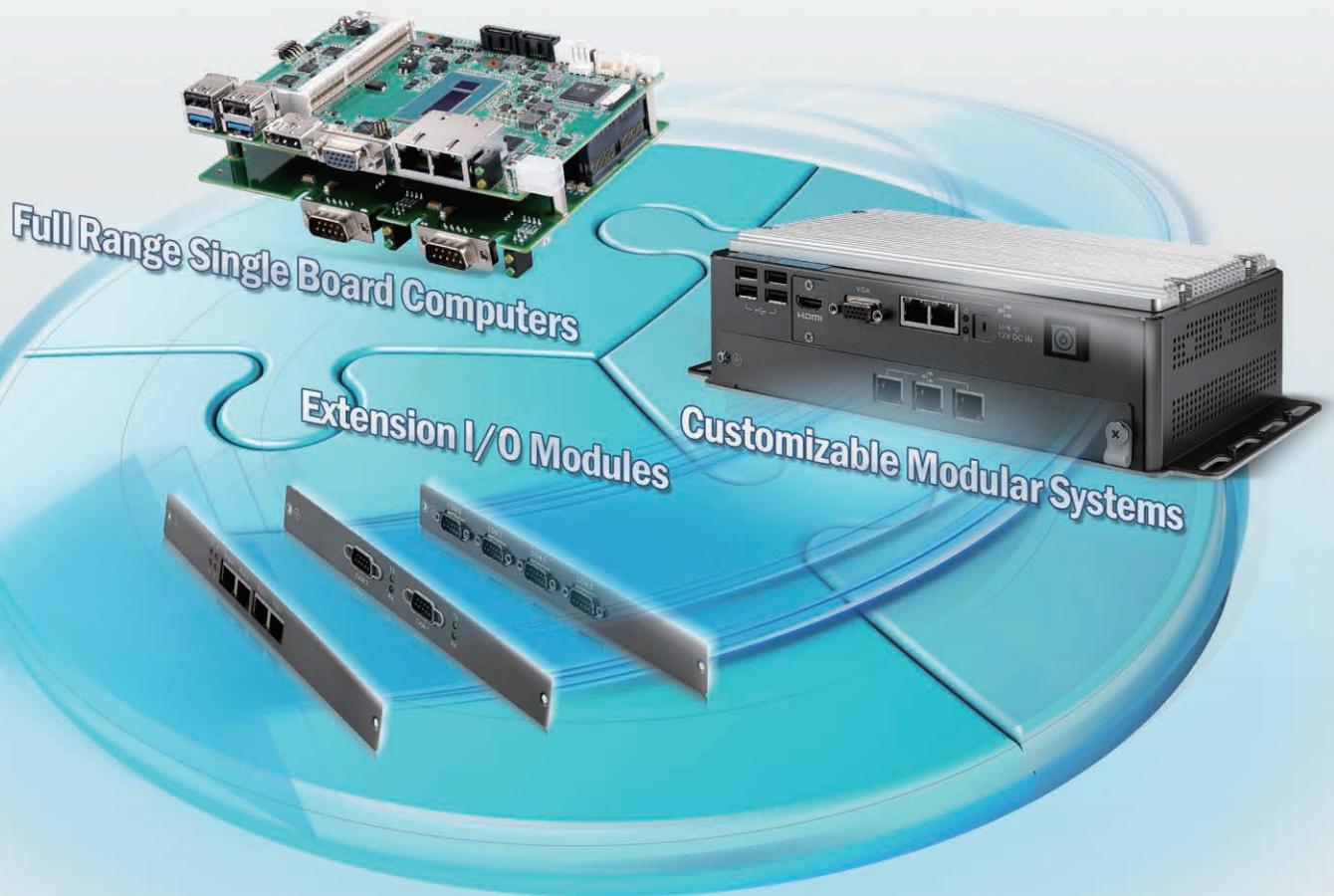


MI/O Extension Total Solutions

Configurable, Fanless, Fully Certified

- ✓ MI/O Extension Single Board Computers
- ✓ MI/O Modular Systems
- ✓ MI/O Extension Modules



ADVANTECH

Enabling an Intelligent Planet

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MI/O Extension Single Board Computers

The Flexible SBCs with MI/O Extension Modules

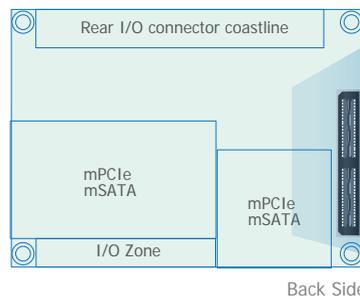
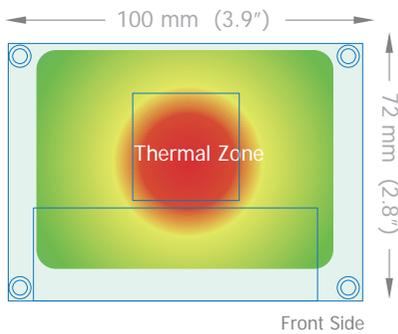
Advantech's innovative MI/O (Multiple I/O) Extension Single Board Computer is strategically positioned between Single Board Computers (SBC) and Computer On Modules (COM). MI/O Extension SBC comes equipped with flexible multiple I/O which helps deliver efficient scheduling, less development resources, and provides system integrators with optimized solutions in a cost-effective way, while still securing their domain know-how in key vertical industrial technologies.

By connecting MI/O Extension modules through high speed sockets, customers can get the most flexible I/O choices to fulfill vertical application requirements. The MI/O Extension connector (MIOe) is ready for additional extended interfaces and future technology trends and currently supports: DisplayPort, PCIe x1*, LPC, SMBus, USB 2.0/USB 3.0, audio line-out, power control and supply.

The design of MI/O Extension takes into account future software/hardware/firmware expansion and upgrades. The MI/O Extension module design document is available for reference as well as an evaluation board for MIOe interface verification and testing. These features are all part of Advantech's thoughtful effort to help system integrators flexibly develop market-sensitive solutions to seize those promising business opportunities!

*Up to 4 pairs depending on different platform specifications

2.5" MI/O-Ultra (Pico-ITX) SBCs

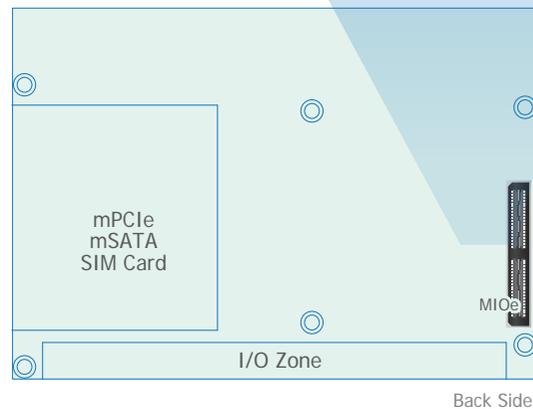
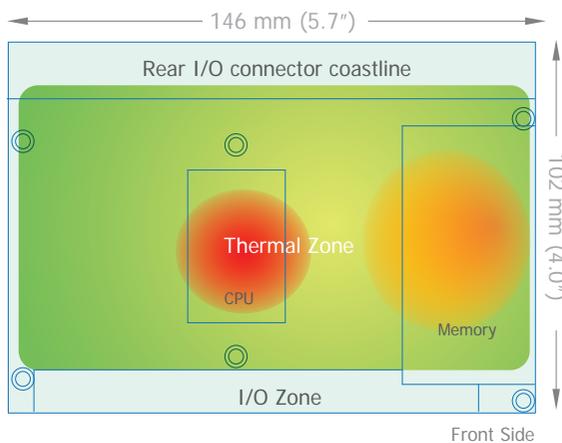


MIOe Pin Assignment

- DisplayPort
- 1/4 PCIe x1
- USB 2.0/3.0
- SMBus
- LPC
- HD Audio line out
- PowerOn
- Reset
- +12V/ +5V Power

- Core TDP : Under 8 W
- Ultra low power consumption
- Ultra small form factor (same dimension as 2.5" hard disk or PICO-ITX)
- Competitive pricing with a fewer of I/O requirement

