

# Embedded PCs

## Pioneering Design & Quick Configuration

- ✓ EPC Full Series
- ✓ Peripheral Integration
- ✓ IoT Software



Rich Expansion  
Capability



Various Form  
Factors Adoption



Fast Local CTOS  
Assembly



One-stop Peripheral  
Integration



I/O Design  
Flexibility

# ADVANTECH

*Enabling an Intelligent Planet*

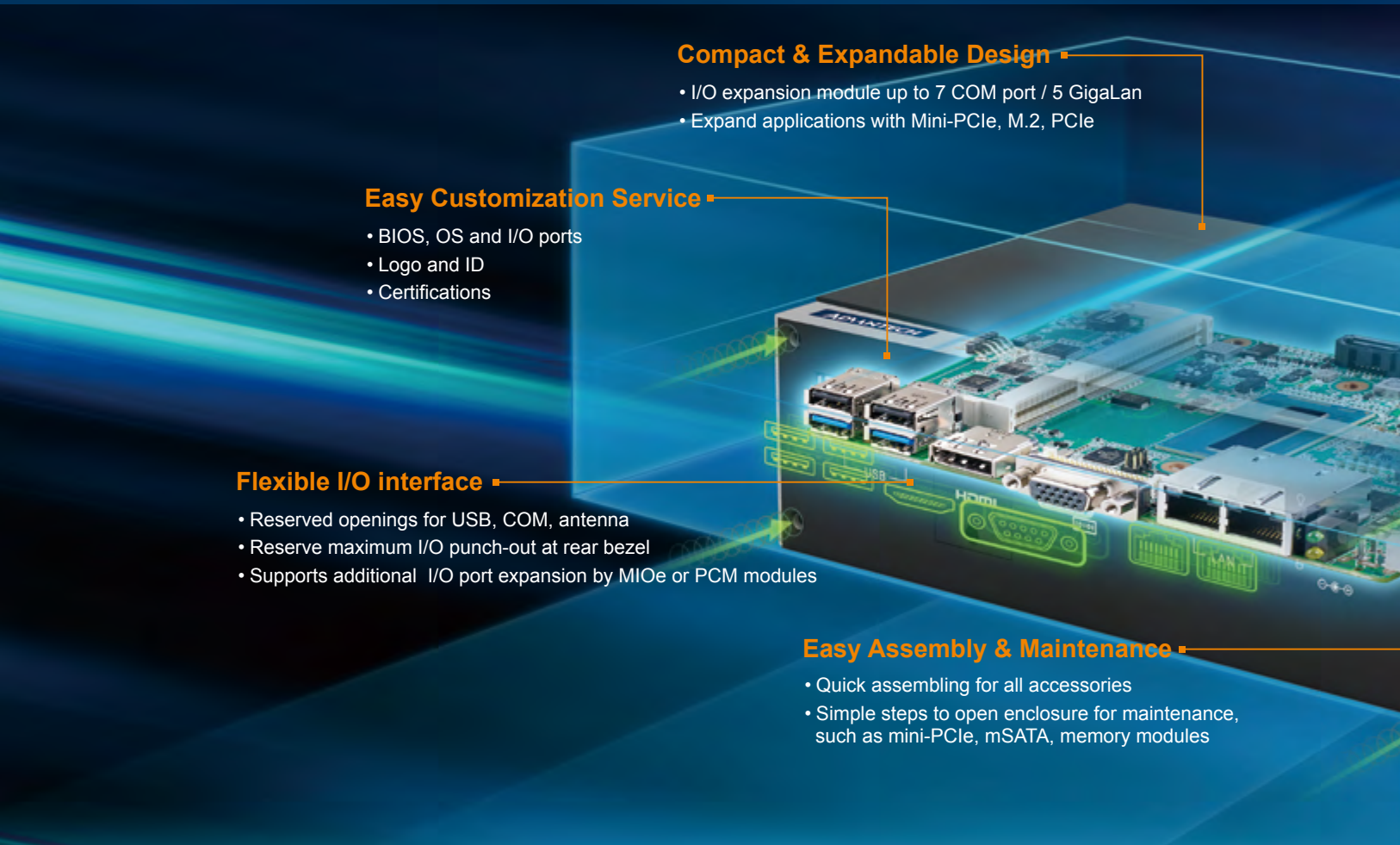
[www.advantech.com](http://www.advantech.com)

# Advantech Embedded PCs

Advantech Embedded PCs (EPC) are a full range enclosures and systems designed for 3.5" single board computers and Mini-ITX motherboards, featuring optimized mechanical design and flexible I/O interface options, assuring maximized flexibility for design-in efficiency. Advantech Embedded PCs come with various standard form factors and scalable sizes, allowing quick integration for customer applications.

## Full Range Enclosures & Systems

- Offering x86 & Arm-based systems
- Designed for 3.5" SBCs, mITX and THIN mITX boards series
- Covers low-power to extreme performance platforms
- Mini to middle-size compact design



### Easy Customization Service

- BIOS, OS and I/O ports
- Logo and ID
- Certifications

### Compact & Expandable Design

- I/O expansion module up to 7 COM port / 5 GigaLan
- Expand applications with Mini-PCIe, M.2, PCIe

### Flexible I/O interface

- Reserved openings for USB, COM, antenna
- Reserve maximum I/O punch-out at rear bezel
- Supports additional I/O port expansion by MIOe or PCM modules

### Easy Assembly & Maintenance

- Quick assembling for all accessories
- Simple steps to open enclosure for maintenance, such as mini-PCIe, mSATA, memory modules

## 6 EPC Series Positioning



### EPC-R Series

- Arm base with Linux/Android OS
- Design for 3.5" motherboards
- Industrial peripheral pre-integration



### EPC-S Series

- Featuring slim design
- Designed for entry-to-middle end 2.5" or 3.5" single board computers
- Fanless system with wall-mount, desk mount, DIN Rail support



### EPC-C Series

- Featuring compact design
- Designed for high performance 3.5" SBCs
- Fan/fanless system with wall-mount & desk mount support

## Quick Integration with Local Service



Flexible System Solutions



2 Years Global Warranty



Meet Your Special Needs



Easy to Order, Smart Purchasing



OS Expertise



Safety of Quality Assurance



Fast Delivery with Local Access



Global Availability



### Key Benefits

- Time-to-market with fully compatible boards & enclosures
- One-stop system integration
- Short design-in process
- Effectively reduce total cost of ownership

### Fanless/ Fan-based

- Fan-based: support high performance platform as Intel core i3 to i7
- Smart fan control to reduce noise
- Fanless: support Atom / ULT processors

### Multiple Mounting Capability

- Supports wall/ desk/ VESA/ Din Rail/ Rack mounting kit
- Supports bilateral VESA mounting kit to link arm and displays



### EPC-X Series

- Featuring expandable design
- Designed for 3.5" SBCs with extension boards or MIOe modules
- Fanless system with wall-mount & desk mount support



### EPC-T Series

- Featuring thin design
- Designed for thin Mini-ITX motherboards, under 1U height
- Fan/ Fanless system for customer's different application/environment



### EPC-B Series

- Featuring scalable design
- Designed for standard Mini-ITX and THIN Mini-ITX motherboards
- Reserved openings for USB, COM, antenna, and low profile PCIe card

# Peripheral Integration

Advantech EPCs are all-in-one prevalidated systems that come with Advantech peripherals (modules, industrial panels) and software (e.g., OS, Wise-PaaS/RMM, McAfee, and Acronis) to reduce your acquisition, development, and maintenance costs.



