPRS/4Q/WiFi Wireless
- Modbus, DNP3/IEC-60870 Protocol
- Support RT-Linux OS, TagLink Software

**ECU-4552**
Power Automation Gateway with Cortex A8 Processor, 4xLAN, 10xCOM and on-board DI/DO
- TI Cortex A8 800MHz Processor
- 4x10/100MB LAN, 10xRS-232/485 COM, 24DI, 4DO
- 1x Mini-PCIe(Reserved)
- Modbus, DNP3, IEC-60870 Protocol
- Support RT-Linux OS, TagLink Software
Machine Automation

Integrated Soft Computing to Enable Intelligent Machines

Advantech developed its own SoftMotion control and GoE (GigE Vision offload engine) and uses the FPGA (Field Programmable Gate Array) and DSP (Digital Signal Processing) as the core-computing hardware platform. Advantech’s motion control card and frame grabber series use Ethernet-based EtherCAT and GigE Vision technologies to provide the best performance PC-based solutions in machine automation. Meanwhile, our team not only develop cards, but also provide SRPs (Solution Ready Package) based on computing platforms to fulfill the demands from SI partners and end customers.

EtherCAT Solutions

**PCI-1203**
EtherCAT Master PCI Card
- Supports up to 32 axis and huge I/O points by cycle time = 500us
- Integrated Advantech Common Motion SDK for user programming
- Diagnostics for fast error handling

**ADAM-5000/ECAT**
4-slot Distributed High Speed I/O System for EtherCAT
- Complete D/I/O, A/I/O and Encoder modules support
- Supports EtherCAT Distributed Clock (DC) mode and SyncManager mode
- Compatible with Advantech Common Motion SDK

Motion Control PCI Cards

**PCI-1245L/ 1245LIO/ 1245E/ 1285E**
Basic/Economic 4/8-axis Stepping and Servo Motor Control PCI Card
- P2P/Linear interpolation/Homing
- Extra 16 x DI /16 x DO extension (PCI-1245LIO) (NEW)
- Path table & Path DO (PCI-1245E/85E) (NEW)

**PCI-1245/ 1265/ 1285**
Standard SoftMotion 4/6/8-axis Stepping and Servo Motor Control PCI Card
- Precise multi-axis synchronization
- 2/3-axis Arc move (NEW)
- High speed 2D compare trigger (NEW)
- Tangential following
- 8 x DI / 8 x DO / 2 x AI (PCI-1265)
- Functions supported by Economic version

GigE Vision Solutions

**PCIE-1672E/ 1674E**
Dual/Quad Channel, PoE Interface Card
- Intel® server-grade GbE Mac Controller
- PCI Express® x 4 compliant
- PoE power from PCIe slot (Total Max. 18W)
- Powered Device (PD) auto detection and classification
- Supports IEEE 802.3at Auto-Negotiation
- Supports Jumbo frame (9,500 byte) and link aggregation

**PCIE-1172/ 1174**
Dual/Quad Channel, Intelligent GigE Vision Frame Grabber with GoE
- GoE (GigE Vision Offload Engine), FPGA image reconstruction, No packet loss, No CPU workload
- GigE Vision, GENICAM and GENTL Compliant
- AD Hoc, automatic IP configuration
- Direct power from PCIe slot (Total Max. 18W)
- ToE (Trigger over Ethernet)

**Features**
- Ready-to-use Softmotion functions for EtherCAT high axis and huge I/O applications
- Real-Time & No Packet Loss on any computing platform

**Features**
- Softmotion functions for vertical application
- Guarantee deterministic control
- Ready-to-use cables for brand motors
Data Acquisition and Control

Diverse Form Factors to Satisfy All DAQ Requirements

Advantech offers a wide range of industrial data acquisition and control devices with various interfaces and functions. Based on PC technology, from ISA to PCI Express, and signal conditioning to graphical software tools, Advantech’s industrial I/O products are reliable, accurate, affordable, and suitable for diverse industrial automation applications, such as testing and measurement, laboratory operations, machine automation, and production testing. Moreover, Advantech’s latest DAQNavi I/O driver supports Windows 7, 8, 10, and Linux OS, enabling customers to seamlessly integrate Advantech’s data acquisition cards with the latest platforms for improved performance and reduced development time.