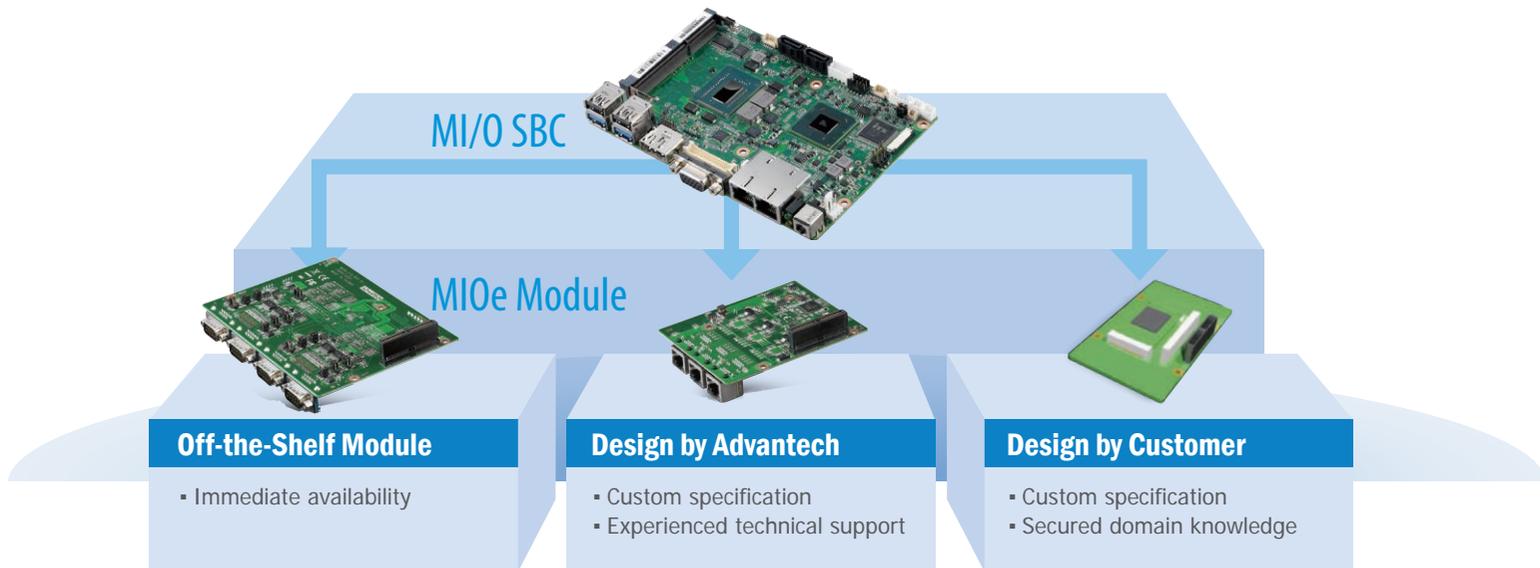
3.5" MI/O-Compact SBCs



- Core TDP : 9 W – 20 W
- Rich I/Os
- Compact size same as 3.5" hard disk
- Supports extended temperature design
- Supports iManager
- Middle to high-end performance platforms

Flexible Service Model - Co-development and Self-development

System Integrators can extend MI/O SBC functionality by implementing MIOe modules with unified MIOe connector. Advantech provides a range of application modules which assists System Integrators in designing their own applications with help from the MI/O extension module design guide on Advantech's website. We also provide a co-development working model with customers. Customers can choose either "Design by Advantech" or "Design by Customer" with Advantech's assistance.



The MI/O Development Process

The co-development working model, called "MIOe Co-development Support," follows Advantech's project development procedures. If customers choose a self-development model, Advantech will assist in process reviews with several checkpoints. Both working models require the following check points:

At the beginning of a project

Advantech assists customers to review block diagrams and evaluate the pros & cons of co-development and self-development models. MI/O Extension specifications, MIOe design guide, evaluation board mechanical drawings and more are available for customers to download. Please visit <http://mio.advantech.com>

Design by Advantech Check Points

Step 1: Project Consultancy

- Advantech proposes project concept, block diagram, specifications, schedule and quotation
- Customer approval

Step 2: Schematics Design

- Advantech proposes schematics

Step 3: Placement Design

- Advantech proposes 2D/3D drawing
- Customer approval

Step 4: Layout Design

- Advantech proposes layout routing

Step 5: Production

- Advantech implements sample assembly

Step 6: Verification

- Customer and Advantech FAE verify the product

Design by Customer Check Points

Step 1: Schematics Review

- Advantech assists customer to review schematics to ensure it meets MIOe design guide

Step 2: Placement Review

- Advantech provides MIOe mechanical limitation and 3D STEP file for customer reference

Step 3: Layout Review

- Advantech provides PCB stack-up and impedance suggestions

Step 4: Production

- Customer implements sample assembly

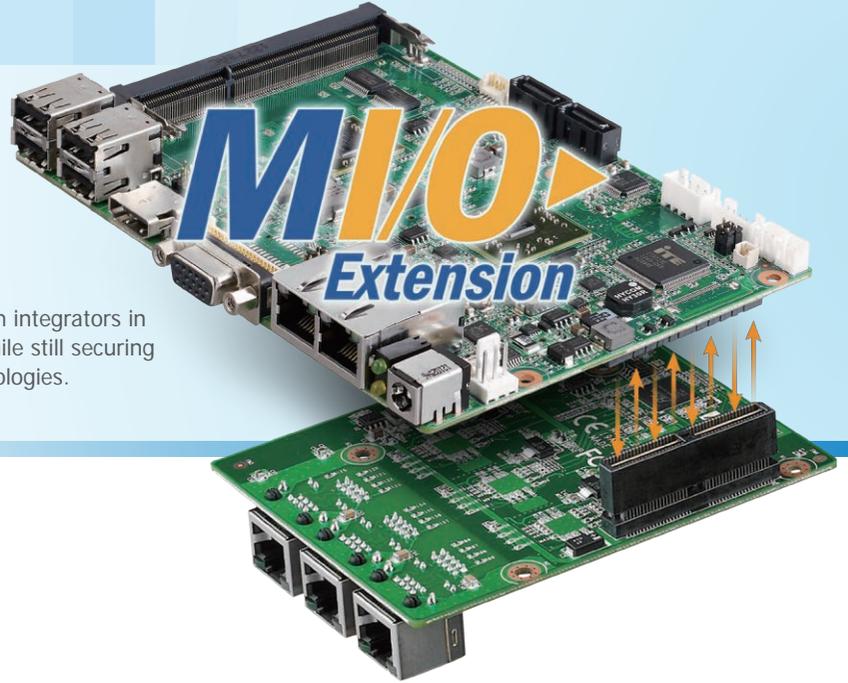
Step 5: Verification

- Customer verifies the product along with Advantech's assistance

Note: Advantech preserves the right to charge design NRE depending on service scale.

Key Features

Advantech introduces MI/O Extension to assist system integrators in quickly providing optimal solutions to their clients, while still securing their competitive edge in key vertical industrial technologies.



MI/Oe Unified Connector

MI/O Extension has one unified MIOe connector which supports additional extended interfaces that give more flexible support to bundled I/O modules, either from Advantech or modules designed by the customer. MIOe connector has various height choices from 5mm to 25mm to meet different module requirement.

Interface functions include:

- DisplayPort: HDMI, LVDS, DVI, CRT or eDP display interface
- PCIe x1: GbE, USB 3.0, SATA/RAID, FPGA or PCI expansion
- USB 2.0/ 3.0: super speed storage, capture card, HD webcam & display interface
- LPC: legacy bus & Multi-UART, PS2, GPIO, FDD, IR, Parallel port from super I/O
- HD Audio: Line out, keep flexibility with selected amplifier
- SMBus: GPIO control, smart battery/ charger, W/R EEPROM
- Power: supported by MI/O Extension SBC

MI/Oe connector has the following features

High speed ground plane header

- Multi high speed protocol supported
- Extended life product
- 10 years in Mixed Flowing Gas (MFG)

Various height choice

- 5, 8, 11, 16, 19, 25mm height combination for different applications

Rich library reference

- Electrical/3D model, PCB library/Footprint
- Final inch layout reference

Unified System Mechanical Design

MI/O Extension provides unified screw mounting holes, coastline, and I/O connector zone for easy system integration, maintenances and upgrades.

- Unified screw mounting holes
- Unified coastline I/O location
- Unified I/O connector zone
- Unified MIOe connector location and pin define





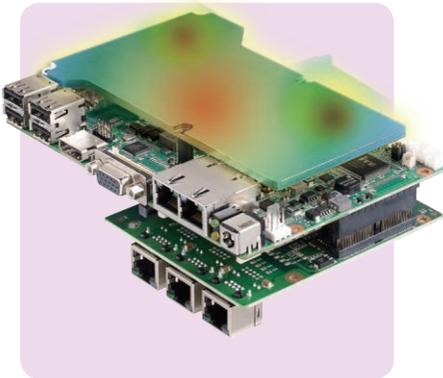
Why choose MI/O Extension SBC for your embedded development

- Highly integrated design saves up to 20% of system space
- Flexibility for future I/O expansion and upgrades
- Design document and evaluation board support
- Time-saving and cost-effective solution for system integrators



Special Mechanical Design

- Advanced thermal design
- Integrated I/O
- Cableless design



Concentrated Thermal Design

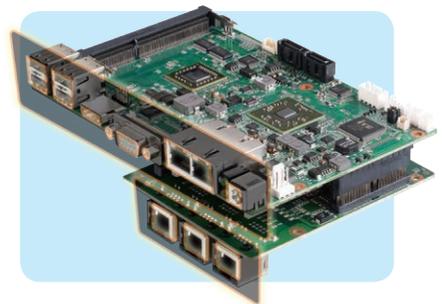
Traditionally, heat flows were routed on the top and bottom sides of embedded boards. Advantech MI/O Extension SBC is designed with a concentrated thermal design so that all heat generation is on the top side only, dispersing heat via the heatsink or the heat spreader with better results.

- Covers CPU, the southbridge, memory, power and active IC
- Maximum thermal space
- Heat spreader/heatsink integration
- Simplifies system design
- Thermally sensitive parts on the bottom side to prevent heat problems.

Expansion Module Options

Advantech has developed a series of modules that are ready for future interface designs and made for flexible vertical application demands.