## Modules

### Storage Module



**SQF-S25 640**

- Embedded 2.5" SATA SSD
- 32GB ~ 1TB



**SQF-SHM 640**

- Half-size mSATA
- 32GB ~ 256GB

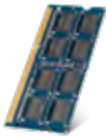
### WIFI Module



**EWM-W158F**

- 2.4GHz/5GHz Full-size
- Mini PCIe 802.11 a/b/g/n 2x2

### Memory Module



**SQR-SD3M**

- SODIMM DDR3L
- 2GB~8GB



**SQR-SD4M**

- SODIMM DDR4 2133/2400
- 4GB~16GB



**SQR-SD3I**

- SODIMM DDR3L 1333/1600/1866
- 2GB~8GB

### Graphic Card



**GFX-A3T5-71FST1**

- HD5450 512MB PCI-E1X DVI+HDMI+VGA Fansink



**GFX-AH7750L16-5C**

- HD7750 1G DDR5 PCI-EX16 DVI+HDMI+VGA Low Profile

### Extension Module



**EXM-321**

- USB to 2-Ch High Speed RS-232 Port Module



**EXM-322**

- USB to 2-Ch High Speed RS-422/RS-485 Port Module



**EXM-521**

- PCIe to 2-Ch USB 3.0 Port Module

### Adaptor



**96PSA-A60W12P2-1**

- FSP Adaptor AC to DC 100-240V 60W12V C14 TERMINAL BLOCK 2 PIN

## Panels



**IDS-3212**

- Industrial Panel Mount Monitor
- 12.1" SVGA / XGA LCD Panel



**IDS-3215**

- Industrial Panel Mount Monitor
- 15" XGA LCD Panel



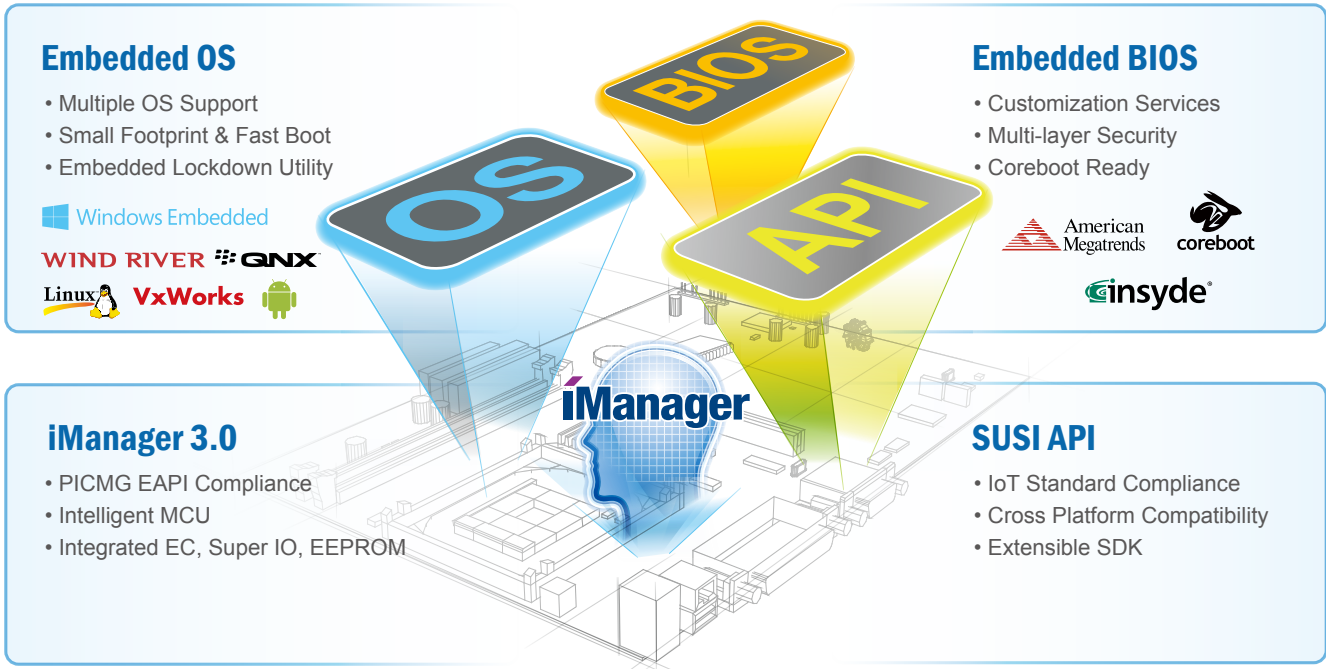
**IDS-3217**

- Industrial Panel Mount Monitor
- 17" SXGA LCD Panel

# IoT Software

## Embedded Software Capabilities

Advantech Embedded Software Services includes Embedded BIOS Services, OS Services and Industrial Cloud Services. Embedded Software Services help decrease design effort and project complexity, and accelerate product development.



## WISE-PaaS/EdgeSense- Edge Intelligence & Sensing Integration

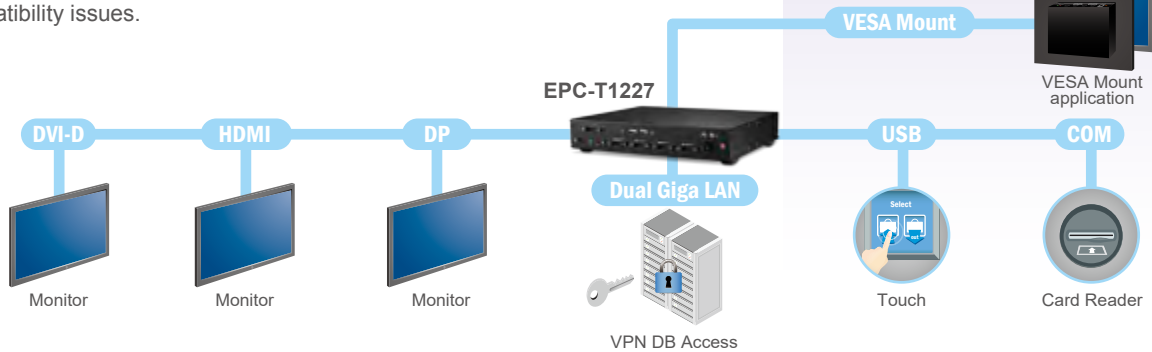
WISE-PaaS/EdgeSense is an edge intelligence and sensing integration software solution that incorporates sensor data aggregation, over-the-air software-in-time updates, edge analytics, cloud applications, and secure end-to-end data protection for fast and easy real-time device-to-cloud operational intelligence.