PCI Express DAQ Cards

**PCIE-1730**
32-Channel TTL and 32-Channel Isolated DI/O PCI Express Card
- 16-channel TTL DI and 16-channel TTL DO with 5 V compatibility
- 16-channel isolated DI and 16-channel isolated DO with 24 V compatibility
- High-voltage isolation on all isolated DI/O channels (2,500 VDC)

**PCIE-1752/1754/1756**
64-Channel Isolated DI/O PCI Express Card
- PCIE-1752: 64-channel isolated DO
- PCIE-1754: 64-channel isolated DI
- PCIE-1756: 32-channel IDI, 32-channel IDO
- High-voltage isolation on all channels (2,500 VDC)
- Retains output settings and values after system hot resets
- Interrupt handling capacity

**PCIE-1760**
8-Channel Relay and 8-Channel Isolated DI PCI Express Card
- 8-channel isolated DI with programmable digital filter
- High-voltage isolation on input channels (2,500 VDC)
- 2-channel Form C and 6-channel Form A relay output
- 2-channel counter input (PWM output available)

**PCIE-1802**
8-Channel, 24-Bit, 216 kS/s Dynamic Signal Acquisition PCI Express Card
- 8 simultaneously sampled analog inputs, up to 216 kS/s
- 24-bit resolution ADCs with 115 dB dynamic range
- Wide ±0.2 ~ 10 V input range
- Built-in anti-aliasing filter
- Software-configurable 4/10 mA IEPE accelerometer

**PCIE-1840**
125 MS/s, 16-Bit, 4-Channel Digitizer PCI Express Card
- 4 analog inputs, up to 125 MHz, 16-bit resolution
- 500 MHz time-interleaved sampling
- Supports non-stop data streaming
- 2 GB of onboard memory
- Tunable anti-aliasing filter, AC/DC coupled

**PCIE-1810/1816/1816H**
12/16-Bit 16-Channel AI Multi-Function PCI Express Card
- PCIE-1810 & PCIE-1816: 500 KS/s
  - PCIE-1816H: 1 MS/s
- Analog and digital triggers
- Waveform generator for AO
- 24 programmable digital I/O lines
- Two 32-bit programmable counters/timers

**PCI DAQ Cards**

**PCI-1714U/1714UL**
Simultaneous 4-Channel Analog Input PCI Card
- A/D converter for each channel
  - PCI-1714U: 12-bit, 30 MS/s, 4-channel single-ended AI
  - PCI-1714UL: 12-bit, 10 MS/s, 4-channel single-ended AI
- ±30 VDC over-voltage protection

**PCI-1716/L**
250 KS/s, 16-Bit, 16-Channel Multi-Function PCI Card
- 16 single-ended/8 differential/combination analog inputs
- 16-bit A/D converter, up to 250 kHz sampling rate
- Auto-calibration
- 16-channel digital input and 16-channel digital output
- 2 analog output channels (PCI-1716 only)

**PCI-1750U/1756**
32/64-Channel Isolated DI/O Universal PCI Card
- High-voltage isolation on output channels (2,500 VDC)
- Wide ±5 ~ 40 VDC output range
- High-sink current for isolated output channels (200 mA max./channel)
- Current protection for each port
**USB DAQ Modules**

**USB-4711/4716**
150 kS/s, 12-Bit/200 kS/s, 16-Bit
16-Channel Multi-Function USB Module
- 2 analog output channels
- 5V/TTL-compatible DI/O (8 inputs, 8 outputs)
- 1 counter for event counting, frequency measurement, and PWM output
- Lockable USB cable for connection security

**USB-4750**
32-Channel Isolated DI/O USB Module
- 16 isolated DI and 16 isolated DO channels
- 2 isolated counters for event counting and frequency measurement
- Retains last output value after system hot resets
- 2,500 VDC isolation protection

**USB-4761**
8-Channel Relay and 8-Channel Isolated DI USB Module
- 8-channel Form C (SPDT) relay channels
- Relay contact rating 0.25 A @ 250 VAC, 2 A @ 30 VDC
- LED indicators show activated relay
- 2,500 VDC isolation protection

**CompactPCI Systems**

**MIC-3106/3111/3121**
4U CompactPCI System with 2/7 Peripheral Slots
- 2G operational anti-vibration protection
- 2G shipping anti-vibration protection
- Air-tight seal connector for corrosive environments
- Modular design supports hot-swappable components
- Easily exchanged peripheral cards reduce maintenance costs
- Low-noise cooling fan for quiet operation

**PCI/PCIE Communication Cards**

**PCI-1610/1612**
4-Port PCI Serial Communication Card with Surge/Isolation Protection
- PCI-1610: RS-232 port
- PCI-1612: RS-232/422/485 ports
- Optional surge/isolation protection
- Fast data transmission speed, up to 921.6 kbps
- 256-byte FIFOs with advanced management

**PCI-1620/1622**
8-Port PCI Serial Communication Card with Surge/Isolation Protection
- PCI-1620: RS-232 port
- PCI-1622: RS-232/422/485 ports
- Optional surge/isolation protection
- Fast data transmission speed, up to 921.6 kbps
- 256-byte FIFOs with advanced management