- Display module: 48-bit LVDS/ DisplayPort/ USB2.0
- Communication module: Triple GbE, 4-port PoE
- Multiple I/O module: Multiple COM Ports, 2-port CAN-Bus
- Evaluation Board: for flexible interface verification
- Your own MIOe module to secure your domain know-how



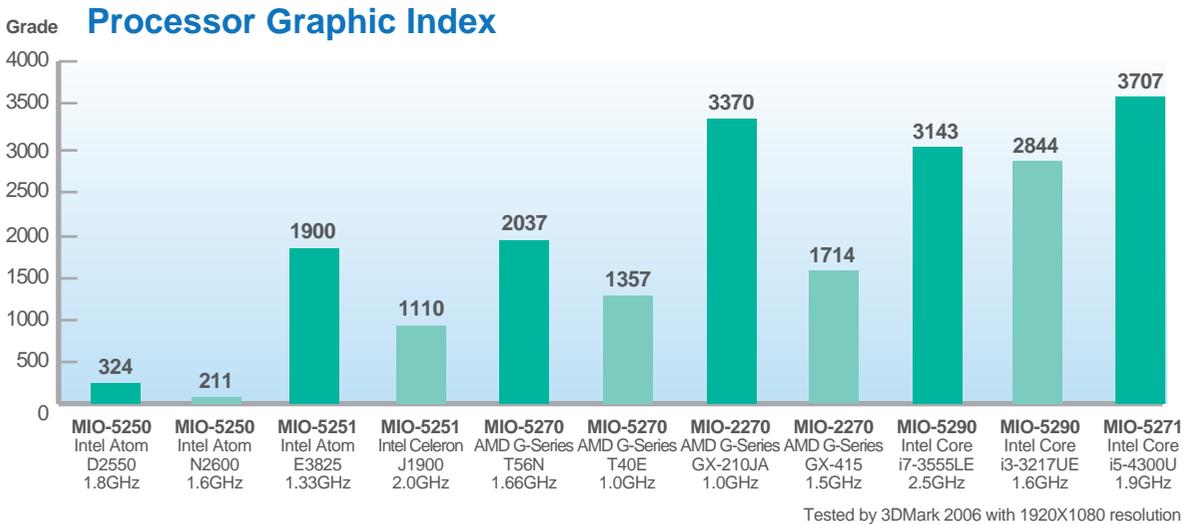
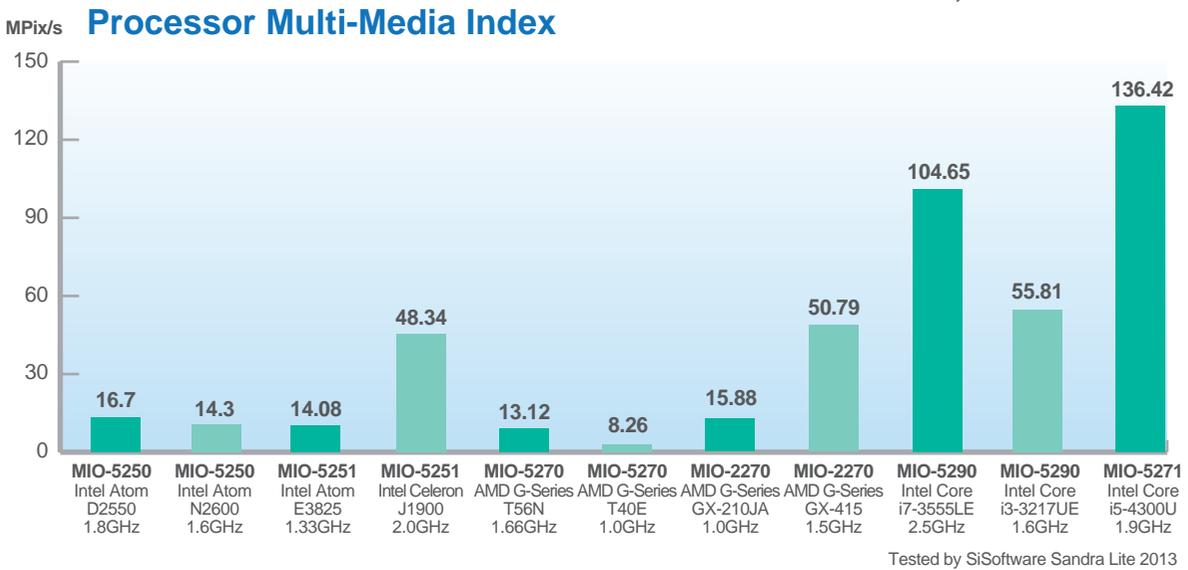
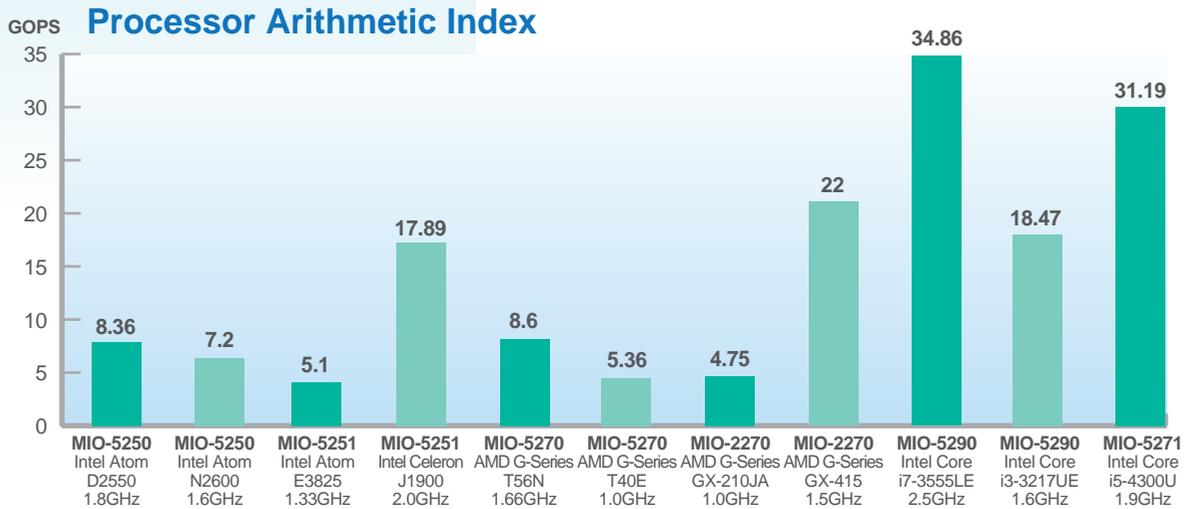
Reduced Cabling

MI/O Extension single board computers come with unified I/O connector coastlines, PCIe Mini Card location and internal I/O connectors. The structural uniformity helps eradicate possible problems with integration during future upgrades.

- Less cabling and lockable connectors on the bottom side
- Reduced assembly, complexity, and labor costs
- Enhance EMI/ESD protection and thermal dissipation

Performance Benchmark

The performance benchmark provides a guidance for customers to choose different platforms according to their application requirements. The results show processor aggregate native performance, multi-media performance and graphic performance.



MI/O Extension Module – Easy Expansion, Immediate Applications

MI/O Extension Module supports many embedded single board computers, and enables customers to get the most flexible I/O choices to fulfill all kinds of vertical applications. All MIOe modules are compatible with all MI/O SBC thanks to unified MIOe connector and system screw holes.

** Advantech provides a design reference guide for customers to design their own MI/O Extension Module.

3.5" MI/O-Compact MIOe Modules



MIOe-210

- Multiple COM Ports
(4x RS232/422/485, 2x RS422/485)

+ MIO-5250 MIO-5251 MIO-5270
MIO-5290 MIO-5271

- Up to 6x RS232/422/485, 4x RS422/485



MIOe-220

- Triple Intel® Gigabit Ethernet

+ MIO-5250 MIO-5251 MIO-5270
MIO-5290 MIO-5271

- Up to 5 x Intel Gigabit Ethernet



MIOe-230

- 48-bit LVDS or DisplayPort, 2 x USB 2.0

+ MIO-5250 MIO-5251 MIO-5270
MIO-5290 MIO-5271

- Up to 2 x LVDS, 8 x USB 2.0



MIOe-3680

- 2-Port CAN-Bus with isolation protection

+ MIO-5250 MIO-5251 MIO-5270 MIO-5290 MIO-5271

- Additional 2 x CANBus



MIOe-3674

- 4-port 10/100/1000 BaseT(X) 802.3af (PoE)

+ MIO-5250 MIO-5251 MIO-5270 MIO-5290 MIO-5271

- Additional to 4 x PoE

2.5" MI/O-Ultra (Pico-ITX) MIOe Modules



MIOe-110

- 2 x RS232, 2 x RS232/422/485, 2 x USB 2.0

+ MIO-2261 MIO-2263 MIO-2270

- Up to 4xRS232, 2xS232/422/485



MIOe-120

- Dual Intel® Gigabit Ethernet/ Mini-PCIe with SIM holder/ HDMI*/ Audio with Amp./ 2 x USB2.0

+ MIO-2261 MIO-2263 MIO-2270

- Up to 3 x Intel® Gigabit Ethernet/ 2 Mini-PCIe with SIM holder/ HDMI/ Audio with Amp.