# Space-limited Passenger Information Display System

## Application Requirements

Passenger Information Systems (PIS) require powerful computing and graphic engine capabilities as they need to support simultaneous streamed video broadcasts and fast database updates for instant feedback. One of our customers in Europe was looking for a system which has great graphic performance and plentiful I/O for peripheral integration. Advantech's EPC-T1227 is integrated with an AMD Radeon 3rd Generation GCN supporting up to three independently operated DVI-D, HDMI, DP, 4K displays which allowed the customer to display information/video/advertisements clearly on large screens. In addition, two GbE LAN offered quick search functions from both the internal VPN DB access network and external Internet connectivity. EPC-T1227's 1U height thin design provided system integration flexibility and Advantech also offered embedded OS integration to the customer to assist application development and help with solving compatibility issues.



## EPC-T1227

- Supports AMD Merlin Falcon / Brown Falcon / Prairie Falcon processor
- Thin and fanless solution
- Supports triple display with DP/eDP/LVDS + DVI-D + HDMI
- Multiple IO ports: 6 x USB, 6 x COM ports
- Supports WISE-PaaS/RMM and Embedded Software APIs
- Supports Wall/VESA/Rack mounting Kit

# Print Monitor System

## Application Requirements

A printing industry customer needed to develop a highly sophisticated system to automate various print inspection works. The print monitoring system needed to have a highly reliable industrial PC-based system with high performance and multiple I/O connectivity for the control units. Advantech provided the EPC-B2275 empowered with an Intel® 6th/7th Generation Core™ i3/i5/i7 processor integrated with dual GbE LAN ports, multiple USB 2.0 ports, USB 3.0, as well as RS232 ports (one RS232/422/485), one expansion slot (low profile), ATX power supply or AC-DC power adaptor, and two shock resistant 2.5" drive bays.



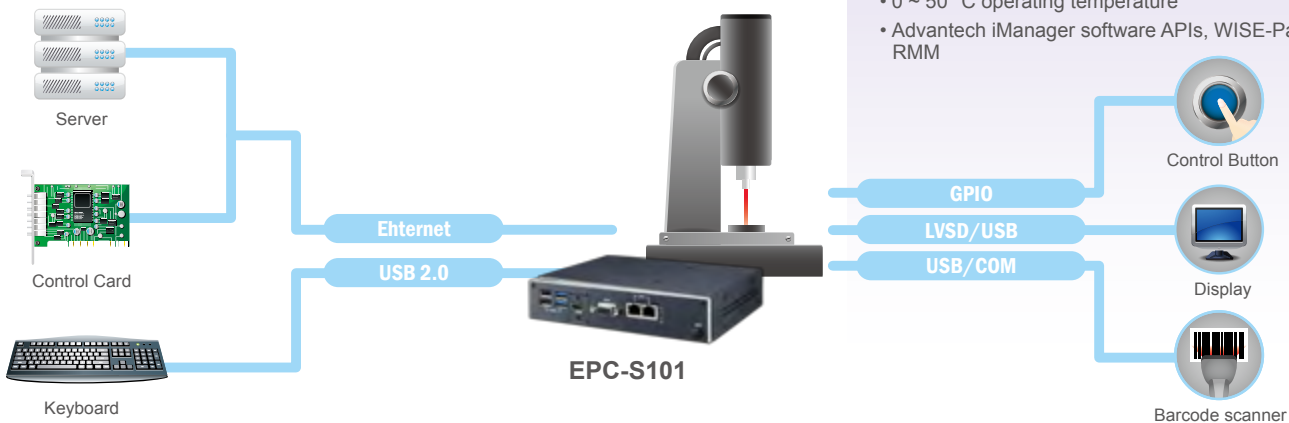
## EPC-B2275

- Supports Intel® 7th & 6th Gen Core™ i processor (LGA1151) with Intel Q170/H110 chipset
- Two 260-pin SO-DIMM up to 32GB DDR4 2133 MHz SDRAM
- Triple display of VGA/DP/HDMI
- One expansion slot (low profile)
- Two Shock Resistant 2.5" drive bays
- Reserved 4 USB, 1 COM, and 2 WLAN antenna punch outs on front panel

# Laser Labeling Machine

## Application Requirements

One of our customers with extensive experience in industry was looking for an embedded SBC with dual display interfaces for internal and external HMI, and also multiple USB and COM ports to support monitoring, control, and feedback for a laser labeling machine. Advantech EPC-S101, a compact system based on 3.5" SBC PCM-9310, equips with Intel® N3000 series platform with only 6W power consumption. EPC-S101's two side-bracket I/Os give lots flexibility for installation. EPC-S101 also can support internal connector features including LVDS/eDP, SMBus and add-on wireless modules. Advantech also provides a built-in OS of the customer's choice—Windows or Linux—in addition to software APIs and utilities that help customers quickly implement their own applications.



## EPC-S101

- Intel® N3000 Series Processor – X5-E8000 quad core, 1.04/2.0GHz
- Default memory: DDR3L-1600 2GB, maximum capacity: 8GB
- 2 x USB3.0, 4 x USB2.0, 4 x COM, DIO, audio line-in/line-out/mic
- Full-size mini-PCIe & mSATA socket for expansion, 2.5" HDD bay
- 0 ~ 50 °C operating temperature
- Advantech iManager software APIs, WISE-PaaS/RMM

# Intelligent Vending Machines

## Application Requirements

A recent Research and Markets report predicts that the global intelligent vending machines market is expected to reach US\$ 11.84 billion by 2025. One vending machine system integrator in China asked for a low power consumption PC controller with multi USB and UART ports for connecting to various kinds of peripherals, and wireless Internet access in order to reduce the cost of intelligent vending machine installation. Advantech provided an Arm-based EPC-R6410 embedded box PC that used an NXP Arm Cortex-A9 i.MX6 Dual/Quad core processor with VGA+HDMI 1080p dual display and dual audio output. Supporting WIFI/BT and 3G/4G wireless connection via internal M.2 and Mini-PCIe interface, the vending machine connected to the Internet for e-Payments, remote control, administration and management, recovery and updates. EPC-R6410's industrial quality and ultra-low power consumption design provides plentiful I/O such as 6 x USB, 5 x UART, and 8 x GPIO, making the system highly expandable and future proof



## EPC-R6410

- NXP ARM® Cortex®-A9 i.MX6 Quad Processor
- DDR3 2GB, 8GB eMMC
- Rich I/O: 1xMini-PCIe, 5xUART, 6xUSB, 1xM.2 socket,
- 8xGPIO, 1xCAN, 1xSD Slot
- M.2 and Mini-PCIe slot for wireless connectivity
- 200 mm(L) x 230 mm(W) x 50 mm(H)
- OS: Android