**PCIE-1602/1604**
2-Port RS-232/422/485 PCI Express/PCI Communication Card with Isolation
- PCIE-1602: 2 RS-232/422/485 ports
- PCIE-1604: 2 RS-232 ports
- Optional isolation protection for RS-232/422/485
- 256-byte FIFOs with advanced management

**PCIE-1610/1612**
4-Port RS-232/422/485 PCI Express/PCI Communication Card with Isolation
- PCIE-1610: 4 RS-232 ports
- PCIE-1612: 4 RS-232/422/485 ports
- Optional surge protection
- Optional isolation protection for RS-232/422/485
- 256-byte FIFOs with advanced management

**PCIE-1680**
2-Port CAN-bus Universal PCI Communication Card with CANopen Support
- Supports two simultaneous CAN networks
- Fast data transmission speed, up to 1 Mbps
- 16 MHz CAN controller frequency
- Isolation protection of 2,500 VDC
- I/O addresses automatically assigned by PCI PnP
Rugged Portable HMI Tablets

For Intelligent Onsite Management and Inspections

Advantech’s portable HMI products are designed to assist mobile workers with managing onsite factory inspections. Equipped with the latest Intel® chipset and RF technology (WLAN, WWAN, and GPS), Advantech’s rugged tablets enable seamless reliable data transmissions, ensuring workers have constant access to relevant information. The PWS-870 tablet and application-oriented peripherals are built for rough handling in extreme environments and the tablet has been drop-tested at 4ft, and certified to military standard MIL-STD-810G. An extension module with MSR and UHF RFID capabilities can be customized according to requirements. For extended operations, the PWS-870 can be easily removed from the wall docking station with just one hand. Additionally, the universal cover features a handle, stand, bag, and hand strap for hands-free carrying options.

PWS-870

10” 16:9 Fully Rugged Tablet with Fourth Generation Intel® Core™ i Processor

- MIL-STD-810G and IP65 certified, can withstand drops of up to 4 ft.
- 10.1” HD high-brightness, multi-touch, Gorilla Glass panel with digitizer
- Fourth generation Intel® Core™ i processor supports Windows 8
- Built-in 4G LTE, WLAN (802.11 a/b/g/n/ac), BT4.0, and GPS modules with Beidou/GLONASS support
- Hot-swappable battery offers up to 11 hours operation
- Built-in dual cameras, a 1D/2D barcode scanner, and NFC RFID
- Wide array of peripherals including a vehicle docking station, desk docking station, and customizable extension modules

Fully Rugged Tablet

Accessories

Wall Docking Station
- Anti-theft locking mechanism
- Rapid device docking and removal (1 second)
- Equipped with 1 x DC-in, expansion I/O, 2 x USB 3.0, 1 x LAN, and 1 x GNSS port

Desk Docking Station
- Equipped with 1 x DC-in, 2 x USB 3.0, 1 x LAN, 1 x RS-232, and 1 x VGA port
- Secondary battery charger

Multiple Battery Charger
- Stores and charges up to 4 PWS-870 external batteries
- LEDs indicate charge status
- Easy table fixing
- Power input: 19.5V/7.7A

Multi I/O Extension
- Interfaces: USB 3.0 (type A, 5V/0.9A) x 1, RS-232 (D-Sub 9) x 2, 10/100/1000 Ethernet (RJ45) x 1
- Dimensions: 192.2 x 45.2 x 25 mm
- Weight: 140g

UHF RFID Extension
- Interfaces: USB 3.0 (type A, 5V/0.9A) x 1, RS-232 (D-Sub 9) x 2, 10/100/1000 Ethernet (RJ45) x 1
- Dimensions: 192.2 x 45.2 x 25 mm
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External Battery
- Capacity: 14.8V 4080mAh
- IP rating: IP65 with PWS-870
- Dimensions: 141.2 x 106.2 x 17 mm
- Weight: 385g

Universal Cover Package
- Material: Plastic, PVC
- Color: Black
- Dimensions: 305 x 254.2 x 88.4 mm
- Weight: 500g (universal cover, hand strap and shoulder belt)
- Package content: universal cover, hand strap, shoulder belt

MSR & Smart Card Reader Extension
- ISO 7816 PC/SC
- EMV 4.0 Level 1
- Supports 2G memory card, SLE4418, SLE4428, SLE4432, SLE4442, SLE4438, SLE5536, SLE6636, AT88SC1608, AT45D041 card
- MSR (Magnetic Card Reader)
- MagneSafe IntelliHead
- Supports US 7810 & ISO 7811/AAMVA
- Card speed: 6 to 60 ips (15.4 to 12.4 cm/s)
- Triple DES encryption
- DUKPT key management

Star Product Highlights

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### Regional Service & Customization Centers

<table>
<thead>
<tr>
<th>China</th>
<th>Taiwan</th>
<th>Netherlands</th>
<th>Poland</th>
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### Worldwide Offices

#### Greater China

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