* HDMI supported by request

MI/O Extension Evaluation Board



MIOe-DB5000

- Evaluation board for all MI/O SBCs
- ATX mapping screw hole (244 x 170 mm)
- Digital Display Interfaces
- 3 PCIe x1/ USB 2.0/ USB 3.0
- HD audio line out
- LPC/ SMBus/ GPIO
- PCIe Mini Card, SIM holder
- SATA, SATA Power



MIOe-DB2000

- Evaluation board for MIO-2262
- 115 x 165 mm
- 1 PCIe x1, 1 Full-size mini PCIe w/ SIM holder
- 6 USB 2.0
- 1 Display Port/ HDMI (HDMI supported by request)
- 1 RJ45 GbE



MIOe-DB2100

- Evaluation board for MIO-2264
- 115 x 165 mm
- 1 PCIe x1, 1 Full-size mini PCIe w/ SIM holder
- 4 USB 2.0, 1 USB 3.0
- 1 Display Port or HDMI
- 1 RJ45 GbE

MI/O Extension Single Board Computers

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Model Name		MIO-5250	MIO-5251	MIO-5270	MIO-5271	MIO-5290
Form Factor		MI/O-Compact	MI/O-Compact	MI/O-Compact	MI/O-Compact	MI/O-Compact
	CPU	Intel Atom D2550/N2600	Intel Atom E3825 / Celeron J1900	AMD G-Series T56N/T40E/T40R	Intel Core i5-4300U, Celeron 2980U	Intel Core i7-3555LE/i7-3517UE/i3-3217UE, Celeron 1047UE
Processor System	CPU TDP	10W/3.5W	6W/ 10W	18 W/6.4 W/5.5 W	15W	25 W/17 W/17W/17W
	Frequency	1.86 GHz /1.6 GHz	1.33 GHz/2 GHz	1.65 GHz/1.0 GHz/1.0 GHz	1.9 GHz/1.6 GHz	2.5 GHz/1.7 GHz/1.6 GHz/1.4 GHz
	Core Number	2	2/ 4	2/ 2/ 1	2	2
	L2 Cache	1 MB	1MB/ 2MB	1 MB/512 KB/512KB	-	-
	L3 Cache	-	-	-	3MB / 2MB	4MB/4MB/3MB/2MB
Memory	BIOS	AMI EFI 16Mbit	AMI UEFI 64Mbit	AMI EFI 32Mbit	AMI UEFI 128 Mb	AMI EFI 64Mbit
	Chipset	Intel Atom SoC	AMD A50M	AMD A50M	Integrated Intel 8 Series	Intel QM77
	Technology	DDR3 1066 MHz/DDR3 800MHz	DDR3L 1066/1333MHz	DDR3 1066 MHz/1333MHz (T56N)	DDR3L 1333/1600 MHz	DDR3 1600MHz, DDR3L 1333 MHz
Graphic Engine	Max. Capacity	4 GB	8 GB	4 GB	8 GB	8 GB
	Socket	1 x 204-pin SODIMM	1 x 204-pin SODIMM	1 x 204-pin SODIMM	1 x 204-pin SODIMM	1 x 204-pin SODIMM
Display	Controller	Integrated Intel GMA 3600 series	Intel Gen7 graphic engine	AMD Radeon™ HD 6320/6250/6250	Intel® HD Graphics 4400 / Intel HD Graphics (Celeron)	Intel® HD Graphics 4000 / Intel® HD Graphics (Celeron)
	Graphic Engine	DirectX® 9 and OpenGL3.0 support HW Accelerated Decode: MPEG2, H.264, VC-1	DirectX11, OpenGL3.2, OpenCL1.1 Full HW acceleration, decode: H.264, MPEG2/4, VC-1, WMV9, Encode: H.264, MPEG2	DirectX® 11 and OpenGL 4.1 technologies support, 2D Acceleration, 3D Acceleration, Motion Video Acceleration, Supports DVD, Blu-ray™; Hardware decode (LVD 3): H.264, VC-1 & MPEG2	DirectX11.1, OpenGL 4.0, and OpenCL 1.3 Full AVC/VC1/MPEG2 HW Decode	DirectX11, OpenGL 3.1, and OpenCL 1.1 Hardware-accelerated acceleration: AVC/H.264, MPEG2-2, VC-1
	Graphic Memory	Share with system memory up to 256 MB	Share with system memory up to 384 MB	Share with system memory up to 384 MB	Share with system memory up to 1792MB	Share with system memory up to 1792MB
	VGA	Up to 1920 x 1200 at 60 Hz	Up to 2560 x 1600 at 60Hz	Up to 2560 x 1600 / Up to 1920 x 1200 at 60Hz (T40E&T40R)	Up to 1920 x 1200 at 60 Hz	Up to 2048 x 1536 at 75Hz
	LCD (LVDS/eDP)	18/24-bit LVDS1: up to 1366 x 768 (N2600), 1440 x 900 (D2550) at 60 Hz 48-bit LVDS2: 2560 x 1600 at 60 Hz (D2550)	48-bit LVDS up to WUXGA 1920 x 1200 at 60Hz	48-bit LVDS, up to 1920 x 1200 at 60 Hz	48-bit LVDS, up to 1920 x 1200 at 60Hz	48-bit LVDS, up to 2560 x 1600 at 60 Hz
Expansion Interface	DDI (HDMI/DVI/DisplayPort)	HDMI: up to 1920 x 1200 at 60Hz	HDMI: 1920 x 1080 at 60Hz DP: up to 2560 x 1600 at 60Hz	HDMI: up to 1920 x 1080 at 60Hz & 36bpp	HDMI: up to 4096 x 2304 at 24 Hz DisplayPort: up to 3200 x 2000 at 60 Hz	HDMI: up to 1920 x 1200 at 60Hz Displayport: up to 2560 x 1600 at 60Hz
	Multiple Display	VGA+LVDS, VGA+HDMI, HDMI+LVDS	VGA+LVDS, VGA+HDMI/DP, LVDS+HDMI/DP	VGA+LVDS, VGA+HDMI, HDMI+LVDS	VGA+LVDS, VGA+HDMI/DP, HDMI/DP+LVDS, VGA+HDMI/DP+LVDS	VGA+LVDS, VGA+HDMI/DP, HDMI/DP+LVDS, VGA+HDMI/DP (coastline) + DP (MIOe)
Ethernet	Mini PCIe	1 x Full-size	1 x Full-size	1 x Full-size	1 x Full-size, 1 x Half-size	1 x Full-size, 1 x Half-size
	SIM Socket	1	1	-	1	-
	SMBus I ² C	1 (Shares with SMBus pin)	1 (Shares with SMBus pin)	1 (Shares with SMBus pin)	1 (Shares with SMBus pin)	1 (Shares with SMBus pin)
Audio	SMBus	SMBus, 1 x USB2.0, LPC, 1 x PCIe, line-out, Displayport (optional), Reset, PowerOn, +5Vsb, +12Vsb	SMBus, 3xUSB2.0, LPC, 1 x PCIe, line-out, DisplayPort (optional), Reset, Power On, +5Vsb, +12Vsb	SMBus, 3 x USB2.0, LPC, 4 x PCIe, line-out, Displayport (optional), Reset, PowerOn, +5Vsb, +12Vsb	SMBus, 3 x USB2.0, LPC, 1 x PCIe, line-out, Displayport (optional), Reset, PowerOn, +5Vsb, +12Vsb	Displayport, SMBus, 1 x USB3.0, LPC, 4 x PCIe x1, line-out, Reset, PowerOn, +5Vsb, +12Vsb
	MIOe					
WatchDog Timer	Controller	GbE1 & GbE2: Intel 82583V	GbE1 & GbE2: Intel i210	GbE1 & GbE2: Realtek RTL8111E-VB-GR	GbE1: Intel i218, GbE2: Intel i210	GbE1-Intel 82579LM, GbE2-Intel 82583V
	Speed Connector	10/ 100/ 1000 Mbps	10/100/1000 Mbps	10/ 100/ 1000 Mbps	10/ 100/ 1000 Mbps	10/ 100/ 1000 Mbps
Storage	Audio Interface	High Definition Audio	High Definition Audio	High Definition Audio	High Definition Audio	High Definition Audio
	CODEC	Realtek ALC892	Realtek ALC888S	Realtek ALC892	Realtek ALC888S	Realtek ALC892
I/O	Amplifier	Optional via MIOe	Optional via MIOe	Optional via MIOe	Optional via MIOe	Optional via MIOe
	Connector	Line-in, Line out, Mic-in	Line-in, Line-out, Mic-in	Line-in, Line out, Mic-in	Line-in, Line-out, Mic-in	Line-in, Line out, Mic-in
Power	WatchDog Timer	255 levels timer interval	255 levels timer interval	255 levels timer interval	255 levels timer interval	255 levels timer interval
	SATA	1, up to 3Gb/s (300 MB/s)	1, up to 3Gb/s (300MB/s)	2, up to 3Gb/s (300 MB/s)	2, up to 6 Gb/s (600 MB/s)	2, up to 6.0 Gb/s (600 MB/s)
Environment	mSATA	Supports either mSATA or full size miniPCIe	1 x Full-size	Supports either mSATA or full size miniPCIe	Supports either mSATA or full size miniPCIe	Supports either mSATA or full size miniPCIe
	CFast	1	-	-	-	-
Physical Characteristics	USB3.0	-	1	-	2	2
	USB2.0	6 (4 from Rear, 2 from Internal)	3 (3 from rear, 1 from internal)	6 (4 from Rear, 2 from Internal)	3 (2 from rear, 1 from internal)	4 (2 from Rear, 2 from Internal)
Operating System	GPIO	8-bit general purpose input/output	8-bit general purpose input/output	8-bit general purpose input/output	8-bit general purpose input/output	8-bit general purpose input/output
	COM Port	2 x RS-232, 2 x RS-232/422/485	2xRS-232, 2xRS-232/422/485	3 x RS-232, 1 x RS-232/422/485	2 x RS-232, 2 x RS-232/422/485	1 x RS-232, 1 x RS-232/422/485
Certification	Reset Button	1	1	1	1	1
	Smart Fan	-	-	1 (T56N only)	-	1
Power	Power Type	Single 12V DC power input	Single 12V DC power input	Single 12V DC power input	Single 12V DC power input	Single 12V DC power input
	Power Supply Voltage Connector	Supports single 12V input, ±10% ATX 2x2P / DC Jack	Supports single 12V input, ±10% ATX 2x2P / DC Jack optional	Supports single 12V input, ±10% ATX 2x2P / DC Jack	Supports single 12V input, ±10% ATX 2x2P / DC Jack optional	Supports single 12V input, ±10% ATX 2x2P / DC Jack
Power	Power Consumption (Idle)	N2600: 7.27 W D2550: 9.95 W	E3825: 5.42 W J1900: .88 W	T40R: 7.08 W T40E: 6.36 W T56N: 7.8 W	Celeron 2980U: 4.56 W i5-4300U: 4.68 W	i7-3217UE: 18.08 W i7-3517UE: 23.5 W i7-3555LE: 27.7 W Celeron 1047UE: 13.2 W
	Power Consumption (Full Load)	N2600: 8.75 W D2550: 12.35 W	E3825: 9.72 W J1900: 13.32 W	T40R: 9.6 W T40E: 9.84 W T56N: 16.2 W	Celeron 2980U: 20.52 W i5-4300U: 29.52 W	i7-3217UE: 22.08 W i7-3517UE: 27.6 W i7-3555LE: 32.5 W Celeron 17.88 W
Environment	Battery	Lithium 3 V / 210 mAh	Lithium 3 V / 210 mAh	Lithium 3 V / 210 mAh	Lithium 3 V / 210 mAh	Lithium 3 V / 210 mAh
	Operational Temperature	0 ~ 60° C (32 ~ 140° F) (Operational humidity: 40° C @ 95% RH Non-Condensing)	0 ~ 60° C (32 ~ 140° F) (Operational humidity: 40° C @ 95% RH Non-Condensing)	0 ~ 60° C (32 ~ 140° F) (Operational humidity: 40° C @ 95% RH Non-Condensing)	0 ~ 60° C (32 ~ 140° F) (Operational humidity: 40° C @ 95% RH Non-Condensing)	0 ~ 60° C (32 ~ 140° F) (Operational humidity: 40° C @ 95% RH Non-Condensing)
Physical Characteristics	Non-Operational Temperature	-40° C ~ 85° C and 60° C @ 95% RH Non-Condensing	-40 ~ 85° C and 60° C @ 95% RH Non-condensing	-40° C ~ 85° C and 60° C @ 95% RH Non-Condensing	-40 ~ 85° C and 60° C @ 95% RH Non-condensing	-40° C ~ 85° C and 60° C @ 95% RH Non-Condensing
	Dimensions (L x W x H)	146 x 102 mm (5.7" x 4")	146 x 102 mm (5.7" x 4")	146 x 102 mm (5.7" x 4")	146 x 102mm (5.7" x 4")	146 x 102 mm (5.7" x 4")
Operating System	Weight	0.74 kg (1.63 lb), weight of total package	0.5 kg (1.1 lb), weight of total package	0.78 kg (1.72 lb), weight of total package	0.74 kg (1.63 lb), weight of total package	0.84 kg (1.72lb), weight of total package
	Microsoft Windows	Yes	Yes	Yes	Yes	Yes
Certification	Linux	Yes	Yes	Yes	Yes	Yes
	SUSIAccess	Yes	Yes	Yes	Yes	Yes
Certification	iManager	Yes	Yes	Yes	Yes	Yes
	EMC	CE, FCC	CE, FCC	CE, FCC	CE, FCC	CE, FCC