# Choose Your Embedded PCs with Boards

## EPC Enclosures

### EPC-C Series



### EPC-X Series



### EPC-B Series



## EPC Enclosures

Model Name		EPC-C100	EPC-C300	EPC-X200	EPC-B2000
Model Name		EPC-C100	EPC-C300	EPC-X200	EPC-B2000
Supported Form Factor		3.5" SBC	3.5" MIO-Compact	3.5" SBC	Mini ITX (170 x 170 mm)
Compatible Boards		PCM-9365	MIO-5251/5271/5272	PCM-9375/9376	AIMB-273/274/275/203/285/215/217/224/225/226/227/242/205
Thermal Solution		Fanless	Fanless for MIO-5251	Fanless	2 x fan / 1x fan (7cm/39.45CFM each)
Driver Bay	2.5" HDD and Slim ODD	1x2.5"HDD	1 x 2.5"HDD	1x2.5"HDD	2x2.5"HDD or 1x2.5" HDD + 1xSlim ODD
	Slot		1 x SD card		Low Profile add-on card
Expansion	Socket	1 x miniPCle	1 x mSATA, 1 x miniPCle	1 x mSATA, 1 x miniPCle	Depend on different Mother Board
	Front Panel I/O	2xUSB, 2xGbE, 1xVGA, 1xCOM, 1x PS/2	4xUSB, 2xGbE, 1xVGA, 1xHDMI	1xGbE, 1xVGA, 1xCOM, 1x PS/2	Up to (4) USB & (4) COM
Rear Panel I/O		4xUSB, 3xCOM, LINE-IN, LINE-OUT, MIC-IN	4xCOM, GPIO, LINE-IN, LINE-OUT, MIC-IN	4xUSB, 3xCOM, 1xGbE, Audio, GPIO, LINE-IN, LINE-OUT, MIC-IN	Depend on different Mother Board
Miscellaneous	LED Indicators	2 (Power LED, HDD LED)	2 (Power LED, HDD LED)	2 (Power LED, HDD LED)	2 (Power LED, HDD LED)
	Switch	1 (Power Switch)	1 (Power Switch)	1 (Power Switch); 1 (Reset Switch)	1 (Power Switch); 1 (Reset Switch)
Power Requirements	Power Input Type (Inlet)	Single 12V DC, 2-Pole Phoenix DC plug in	Single 12V DC, 2-Pole Phoenix DC plug in	12V & 5V (5V for SBC boot up, 12V for LVDS inverter, FAN and PC/104), 4-Pole Phoenix DC plug in	AC Inlet / DC-in Jack
	Power supply	DC input with power adaptor	DC input with power adaptor	DC input with power adaptor	AC input with 150W ATX power supply / DC input with power adaptor
Environment	Operating Temperature	0 ~ 40 °C (32 ~ 104 °F)	0 ~ 40 °C (32 ~ 104 °F)	0 ~ 40 °C (32 ~ 104 °F)	0 ~ 40 °C (32 ~ 104 °F)
	Non-operating Temperature	-20 ~ 60 °C (-4 ~ 140 °F)	-20 ~ 60 °C (-4 ~ 140 °F)	-20 ~ 60 °C (-4 ~ 140 °F)	-20 ~ 60 °C (-4 ~ 140 °F)
	Humidity	10~85% @ 40 °C, non-condensing	10~85% @ 40 °C, non-condensing	10~85% @ 40 °C, non-condensing	10~85% @ 40 °C, non-condensing
	Vibration (5 ~ 500Hz)	SSD : 30G, IEC 60068-2-27, half sine, 11 ms duration	SSD : 30G, IEC 60068-2-27, half sine, 11 ms duration	SSD : 30G, IEC 60068-2-27, half sine, 11 ms duration	1 Grms (1xHDD+1xODD); 0.5 Grms (2xHDD)
	Shock	SSD : 30G, IEC 60068-2-27, half sine, 11 ms duration	SSD : 30G, IEC 60068-2-27, half sine, 11 ms duration	SSD : 30G, IEC 60068-2-27, half sine, 11 ms duration	10G (with 11ms duration, half sine wave)
Certification		CE, FCC Class A	CE, FCC Class A	CE, FCC Class A	CE, FCC Class B
Physical Characteristics	Dimensions (W x H x D)	200 x 60 x 145 mm	188 x 54 x 150 mm	220 x 73 x 150 mm	250 x 98 x 255 mm (9.84" x 3.86" x 10.04")
	Weight	0.95kg	1.38kg	1.43kg	3.8 / 3.1 kg