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Model Name		MIO-2261	MIO-2262	MIO-2263	MIO-2264	MIO-2270
Form Factor		2.5" MI/O-Ultra (Pico-ITX)	2.5" MI/O-Ultra (Pico-ITX)	2.5" MI/O-Ultra (Pico-ITX)	2.5" MI/O-Ultra (Pico-ITX)	2.5" MI/O-Ultra (Pico-ITX)
Processor System	CPU	Intel Atom N2600/N2800	Intel Atom N2600/N2800	Intel Atom E3825 / Celeron J1900	Intel Atom E3825/Celeron N2930	AMD G-Series SoC GX-415GA/GX-210JA
	CPU TDP	3.5W/6.5W	3.5W/6.5W	6W/ 10W	6W/ 7.5W	15W/ 6W
	Frequency	1.6 GHz/1.86 GHz	1.6 GHz/1.86 GHz	1.33 GHz/ 2.0 GHz	1.33 GHz/ 1.83 GHz	1.5 GHz/ 1.0 GHz
	Core Number	2	2	2/4	2/4	4/2
	L2 Cache	1MB	1MB	1MB/2MB	1 MB/2 MB	2MB/ 1MB
	L3 Cache	-	-	-	-	-
Memory	BIOS	AMI EFI 16Mbit	AMI EFI 16Mbit	AMI EFI 64 Mbit	AMI EFI 64 Mbit	AMI EFI 32 Mbit
	Chipset	Intel NM10	Intel NM10	Intel Atom SoC	Intel Atom SoC	AMD G-Series SoC
	Technology	DDR3 800MHz/DDR3 1066MHz	DDR3 800MHz/DDR3 1066MHz	DDR3L 1066/ 1333 MHz	DDR3 1066/ 1333 MHz	DDR3/3L 1600 MHz/ 1066 MHz
Display	Max. Capacity	4 GB	4 GB	8 GB	8 GB	8 GB
	Socket	1 x 204-pin SODIMM	1 x 204-pin SODIMM	1 x 204-pin SODIMM	1 x 204-pin SODIMM	1 x 204-pin SODIMM
	Controller	Integrated Intel GMA 3600 series	Integrated Intel GMA 3600 series	Intel Gen7 graphic engine	Intel® Atom SoC integrated	AMD Radeon HD 8330E for GX-415GA AMD Radeon HD 8180 for GX-210JA, DirectX®11.1 graphic with UVDA.2, Open GL4.1/ Open CL 1.2, 2D/ 3D Acceleration, Motion Video Acceleration, Hardware decode (LVD) for H.264, MPEG2/4, VC1, MVC
	Graphic Engine	DirectX® 9 and OpenGL3.0 support HW Accelerated Decode: MPEG2, H.264, VC-1	DirectX® 9 and OpenGL3.0 support HW Accelerated Decode: MPEG2, H.264, VC-1	DirectX® 11, OGL 3.2, OCL 1.1, OGLES 2.0.2, 2D/ 3D Acceleration, Encode: H264, MPEG2/4, VC1, WMV9, Decode: H264, MPEG2	DirectX®11, Open GL3.0, Open CL 1.1, OGLES 2.0 Encode: H264, MPEG2 Decode: H264, MPEG2, VC-1, WMV9	AMD Radeon HD 8330E for GX-415GA AMD Radeon HD 8180 for GX-210JA, DirectX®11.1 graphic with UVDA.2, Open GL4.1/ Open CL 1.2, 2D/ 3D Acceleration, Motion Video Acceleration, Hardware decode (LVD) for H.264, MPEG2/4, VC1, MVC
	Graphic Memory	Share with system memory up to 256MB	Share with system memory up to 256MB	Share with system memory up to 384 MB	Share with system memory up to 384 MB	Share with system memory up to 384 MB
	VGA	Up to 1920 x 1200 at 60 Hz	Up to 1920 x 1200 at 60 Hz	Up to 2560 x 1600 at 60Hz	Up to 2560 x 1600 at 60Hz	Up to 2048 x 1536 at 60Hz
Expansion Interface	LCD (TTL/LVDS/eDP)	18/24-bit LVDS, up to 1366 x 768 at 60 Hz	18/24-bit LVDS, up to 1366 x 768 at 60 Hz	18/24-bit LVDS, up to 1440 x 900 at 60 Hz	18/24-bit LVDS, up to 1440 x 900 at 60 Hz	18-bit LVDS, up to 1600 x 900 at 60 Hz
	DDI (HDMI/DVI/DisplayPort)	-	-	HDMI 1.4a 1920x1200 at 60 Hz/ 24bpp	HDMI 1.4a 1920x1200 at 60 Hz/ 24bpp	HDMI 1.4a 1920x1200 at 60 Hz/ 24bpp
	Multiple Display	VGA+LVDS	VGA+LVDS	VGA+LVDS, HDMI+LVDS	LVDS+VGA or LVDS+DP/HDMI or VGA+DP/HDMI	VGA+LVDS, HDMI+LVDS
	Mini PCIe	1 x Half-size	1 x Full-size (Default support mSATA, selected by BIOS)	1 x Half size	1 x Half size	1 x Half size
	SMBus	1	1 (from 64pin connector B)	1	1	1
	I ² C	1 (Shares with SMBus pin, supported by request)	1 (from 64pin connector B)	-	1	-
Ethernet	MIOe	2 x USB 2.0, 2 x PCIe x1, LPC, line-out, SMBus, DP (HDMI supported by request), Reset, PowerOn, +5Vsb, +12Vsb	3 x USB 2.0, 2 x PCIe x1, LPC, line out SMBus, DP (HDMI supported by request), Reset, PowerOn, +5Vsb, +12Vsb	2 x USB2.0, 2 PCIe x1, LPC, line-out, SMBus, DP (HDMI supported by request), Reset, PowerOn, +5 Vsb, +12 Vsb	USB 3.0, 2 PCIe x1, LPC, HD Audio line-out, SMBus, DP (HDMI supported by request) Reset, Power On, +5 Vsb, +12 Vsb	2 x USB2.0, 2 PCIe x1, LPC, line-out, SMBus, DP (HDMI supported by request), Reset, PowerOn, +5 Vsb, +12 Vsb
	64-pin connector A	-	12V DC input, Inverter, VGA, 2 x USB2.0, 1 GbE w/ LED	-	12V DC input, Inverter, VGA, 2 x USB2.0, 1 GbE w/ LED	-
	64-pin connector B	-	SMBus, I ² C, Power/Reset button, HDD/ Power LED, 2 x USB2.0, 8-bit GPIO, HD Audio Line in/out, 2 x RS-232	-	SMBus, I ² C, Power/Reset button, HDD/Power LED, 2 x USB2.0, 8-bit GPIO, HD Audio Line-in, Line out, Mic-in, 2 x RS-232	-
Audio	Controller	Intel 82583V	Intel 82583V	Intel i210	Intel i210	GbE Realtek RTL8111E
	Speed	10/100/1000Mbps	10/100/1000Mbps	10/100/1000Mbps	10/100/1000Mbps	10/100/1000Mbps
	Connector	RJ45	from 64pin connector A	RJ45	from 64pin connector A	RJ45
WatchDog Timer	Audio Interface	High Definition Audio	High Definition Audio	High Definition Audio	High Definition Audio	High Definition Audio
	Codec	Realtek ALC892	Realtek ALC892	Realtek ALC888S	Realtek ALC888S	Realtek ALC888S
	Amplifier	Optional via MIOe	Optional via MIOe	Optional via MIOe	Optional via MIOe	Optional via MIOe
Storage	Connector	Line-in, Line out	Line-in, Line out (from 64pin connector B)	Line-in, Line-out	Line-in, Line out, Mic-in (from 64pin connector B)	Line-in, Line-out
	WatchDog Timer	255 levels timer interval	255 levels timer interval	255 levels timer interval	255 levels timer interval	255 levels timer interval
	SATA	1, up to 3Gb/s (300 MB/s)	1, up to 3Gb/s (300 MB/s)	1, up to 3Gb/s (300 MB/s)	1, up to 3Gb/s (300 MB/s)	1, up to 6Gb/s (600 MB/s)
I/O	mSATA	1 (Integrates USB signal, supports either mSATA or USB interface module)	1 (Integrates USB signal, supports either mSATA or USB interface module)	1	1 (Supports mSATA or USB interface module or full size miniPCIe, selected by BIOS, default is mSATA)	1 (Integrates USB signal, supports either mSATA or USB interface module)
	USB3.0	-	-	1	1 (from MIOe)	2
	USB2.0	4 (2 from Rear, 2 from Internal)	4 (2 from 64pin connector A, 2 from 64pin connector B)	3 (1 from rear, 2 from internal)	4 (2 from 64pin connector A, 2 from 64pin connector B)	2 (from internal)
	GPIO	8-bit GPIO (from 64pin connector A)	8-bit GPIO (from 64pin connector A)	8-bit general purpose input/output	8-bit GPIO (from 64pin connector B)	8-bit general purpose input/output
	COM Port	2 x RS-232	2 x RS-232	1 x RS-232, 1 x RS-232/422/485	2 x RS-232/422/485 (from 64pin connector B)	1 x RS-232, 1 x RS-232/422/485
	Reset Button	1	1	1	1	1 (GX-415GA)
Power	Smart Fan	-	-	-	-	-
	Power Type	Single 12V DC power input	Single 12V DC power input	Single 12V DC power input	Single 12V DC power input	Single 12V DC power input
	Power Supply Voltage	Supports single 12V input, ± 10% 3.96mm 1x2p, DC Jack(optional)	Supports single 12V input, ± 10% From 64pin connector A	Supports single 12V input, ±10% 3.96mm 1x2p, DC Jack(optional)	Supports single 12V input, ± 10% From 64pin connector A	Supports single 12V input, ±10% 3.96mm 1x2p, DC Jack(optional)
	Power Consumption (Idle)	N2600: 4.2 W N2800: 5.52 W	N2600: 5.24 W N2800: 6.12 W	J1900: 10.59W E3825: 7.08W	TBD	GX-415GA: 12.6W GX-210JA: 5.93W
	Power Consumption (Full Load)	N2600: 9.12 W N2800: 9.6 W	N2600: 8.05 W N2800: 9.8 W	J1900: 12.48W E3825: 9.12W	TBD	GX-415GA: 15.12W GX-210JA: 10.2W
	Battery	Lithium 3V / 210 mAh	Lithium 3V / 210 mAh	Lithium 3V / 210 mAh	Lithium 3V / 210 mAh	Lithium 3V / 210 mAh
Environment	Operational Temperature	0 ~ 60° C (32 ~ 140° F) (Operational humidity: 40° C @ 95% RH Non-Condensing)	0 ~ 60° C (32 ~ 140° F) (Operational humidity: 40° C @ 95% RH Non-Condensing)	0 ~ 60° C (32 ~ 140° F) (Operational humidity: 40° C @ 95% RH Non-Condensing)	0 ~ 60° C (32 ~ 140° F) (Operational humidity: 40° C @ 95% RH Non-Condensing)	0 ~ 60° C (32 ~ 140° F) (Operational humidity: 40° C @ 95% RH Non-Condensing)
	Non-Operational Temperature	-40° C ~ 85° C and 60° C @ 95% RH non-condensing	-40° C ~ 85° C and 60° C @ 95% RH non-condensing	-40 ~ 85° C and 60° C @ 95% RH non-condensing	-40° C ~ 85° C and 60° C @ 95% RH non-condensing	-40 ~ 85° C and 60° C @ 95% RH non-condensing
Physical Characteristics	Dimensions (L x W x H)	100 x 72 mm (3.9" x 2.8")	100 x 72 mm (3.9" x 2.8")	100 x 72 mm (3.9" x 2.8")	100 x 72 mm (3.9" x 2.8")	100 x 72 mm (3.9" x 2.8")
	Weight	0.48 kg (1.06 lb), weight of total package	0.37 kg (0.82 lb), weight of total package	0.46 kg (1.01 lb), weight of total package	TBD	0.45 kg (0.99 lb), weight of total package
Operating System	Microsoft Windows	Yes	Yes	Yes	Yes	Yes
	Linux	Yes	Yes	Yes	Yes	Yes
	SUSIAccess	Yes	Yes	Yes	Yes	Yes
	iManager	-	-	-	-	-
Certification	EMC, FCC	CE, FCC	CE, FCC	CE, FCC	CE, FCC	

MI/O Modular System

Advantech MI/O Modular System tackles complex technical projects with a modular approach that makes it easy to build a system quickly, with less overall development cost. MI/O Modular System shortens the time spent on design & validation, making it possible to build a system within 30 days - at least 50% less development time than traditional ODM! A customer satisfaction survey also shows MI/O Modular System reduces R&D investment cost by at least 20% compared with previous projects. So leave the complex tasks to Advantech's innovative MI/O Modular System!

Optimized Thermal Design

- Maximized heat dissipation
- Intel® Atom™ to Core™ i platforms supported



Rich I/O Expansion Possibilities

- Modularized design for easy configuration
- Fast selection of single board computers and I/O modules



Space-saving, Fanless Design

- Dimensions (28.5 x 15.2 x 7.5cm)
- Aesthetic Appearance



Fast Customization

- Logo
- I/O bracket
- Module

Highly Integrated System

- HDD/SSD/mSATA anti-vibration design
- Accepts commercial grade memory
- Windows/Linux/RTOS supported
- Wireless connectivity



Key Benefits:

Modular Design

MI/O modular system is compatible with all MI/O-Compact (3.5") series SBC and different MIOe modules. System integrators can change SBC and modules based on different applications and performance requirements. Due to the unified design of coastline, screw mounting hole, MIOe connector, the I/O bracket, customers can choose any combination among platforms, MIOe extension modules, mini PCIe modules, I/O connection, brackets, power solutions, as well as memory, storage and operating systems based on their requirements.

Less Development Cost & Time

With this modular design, system integrators can easily adopt any functions required just by changing the MIOe module and keeping the same enclosure; this saves costs on mechanical development and tooling fees, as well as shortening the time spent on design and validation. Self-development of MIOe modules proceeds rapidly.

Convenient & Selectable I/O Interfaces

Often customized specifications call for various connector types. This kind of customization can demand a redesign of the molding for the entire shell or embedded single board computer. Advantech's configurable I/O bracket design can easily be modified with custom connectors or cables, so other system components don't need to be changed; this shortens overall development time.

Fanless and Easy-to-assemble Design

MI/O Modular Systems incorporate optimized thermal designs based on thermal simulation results. What's more, MI/O Modular Systems only require 4 steps to full assembly with hard drive, and 5 steps to full assembly with MI/O extension modules. This allows customers to reduce overall assembly cost.

All Configurations Are Certified

To save budgets and development costs, Advantech MI/O Modular Systems have verified all parts and components in combination with a variety of MIOe modules; things like compatibility, environment reliability, and EMI/EMC testing, have all passed CE/FCC/UL/CB/CCC certifications.

Design Your MI/O Modular System

Select your MI/O Extension SBC and MIOe modules according to your specific application requirements.



Supported MIOe Extension Modules



MIOe-210

4 x RS232/422/485, 2 x RS422/485, 8-bit GPIO MIOe module



MIOe-220

3 x Intel® Gigabit Ethernet MIOe Module



MIOe-3674

4-port 10/100/1000 BaseT(X) 802.3af (PoE) Compliant Ethernet MIOe Module



MIOe-3680

2-Port CAN-Bus MIOe Module with Isolation Protection



EMIO-100E

1-port Giga LAN Port



PCM-27D24DI

24-Channels Isolated Digital I/O with counter



PCM-24D4R4

4-Port Non-Isolated RS-422/485 ,921.6 kbps



PCM-24D4R2

4-Port Non-Isolated RS-232, 921.6 kbps



PCM-24D2R4

2-Port Isolated RS-422/485 mPCIe,921.6 kbps



PCM-24D2R2

2-Port Isolated RS-232 mPCIe ,921.6 kbps

**Mini PCIe I/O modules need to customize rear I/O bracket, supported by request

Match with Peripherals

Advantech has a complete product line of peripherals to provide a total solution, such as storage, memory, wireless modules, monitors, power module, adapter, and mini PCIe I/O modules to fit various requirements.