# EPC Barebone Systems

## EPC-R Series



## EPC-S Series



Model Name		EPC-R4760	EPC-R4680	EPC-R6410	EPC-S101	EPC-S201
Barebone system	Description	ARM based Fan-less Barebone System	ARM based Fan-less Barebone System	ARM based Fan-less Barebone System	Fanless barebone w/ memory adoption	Fanless barebone system
Processor System	Compatible Motherboard	RSB-4760	RSB-4680	RSB-6410	PCM-9310	MIO-2360
	Thermal Solution	Fanless	Fanless	Fanless	Fanless	Fanless
	CPU	Qualcomm Snapdragon™ 410 APQ8016 ARM Cortex-A53 1.2 GHz	Rockchip ARM Cortex-A17 RK3288 Quad core 1.6 GHz	NXP ARM Cortex-A9 i.MX6 1 GHz	Intel Celeron N3160/N3060, Atom x5-E8000	Intel Celeron N3350 1.10GHz
	BIOS	Advantech boot loader	Advantech boot loader	Advantech boot loader	AMI UEFI 64Mb SPI	AMI UEFI 64Mb SPI
Memory	Socket	On-board	On-board	On-board	1 x 204-pin SODIMM	1 x 204-pin SODIMM
	Technology	DDR3L-1066	DDR3L-1333	DDR3L-1333	DDR3L-1600	DDR3L-1866
	Max. Capacity	2GB	2GB	2GB	Default 2GB adopted, up to 8GB	8GB
Graphics	Chipset Integrated	Adreno™ 306 GPU	ARM Mali T764 GPU	Vivante GC2000 GPU	Intel Gen8LP	Intel Gen9LP
Storage	2.5" HDD Bay	8GB eMMC NAND Flash for O.S. 4MB SPI NOR Flash for ADV.	8GB eMMC NAND Flash for O.S. and Advantech boot loader	8GB eMMC NAND Flash for O.S. 4MB SPI NOR Flash for ADV.	Room for 1 x 2.5" SSD, max. 9.5mm height	-
	mSATA Slot	-	-	-	Full size SATAIII (opt. mPCIe)	Half size SATAIII
Ethernet	Interface	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps
	Controller	Microchip LAN7500	TI DP83867	NXP i.MX6 integrated RMII	LAN1: Realtek RTL8111E LAN2: Realtek RTL8111E	Intel i210
	Connector	RJ45	RJ45	RJ45	RJ-45 x 2	RJ45
Audio	Codec	PM8916	Realtek ALC5660	SGTL5000	Realtek ALC892	Realtek ALC888
Internal expansion Slot	Mini-PCIe	1 x Full-size	1 x Full-size	1 x Full-size	Full size PCIe Gen2 (opt. 2 slots)	Full size PCIe Gen2
	M.2	1 x M.2 Key E slot	1 x M.2 Key E slot	1 x M.2 Key E slot	1 (Option)	-
	SIM slot	1	1	1	1 (Option)	-
	SD slot	1 x SD slot	1 x Micro SD slot	1 x SD slot	-	-
Front Panel	DP++	-	-	-	-	-
	DP/HDMI	1 x HDMI 1.4 up to 1920 x 1080	-	-	HDMI 1.4b up to 2560 x 1600	Opt. HDMI 1.4b up to 3840 x 2160
	VGA	-	-	-	1	1
	DVI	-	-	-	-	-
	COM	1 x 4 wires RS-232/422/485	2 x 4-wire RS-232, 2 x 8-wire RS-232	2 x 4-wire RS-232 1 x debug port	-	1 (RS-232/422/485)
	LAN	1	-	-	2	1
	USB	2 USB 2.0	3 USB2.0	-	4 (USB2.0 x 2, USB3.0 x 2)	2 x USB3.0
	Audio Jack	-	-	-	-	Line-in/Line-out
	Antenna (optional)	2 x antenna hole	3 x antenna hole	2 x antenna hole	up to 1	up to 2
	Rear Panel/ Side Panel	DP++	-	-	-	-
DP/HDMI		-	1 x HDMI 2.0 up to 3840x2160	1 x HDMI 1.4 up to 1920 x 1080	-	-
VGA		-	1	1	-	-
DVI		-	-	-	-	-
COM		-	1 x 4-wire RS232/RS485 1 x 2-wire RS232/Debug port	1 x 4-wire RS232/RS485 1 x 4-wire RS232	4 (2 x RS-232, 2 x RS-232/422/485)	1 (RS-232/422/485)
LAN		-	1	1	-	-
USB		2 USB 2.0	2 x USB2.0 Host 1 x USB2.0 OTG	6 x USB2.0 Host	2 (USB2.0)	-
Audio Jack		-	1 x Line out 1 x Mic in	1 x Line out 1 x Mic in	Line-in, Line-out, Mic-in	-
GPIO		-	8 x GPIO by DB9 CONN	-	8-bit	8-bit
Antenna (optional)		3 x antenna hole	2 x antenna hole	2 x antenna hole	up to 1	-
Miscellaneous	LED Indicators	2 (Power LED, WLAN LED)	2 (Power LED, WLAN LED)	1 Green LED for system power	2 (Power LED, HDD LED)	1 (Power LED)
	Switch	NA	1 (Power Switch); 1 (Reset Switch)	1 x Reset button 1 x Power button	1 (Power Switch)	1 (Power Switch)
	Circular Cutouts	-	-	-	1	-
Mounting		Wall mount	Wall mount	Wall mount	Desk mount, VESA mount, DIN rail	Desk mount, Wall mount, DIN rail
Power Requirements	Power Voltage	9-36V	12V	12V	12V DC-in	12V DC-in
	Power Input Type (Inlet)	DC-in	DC-in	DC-in	Phoenix DC plug-in	Phoenix DC plug-in
	Consumption	TBD	TBD	9W (heavy loading burning)	4.5W (idle with Celeron N3060)	TBD
Environment	Operating Temperature	0 ~ 40 °C	0 ~ 50 °C	0 ~ 55 °C	0 ~ 50 °C (32 ~ 122 °F)	0 ~ 50 °C (32 ~ 122 °F)
	Non-operating Temperature	-40 ~ 85 °C	-40 ~ 85 °C	-40 ~ 85 °C	-40 ~ 85 °C (-40 ~ 185 °F)	-40 ~ 85 °C (-40 ~ 185 °F)
	Humidity	5 ~ 95% Relative Humidity, non-condensing	5 ~ 95% Relative Humidity, non-condensing	5 ~ 95% Relative Humidity, non-condensing	Operating: 40 °C @ 95% RH, non-condensing Storage: 60 °C @ 95% RH, non-condensing	Operating: 40 °C @ 95% RH, non-condensing Storage: 60 °C @ 95% RH, non-condensing
	Vibration (5 ~ 500Hz)	IEC60068-2-64 random 2.0Grms IEC60068-2-6 sinusoidal 2.0G	IEC60068-2-64 random 2.0Grms IEC60068-2-6 sinusoidal 2.0G	IEC60068-2-64 random 2.0Grms IEC60068-2-6 sinusoidal 2.0G	IEC60068-2-64 random 3.0Grms IEC60068-2-6 sinusoidal 2.0G	With Desk/Wall Mount/ DIN Rail: 3 Grms, IEC 60068-2-64, random vibration, 5 ~ 500 Hz, 1 hr/axis
	Shock	IEC60068-2-27 half-sine 10G/11ms	IEC60068-2-27 half-sine 10G/11ms	IEC60068-2-27 half-sine 10G/11ms	IEC60068-2-27 half-sine 30G/11ms	IEC60068-2-27 half-sine 30G/11ms
Certification		CE/FCC Class B CB/UL/CCC/BSMI	CE/FCC Class B, CCC	CE/FCC Class B CCC/BSMI	CE/FCC Class B CB/UL/CCC/BSMI	CE/FCC Class B CB/UL/CCC/BSMI/KCC
	Physical Characteristics					
Physical Characteristics	Dimensions (W x H x D)	188 x 150 x 39 mm	190 x 150 x 43 mm	200 x 230 x 50 mm	188 x 39 x 150 mm	134 x 100 x 44mm
	Weight	1.2KG	TBD	2.26KG	0.95kg	0.6kg

## EPC-T Series



Model Name		EPC-T1215	EPC-T1217	EPC-T1231	EPC-T1232	EPC-T2285
Barebone system	Description	Fan-base / Fanless barebone, w/ adapter, w/o HDD, memory	Fanless barebone, w/ adapter, w/o SSD, memory	Fan-based / Fanless barebone, w/ adapter, w/o HDD, memory	Fanless barebone, w/ adapter, w/o SSD, memory	Fan-base barebone, w/o adapter, HDD, memory
Processor System	Compatible Motherboard	AIMB-215D-S6B1E	AIMB-217D-S6A1E	AIMB-231G2-U5A1E AIMB-231G2-U3A1E	AIMB-T12325W-00Y10	AIMB-285G2-00A1E
	Thermal Solution	1x chassis fan (4cm/23.8CFM)/ Fanless	Fanless	1x chassis fan (4cm/23.8CFM)/ Fanless	Fanless (0.7 m/s air flow)	2x chassis fan (4cm/23.8CFM)
	CPU	Intel® Bay Trail Quad core Celeron™ J1900 (on board)	Intel Pentium N4200 (on board)	Intel Core i3-5010U / i5-5350U (on board)	Intel Core™ i5-6300U (on board)	Intel® 6th/7th Gen Core™ i processor (LGA1151)
	BIOS	AMI 16 Mbit SPI	AMI 128 Mbit SPI	AMI 128 Mbit SPI	AMI uEFI 16 Mbit	AMI EFI 128 Mbit, SPI
Memory	Socket	2 x 204-pin DDR3 SODIMM (Non-ECC)	2 x 204-pin SO-DIMM (Non-ECC)	2 x 204-pin DDR3 SODIMM (Non-ECC)	1 x 260-pin DDR4 SO-DIMM (Non-ECC)	260 PIN DDR4 SO-DIMM (Non-ECC)
	Technology	DDR3L 1066/1333 MHz SDRAM	Dual channel DDR3L 1866 MHz SDRAM	DDR3L 1600 MHz SDRAM	DDR4 2133 MHz SDRAM	Dual Channel DDR4 2133 MHz SDRAM
	Max. Capacity	8 GB/up to 4 GB per SODIMM	8 GB/8 GB per SO-DIMM	16 GB/up to 8 GB per SODIMM	8 GB per SO-DIMM	32 GB/up to 16 GB per SODIMM
Graphics	Chipset Integrated	Integrated Intel HD Graphics	Intel Gen 9 Graphics Engines and media encode/decode engine	Intel® HD Graphics 6000	Intel® HD Graphics, Supports OpenGL 5.0, DirectX11.2, OpenCL 2.1	Intel® HD Graphics, Supports OpenGL 5.x, DirectX12, OpenCL 2.X
Storage	2.5" HDD Bay	1 (supports 2.5" HDD/SSD, max 9.5 mm height)	1 (supports 2.5" SSD, max 9.5 mm height)	1 (Fan-based supports 2.5" HDD/ Fanless supports 2.5" SSD, max 9.5 mm height)	1 (supports 2.5" SSD, max 9.5 mm height)	1 (supports 2.5" HDD/SSD, max 9.5 mm height)
	mSATA Slot	1 (share w/ full size Mini-PCIe slot)	1 (share w/ full size Mini-PCIe slot)	1 (share w/ full size Mini-PCIe slot)	1 (share w/ full size Mini-PCIe slot)	1+1 (Full-size, Half-size)
Ethernet	Interface	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps
	Controller	LAN1: Realtek RTL8111E LAN2: Realtek RTL8111E	LAN1: Realtek 8111G LAN2: Realtek 8111G	LAN1: Intel PHY i218-LM LAN2: Intel i210	LAN1: Intel Clarkville I219LM GbE PHY LAN2: Intel Springville I211 GbE	LAN1: Realtek RTL8111G LAN2: Realtek RTL8111G
	Connector	2 (RJ-45)	2 (RJ-45)	2 (RJ-45)	2 (RJ-45)	2 (RJ-45)
Audio	Codec	Realtek ALC892, High Definition Audio (HD)	Realtek ALC888S, High Definition Audio (HD)	Realtek ALC892, High Definition Audio (HD)	Realtek ALC892, High Definition Audio (HD)	Realtek ALC892, High Definition Audio (HD)
Internal expansion Slot	Mini-PCIe	1+1 (Full-size, Half-size)	1 (Full-size)	1+1 (Full-size, Half-size)	1+1 (Full-size, SIM card holder)	1+1 (Full-size, Half-size)
	M.2	-	1 x M.2 Key E slot (2230)	-	-	-
	SIM slot	1	1	1	1	1
	SD slot	-	-	-	-	-
Front Panel	DP++	-	-	-	-	-
	DP/HDMI	-	-	-	-	-
	VGA	-	-	-	-	-
	DVI	-	-	-	-	-
	COM	5 (RS-232)	5 (4 x RS-232, 1 x RS232/422/485, 1 support 5V/12V)	2 (1 x RS-232, 1 x RS-232/422/485)	2 (1 x RS-232, 1 x RS-232/422/485)	2 (1x RS-232/422/485, 1 x RS-232/422/485 with 5V/12V)
	Lan	-	-	-	-	-
	USB	4 (USB2.0)	4 (USB2.0; optional)	2 (USB2.0)	2 (USB2.0)	4 (USB2.0)
	Audio Jack	2 (Line-Out, Mic-In)	2 (Line-Out, Mic-In)	2 (Line-Out, Mic-In)	2 (Line-Out, Mic-In)	2 (Line-Out, Mic-In)
	Antenna (optional)	up to 2	up to 2	up to 2	up to 2	up to 2
	GPIO	8 bit	8 bit	8 bit	8 bit	8 bits (Optional)
Rear Panel	DP++	1	-	1	1	1
	DP/HDMI	-	1/1	1	1 (HDMI)	1 (HDMI 1.4)
	VGA	1	1	-	-	-
	DVI	-	-	-	-	-
	COM	1 (RS-232)	1 (RS232)	-	-	-
	Lan	2 (RJ-45)	2 (RJ-45)	2 (RJ-45)	2 (RJ-45)	2 (RJ-45)
	USB	1 (USB3.0); 3 (USB2.0)	4 (USB3.0)	4 (USB3.0)	4 (USB3.0)	4 (USB3.0)
	Audio Jack	1 (Line-Out)	1 (line out)	2 (Line-Out, Mic-in)	2 (Line-Out, Mic-in)	2 (Line-Out, Mic-in)
	GPIO	8 bit	8 bit	8 bit	8 bit	8 bits (Optional)
	Antenna (optional)	up to 2	up to 2	up to 2	up to 2	up to 2
Miscellaneous	LED Indicators	2 (Power LED, HDD LED)	2 (Power LED, HDD LED)	2 (Power LED, HDD LED)	2 (Power LED, HDD LED)	2 (Power LED, HDD LED)
	Switch	1 (Power Switch); 1 (Reset Switch)	1 (Power Switch); 1 (Reset Switch)	1 (Power Switch); 1 (Reset Switch)	1 (Power Switch); 1 (Reset Switch)	1 (Power Switch); 1 (Reset Switch)
	Circular Cutouts	-	-	-	-	1 (Reserved for internal cable)
Mounting	Wall mount, VESA mount, Rack mount, DIN rail	Wall mount, VESA mount, Rack mount, DIN rail	Wall mount, VESA mount, Rack mount, DIN rail	Wall mount, VESA mount, Rack mount, DIN rail	Wall mount, VESA mount, Rack mount	
Power Requirements	Power Voltage	12V DC-in	12V DC-in	12V DC-in	12V DC-in	12V DC-in
	Power Input Type (Inlet)	2.5Ø DC jack	2.5Ø DC jack	2.5Ø DC jack	2.5Ø DC jack	DC jack (2.5Ø with locked design)
Environment	Consumption	10.17W (idle with Intel Celeron J1900)	With Desk/Wall Mount/ DIN Rail: 3 Grms, IEC 60068-2-64, random vibration, 5 ~ 500 Hz, 1 hr/axis	14.4W (idle with Intel ULT i5 Processor) 13.4W (idle with Intel ULT i3 Processor)	21.5W (i5-6300U, Max load)	89.36W (idle with Intel i7-6700 Processor)
	Operating Temperature	Fan-base: 0 ~ 50 °C (32 ~ 122 °F) Fanless: 0 ~ 40 °C (32 ~ 104 °F)	Fanless: 0~45 °C	Fan-base: 0 ~ 50 °C (32 ~ 122 °F) Fanless: 0 ~ 45 °C (32 ~ 104 °F)	0 ~ 45 °C (32 ~ 113 °F)	HDD: 0 ~ 45 °C (32 ~ 113 °F) SSD: 0 ~ 50 °C (32 ~ 122 °F)
	Non-operating Temperature	-40 ~ 85 °C (-40 ~ 185 °F)	-40 ~ 85 °C (-40 ~ 185 °F)	-40 ~ 85 °C (-40 ~ 185 °F)	-20 ~ 60 °C (-4 ~ 140 °F)	-40 ~ 85 °C (-40 ~ 185 °F)
	Humidity	10~95% @ 40°C, non-condensing	10~95% @ 40°C, non-condensing	10~95% @ 40°C, non-condensing	10~95% @ 40°C, non-condensing	10~95% @ 40°C, non-condensing
	Vibration	1 Grms (HDD x 1); 3 Grms (SSD x 1)	3 Grms (SSD x 1)	1 Grms (HDD x 1); 3 Grms (SSD x 1)	3 Grms (SSD x 1)	1 Grms (HDD x 1); 3 Grms (SSD x 1)
Shock	-	-	-	-	-	
Certification	CE, FCC, CCC	CE, FCC	CE, FCC	CE, FCC	CE/FCC/CCC	
Physical Characteristics	Dimensions (W x H x D)	250 x 43 x 210 mm (9.84" x 1.69" x 8.27")	250 x 43 x 210 mm (9.84" x 1.69" x 8.27")	250 x 43 x 210 mm (9.84" x 1.69" x 8.27")	250 x 43 x 210 mm (9.84" x 1.69" x 8.27")	250 x 44.2 x 225 mm (9.84" x 1.74" x 8.85")
	Weight	3.1kg	3.1kg	3.1kg	3.1kg	3.68kg