Storage Modules

- 2.5" SATA Hard Disk Drive
- 2.5" SSD SATA Flash Drive MLC/SLC
- mSATA Flash Drive MLC/SLC



Memory Modules

- Standard temp. 0~70°C and wide temp. -40~85°C
- DDR3/DDR3L SO-DIMM 1GB/2GB/4GB/8GB
- 30u Plating



Wireless Modules

- 7 years longevity
- Wi-Fi/Bluetooth, 3G and GPS module
- Standard temp. 0~60°C and wide temp. -40~85°C



Display

- 5.7" ~55" size options
- LVDS, VGA, DVI, HDMI interfaces
- Standard temp. 0~50°C and wide temp. -20~70°C



Power Modules & Adapter

- 12V-24V & 9-36V wide range power module
- Power adapter DC or Phoenix type



mPCIe I/O Modules

- Isolated high speed COM ports
- USB3.0/CANBus/Parallel/GbE
- 24-Channels Isolated Digital I/O with counter



*Customized brackets and logo silk ink are available depending on customer order volume.

MI/O Modular Systems Enable Reliable Operations with Rich I/O Connectivity for Self-Service Financial and Banking Kiosks



Introduction

While self-service kiosks have been around for some time, they are increasingly adopted by ever more financial institutions and banks. Even though at first they appear to be just regular ATMs, they are capable of performing a variety of additional transactions and services during peak hours or in multiple remote locations. Customers enjoy numerous benefits including the ability to cash checks, complete money orders, print official receipts, pay bills and withdraw cash. Furthermore, this helps to ease the burden on tellers allowing them to spend more time with individual customers that require additional assistance, all of which reduces customer waiting times and increases service efficiency.

Application Requirements

A particular customer was looking for an embedded system with rich I/O connectivity, numerous reliable serial ports to connect several kinds of printers and card readers, and noiseless operation for quiet interaction with customers. In addition, a critical task of this banking kiosk was to secure customer's personal information such as security ID numbers and bank account information.

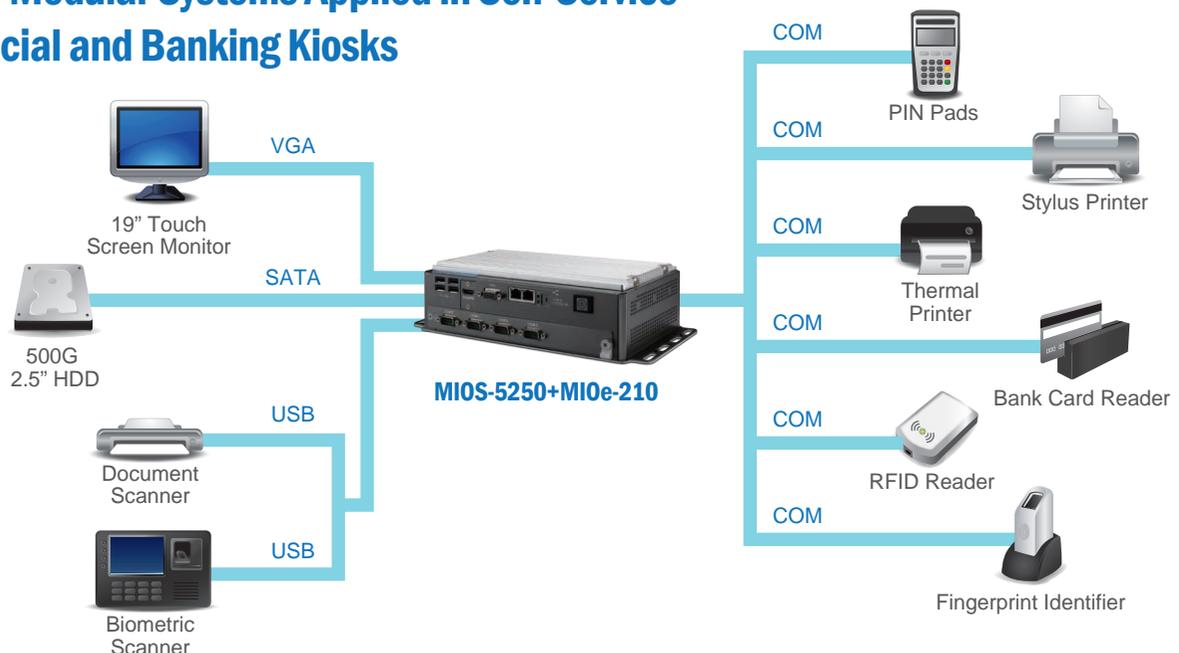
Noiseless Operation

Because people frequently interact with banking kiosks, noiseless and reliable operation is important. MIO-5250 is powered by an Intel® Atom™ N2600/ D2550 dual core low power processor with fanless design which makes it noiseless with high MTBF.

Remote Management and Security

In the banking industry, system security is critical for personal data protection and for internet data transfers. MIO-5250 bundles with Advantech's SUSIAccess remote management software that enables complete and excellent system protection powered by McAfee, providing an effective way to block unauthorized applications and code, and eliminates the need for IT administrators to manually maintain lists of approved applications. Only authorized software is allowed to run, and it cannot be tampered with. With SUSIAccess remote management capabilities, and system recovery features powered by Acronis, a bank can remotely manage and monitor any branch's kiosk machine for screen hang ups, reboot requests, data backup and auto recovery; saving huge maintenance costs and providing all the necessary security protection.

MI/O Modular Systems Applied in Self-Service Financial and Banking Kiosks



MI/O Modular Systems Guarantee Non-stop Recording with PoE Compliant Ethernet Ports for Video Surveillance



Introduction

Governments in most countries have increased their spending on video surveillance in response to increasing security concerns. Today's video surveillance market is motivated by increased urbanization and prosperity and the trend towards more efficient policing strategies in our cities as public service budgets are streamlined. Because there is a greater need for security and demands for audits and operational efficiencies, monitoring and collecting vast amounts of data has become a critical requirement. Within this mix, the Network Video Recorder (NVR) plays an important role in surveillance systems, being deployed in vehicles, on the street, in the home and in public spaces.

Application Requirements

A valued customer who was in the process of designing a mobile in-vehicle NVR application, needed a system with LAN connecting to IP cameras and wireless connection to a video server. IP camera also requires a power cable to input power. Because it was a mobile solution, it needed to be small in size and easy to upgrade, and it also needed to be a high performance platform capable of the highest graphic processing and data transmission. For all these reasons, Advantech MI/O Modular System – MIOS-5271 bundled with MIOe-3674 PoE module, is an ideal option in the scenario.

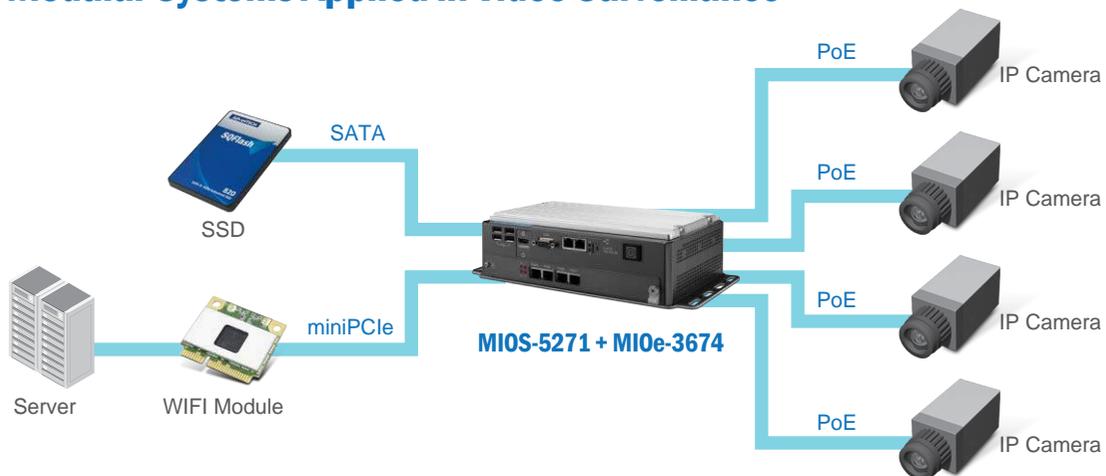
MI/O System Flexible Design

Using 4th Gen Intel® Core™ i5 embedded processors, MIOS-5271 is a high-performance Box-PC system that ensures remote security monitoring with 4 x PoE compliant extension Ethernet ports, which enable high-speed graphics and data transmission. The modularized design of MIOS-5271 offers great expansion flexibility for upgrading I/O or even a complete SBC when the latest technology becomes available; saving costs on upgrading existing chassis and extension modules.

Remote Management

Remote device management is important for surveillance applications because they are often located in remote sites, making them difficult to maintain. With Advantech's SUSIAccess remote management software built-in, customers can easily and remotely control and monitor each NVR system on each vehicle, and can easily update the software on several systems in parallel. This saves a huge amount of time and maintenance costs.

MI/O Modular Systems Applied in Video Surveillance



MI/O Extension Modular Systems

NEW

NEW



Model Name		MIOS-5250	MIOS-5251	MIOS-5271
Processor System	CPU	Intel Atom N2600/N2800	Intel® Celeron J1900 / Intel® Atom E3825	Intel® Celeron 2980U / Intel® Core i5 4300U
	Frequency	1.6 GHz/1.86 GHz	2.0 GHz/1.33 GHz	1.6 GHz / 1.9 GHz
	Core Number	2	4 / 2	2
	BIOS	AMI EFI 16Mbit	AMI UEFI 64Mbit	AMI EFI 128 Mbit
	Chipset	Intel NM10	Intel Atom SoC	Integrated Intel 8 Series Chipset
Memory	Technology	DDR3 800MHz/1066MHz	DDR3L 1066/1333MHz	DDR3L 1333/1600MHz
	Max. Capacity	4 GB	8GB	8GB
	Socket	1 x 204-pin SODIMM	1 x 204pin SODIMM	1 x 204-pin SO-DIMM
Display	Graphic Engine	DirectX 9 and OpenGL3.0 support HW Accelerated Decode: MPEG2, H.264, VC-1	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, OpenGL* 4.0 support. Full AVC/VC1/MPEG2 HW Decode
	VGA	Up to 1920 x 1200	Up to 1600 x 1200 at 60Hz	up to 1920 x 1200
	HDMI	up to 1920 x 1200 at 60Hz	1920 x 1080 at 60Hz	up to 4096 x 2304 at 24 Hz
	DisplayPort	N/A	up to 2560 x 1600 at 60Hz (Optional)	up to 3200 x 2000 at 60 Hz,
	Multiple Display	VGA+HDMI	VGA + HDMI/DP	VGA + HDMI/DP
Expansion Interface	Mini PCIe	1 x Full-size	1 x Full-size	1 x Half-size Mini PCIe 1 x Full-size Mini PCIe
	SIM Socket	1	1	1
Ethernet	Controller	GbE1: Intel 82583V, GbE2: Intel 82583V	GbE1 & GbE2: Intel i210	GbE 1 : Intel i218 GbE 2 : Intel i210
	Wake on LAN	Yes	Yes	Yes
	Speed	10/ 100/ 1000 Mbps	10/100/1000 Mbps	10/ 100/ 1000 Mbps
Audio	Audio Interface	HD Audio	HD Audio	HD Audio
	CODEC	Realtek ALC892	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" 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 Full-size, supports either mSATA or full size miniPCIe	1 x Full-size	1 x Full-size, supports either mSATA or full size miniPCIe
I/O	USB3.0	-	1	2
	USB2.0	6	3	2
	GPIO	8-bit Programmable DIO	8-bit Programmable DIO	8-bit Programmable DIO
	COM Port	4 x RS-232	2 x RS-232, 2 x RS-232/422/485	2 x RS-232, 2 x RS-232/422/485
Power	Power Type	ATX	ATX	ATX
	Power Supply Voltage	12 VDC, ± 10%	12 VDC, ± 10%	12 VDC, ± 10%
	Power Consumption (Idle)	15 Watt (with Intel Atom D2550 at 1.8 GHz)	TBD	TBD
	Power Consumption (Full Load)	18 Watt (with Intel Atom D2550 at 1.8 GHz)	TBD	TBD
Environment	Operating Temperature (air flow 0.7 m/sec)	0 ~ 45° C (32 ~ 113° F) with 0.7m/s air low	0 ~ 45° C (32 ~ 113° F) with 0.7m/s air low	0 ~ 45° C (32 ~ 113° F) with 0.7m/s air low
	Non-operating Temperature	-40~ 85° C and 95% @ 40° C 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: 5 Grms, IEC 60068-2-64, random, 5 ~ 500 Hz, 1 hr/axis.	With SSD: 5 Grms, IEC 60068-2-64, random, 5 ~ 500 Hz, 1 hr/axis.	With SSD: 5 Grms, IEC 60068-2-64, random, 5 ~ 500 Hz, 1 hr/axis.
	Shock Protection	With SSD: 50 G, IEC 60068-2-27, half sine, 11 ms duration	With SSD: 50 G, IEC 60068-2-27, half sine, 11 ms duration	With SSD: 50 G, IEC 60068-2-27, half sine, 11 ms duration
Physical Characteristics	Dimensions (W x H x D)	284.6 x 151.6 x 74.5 mm (11.2" x 5.96" x 2.9")	284.6 x 151.6 x 74.5 mm (11.2" x 5.96" x 2.9")	284.6 x 151.6 x 74.5 mm (11.2" x 5.96" x 2.9")
	Weight	2.3 kg (5.07 lb), with HDD, MIOe-210 module inside)	2.3 kg (5.07 lb), with HDD, MIOe-210 module inside)	2.3 kg (5.07 lb), with HDD, MIOe-210 module inside)
Operating System	Microsoft Windows	Windows 7, Windows XP	Windows 7, Windows 8	Windows 7, Windows 8
	Linux	Yes	Yes	Yes
Certification	EMC	CE/FCC Class A, CCC	CE/FCC Class A, CCC	CE/FCC Class A, CCC
	Safety Certifications	UL, CCC, CB	UL, CCC, CB	UL, CCC, CB

Embedded Operating Systems

Complete Solution for Rapid Application Development

Advantech provides customized Embedded OS and built-in configuration utilities on our full range MI/O Extension Solutions to facilitate system integration.



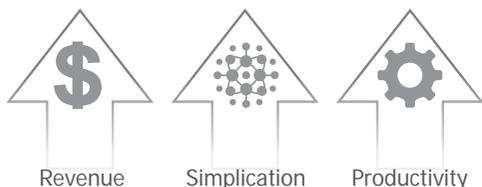
Empowered by SUSIAccess & iManager

SUSIAccess for Remote Device Management

SUSIAccess is a software application preloaded in MI/O SBC to centralize monitoring and managing of embedded devices. By providing a ready-to-use remote access solution, System Integrators can focus more on their own applications, and let SUSIAccess configure their system, monitor devices' health, and recover from system failure.

Benefits of SUSIAccess

- Monitor multiple devices remotely
- Schedule power management
- Protect systems from potential threats
- Access devices using remote desktop
- Lowers complexity for embedded system deployment
- Saves time and resources during development
- Increases system reliability
- Decreases after services cost



Intelligent Self-Management-iManager

All MI/O Compact series support iManager. iManager is an intelligent self-management cross platform tool that monitors system status for problems and reacts to take action if something is abnormal. iManager offers a boot up guarantee in critical low temperature environments so systems can automatically recover when voltages dip. iManager makes the whole system more reliable and more intelligent.

Enhance Reliability

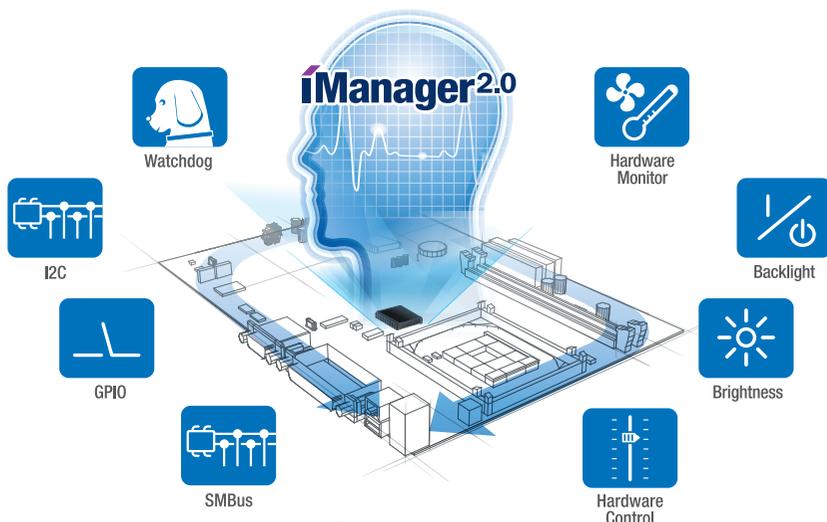
Multi-stage watchdog protection and dynamic thermal & fan control

Simplify Integration

Better performance and easier integrated cross platform API

Secure System

Real-time monitoring & response, and encrypted user EEPROM data storage



*Available in all MI/O-Compact SBC series.

Configure To Order Services

Simply Build Your Own MI/O Modular System with Advantech Configure To Order Services

Advantech Configure To Order Services (CTOS) is an eBusiness service consisting of Web-based configuration tools, manufacturing services and Advantech global services for the ultimate system configuration solution. Through CTOS service, you can configure, assembly, and test your MIO modular system with different combination of peripherals to quick deliver ready-to-use system.



Meet Your Special Needs



Two Years Global Warranty



Easy to Order, Smart Purchasing



Wide and Flexible System Solutions



Global Availability



Fast Delivery with Local Access



Reliability & Safety of Quality Assurance



OS Expertise

Regional Service & Customization Centers

China

Kunshan
86-512-5777-5666

Taiwan

Taipei
886-2-2792-7818

Netherlands

Eindhoven
31-40-267-7000

Poland

Warsaw
48-22-33-23-730

USA

Milpitas, CA
1-408-519-3898

Worldwide Offices

Greater China

China 800-810-0345
Beijing 86-10-6298-4346
Shanghai 86-21-3632-1616
Shenzhen 86-755-8212-4222
Chengdu 86-28-8545-0198
Hong Kong 852-2720-5118

Taiwan 0800-777-111
Neihu 886-2-2792-7818
Xindian 886-2-2218-4567
Taichung 886-4-2329-0371
Kaohsiung 886-7-229-3600

Asia Pacific

Japan 0800-500-1055
Tokyo 81-3-6802-1021
Osaka 81-6-6267-1887

Korea 080-363-9494
Seoul 82-2-3663-9494

Singapore
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