## EPC-B Series



Model Name		EPC-T3285	EPC-T3217	EPC-B2203	EPC-B2281	EPC-B2205	EPC-B2275
Barebone system	Description	Fan-base barebone, w/o HDD, memory	Fanless barebone, w/ adapter, w/o SSD, memory	Fan-base barebone, w/ 150W PSU, w/o HDD, memory	Fan-base barebone, w/ 180W PSU, w/o HDD, memory	Fan-base barebone, w/ 150W PSU, w/o HDD, memory	Fan-base barebone, w/ 150W PSU, w/o HDD, memory
Processor System	Compatible Motherboard	AIMB-285G2-00A1E	AIMB-217D-S6A1E	AIMB-203G2-00A1E	AIMB-2420G2-H7A1E	AIMB-205G2-00A1E	AIMB-275G2-00A1E
	Thermal Solution	2x chassis fan (4cm/23.8CFM)	Fanless (0.7 m/s air flow)	2xchassis fan (7cm/28CFM)	2xchassis fan (7cm/28CFM)	2xchassis fan (7cm/28CFM)	2xchassis fan (7cm/28CFM)
	CPU	Intel® 6th/7th Gen Core™ i processor (LGA1151)	Supports Intel Pentium, Celeron Quad Core & Dual Core processor	Intel® 4th Gen Core™ i processor (LGA1150)	Support Intel® Core i7/i5/i3/ Pentium / Celeron desktop processor (LGA) with Intel H61 chipset	Intel® 7th Gen Core™ & 6th Gen Core™ i processor / Pentium / Celeron (LGA1151) with Intel H110 chipset	Intel® 7th & 6th Gen Core™ i processor (LGA1151)
	BIOS	AMI EFI 128 Mbit SPI	AMI 128 Mbit SPI	AMI EFI 64 Mbit SPI	AMI EFI 32 Mbit SPI	AMI EFI 128 Mbit SPI	AMI EFI 128 Mbit, SPI
Memory	Socket	2 x 260 Pin DDR4 SO-DIMM	2 x 204-pin SO-DIMM (Non-ECC)	2 x 204-pin DDR3 SO-DIMM (Non-ECC)	2 x 204-pin DDR3 SO-DIM	2 x 260-pin DDR4 SO-DIMM	2 x 260-pin DDR4 SO-DIMM (Non-ECC)
	Technology	Dual Channel DDR4 2133 MHz SDRAM	Dual channel DDR3L 1866 MHz SDRAM	Dual Channel DDR3/DDR3L @1.5V 1333/1600 MHz SDRAM	Dual Channel DDR3 1066/1333/1600 MHz SDRAM	Dual channel DDR4 2400/2133 MHz non ECC SDRAM (Only supports DDR4 2133 MHz SDRAM for SKL-S CPU)	Dual Channel DDR4 2133 MHz SDRAM
	Max. Capacity	32GB (up to 16GB per SO-DIMM)	8 GB/8 GB per SO-DIMM	16 GB/up to 8 GB per SODIMM	8 GB/4 GB per SO-DIMM	Up to 32GB (16GB per SO-DIMM)	32 GB/up to 16 GB per SODIMM
Graphics	Chipset Integrated	Intel® HD Graphics, Supports OpenGL 5.x, DirectX12, OpenCL 2.X	Intel Gen 9 Graphics Engines and media encode/decode engine	Integrated Gfx Gen. 7.5, Supports DirectX11.1, OpenGL 4.0 and OpenCL 1.2	Intel® HD P3000/4000 graphics engine supports up to DirectX 11, Shader Model 4.1 and OpenGL 3.0	Integrated Intel® HD Graphics 530	Intel® HD Graphics, Supports OpenGL 5.x, DirectX12, OpenCL 2.X
Storage	2.5" HDD Bay	2 (supports 2 x 2.5" HDD/SSD, or 1 3.5" HDD)	"2 (supports 2 x 2.5" HDD/SSD, or 1 3.5" HDD)"	2 (supports 2 x 2.5" HDD/SSD, or 1 slim ODD & 1 x 2.5" HDD/SSD)	2 (supports 2 x 2.5" HDD/SSD, or 1 slim ODD & 1 x 2.5" HDD/SSD)	2 (supports 2 x 2.5" HDD/SSD, or 1 slim ODD & 1 x 2.5" HDD/SSD)	2 (supports 2 x 2.5" HDD/SSD, or 1 slim ODD & 1 x 2.5" HDD/SSD)
	mSATA Slot	1 (share w/ full size Mini-PCIe slot)	1 (F/S with SIM card holder)	1 (Full-size, Half size)	1 (share w/ full size Mini-PCIe slot)	1 (share w/ full size Mini-PCIe slot)	1 (Full-size, Half size)
Ethernet	Interface	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps
	Controller	LAN1: Realtek RTL8111G LAN2: Realtek RTL8111G	" LAN1: Realtek 8111G LAN2: Realtek 8111G "	LAN1: Realtek 8111E LAN2: Realtek 8111E	LAN1: RTL8111E LAN2: RTL8111E	LAN1: Realtek RTL8111G LAN2: Realtek RTL8111G	LAN1: Intel i219LM LAN2: Intel i211AT
	Connector	2 (RJ-45)	2 (RJ-45)	2 (RJ-45)	2 (RJ-45)	2 (RJ-45)	2 (RJ-45)
Audio	Codec	Realtek ALC892, High Definition Audio (HD)	"Realtek ALC892, High Definition Audio (HD)"	Realtek ALC892, High Definition Audio (HD)	Realtek ALC892, High Definition Audio (HD)	Realtek ALC892, High Definition Audio (HD)	Realtek ALC892, High Definition Audio (HD)
Internal expansion Slot	Mini-PCIe	1+1 (Full-size, Half-size) 1 PCIe slot (Full height)	1 (Full-size)	2 (1 x F/S; 1 x H/S) DP++: 0	1 (Full-size)	1 (Full-size)	1+1 (Full-size, Half-size)
	M.2	-	1 E key for wireless module (Type: 2230)	-	-	1 x M.2 Key B slot (2242)	1 x M.2 Key B slot
	SIM slot	1	1	1	-	-	-
	SD slot	-	-	-	-	-	-
Front Panel	DP++	-	-	-	-	-	-
	DP/HDMI	-	-	-	-	-	-
	VGA	-	-	-	-	-	-
	DVI	-	-	-	-	-	-
	COM	2 (1x RS-232/422/485, 1 x RS-232/422/485 with 5V/12V)	"4 (1x RS-232/422/485, 3 x RS-232)"	4 (RS232; optional)	4 (Optional)	4 (Optional)	1 (RS232/422/485)
	LAN	-	-	-	-	-	-
	USB	4 (USB2.0)	4 (USB2.0)	4 (USB2.0; optional)	2 (USB2.0; Optional)	2 (USB2.0; Optional)	4 (USB2.0; optional)
	Audio Jack	2 (Line-Out, Mic-In)	2 (Line-Out, Mic-In)	-	-	-	-
	Antenna (optional)	up to 2	up to 2	up to 2	up to 2	up to 2	up to 2
	DP++	1	-	-	-	-	-
Rear Panel	DP/HDMI	1 (HDMI1.4)	1/1	1/0	-	1/0	1/1
	VGA	-	1	1	1	1	1
	DVI	-	-	1	-	1 (DVI-D)	-
	COM	-	-	1 (RS232, supports 5V/12V)	2 (1 x RS232, 1 x RS232/422/485)	-	1 (RS232, supports 5V/12V)
	LAN	2 (RJ-45)	2 (RJ-45)	2(RJ-45)	2 (RJ-45)	2 (RJ-45)	2(RJ-45)
	USB	4 (USB3.0)	4(USB3.0)	4(USB3.0)	6 (USB 2.0)	4 (USB3.0); 4 (USB2.0)	4(USB3.0)
	Audio Jack	2 (Line-Out, Mic-in)	1 (Line-Out)	3 (Mic in, Line out, Line in)	2 (Line-Out, Mic-in)	3 (line-in, line-out, mic-in)	3 (Mic in, Line out, Line in)
	GPIO	8 bits (Optional)	8 bits (optional)	8 bits (Optional)	8 bits (Optional)	8 bits (Optional)	8 bits (Optional)
	Antenna (optional)	up to 2	up to 2	up to 2	-	-	-
	LED Indicators	2 (Power LED, HDD LED)	2 (Power LED, HDD LED)	2 (Power LED, HDD LED)	2 (Power LED, HDD LED)	2 (Power LED, HDD LED)	2 (Power LED, HDD LED)
Miscellaneous	Switch	1 (Power Switch); 1 (Reset Switch)	1 (Power Switch); 1 (Reset Switch)	1 (Power Switch); 1 (Reset Switch)	1 (Power Switch); 1 (Reset Switch)	1 (Power Switch); 1 (Reset Switch)	1 (Power Switch); 1 (Reset Switch)
	Circular Cutouts	-	-	-	-	-	-
Mounting	Wall mount, Rack mount	Wall mount, Rack mount	Wall mount	Wall mount	Wall mount	Wall mount	
Power Requirements	Power Voltage	12V DC-in (Optional 9-36V)	12V DC-in (Optional 9-36V)	Power Voltage: 100V-240V AC input	Power Voltage: 100V-240V AC input	Power Voltage: 100V-240V AC input	Power Voltage: 100V-240V AC input
	Power Input Type (Inlet)	DC jack (2.50)	DC jack (2.50)	Power Code input	Power Code input	Power Code input	Power Code input
	Consumption	TBD	TBD	TBD	TBD	TBD	TBD
Environment	Operating Temperature	0 ~ 40 °C (32 ~ 104 °F)	0 ~ 45 °C (32 ~ 113 °F)	0 ~ 40 °C	0 ~ 40 °C (32 ~ 104 °F)	0 ~ 40 °C (32 ~ 104 °F)	0 ~ 40 °C
	Non-operating Temperature	-20 ~ 60 °C (-4 ~ 140 °F)	-20 ~ 60 °C (-4 ~ 140 °F)	-29 ~ 60 °C	-20 ~ 60 °C (-4 ~ 140 °F)	-20 ~ 60 °C (-4 ~ 140 °F)	-29 ~ 60 °C
	Humidity	10-95% @ 40 °C, non-condensing	"10-95% @ 40°C, non-condensing"	10-95% @ 40°C, non-condensing	10-95% @ 40°C, non-condensing	10-95% @ 40°C, non-condensing	10-95% @ 40°C, non-condensing
	Vibration (5 ~ 500Hz)	1 Grms (2.5" HDD x 1); 0.5 Grms (HDD x 2, 3.5" HDD x 1)	"1 Grms (2.5" HDD x 1); 0.5 Grms (HDD x 2, 3.5" HDD x 1"	1 Grms (HDD*1+ODD*1); 0.5 Grms (HDD*2)	1 Grms (HDD*1+ODD*1); 0.5 Grms (HDD*2)	1 Grms (HDD*1+ODD*1); 0.5 Grms (HDD*2)	1 Grms (HDD*1+ODD*1); 0.5 Grms (HDD*2)
Shock	-	-	-	-	-	-	
Certification	CE, FCC	CE/FCC	CE/FCC/CCC	CE/FCC/CCC	CE, FCC	CE/FCC/CCC	
Physical Characteristics	Dimensions (W x H x D)	330 x 44 x 270 mm (13" x 1.73" x 10.62")	"330 x 44 x 270 mm (13" x 1.73" x 10.62")"	250 x 98 x 255 mm (9.84" x 3.86" x 10.04")	250 x 98 x 255 mm (9.84" x 3.86" x 10.04")	250 x 98 x 255 mm (9.84" x 3.86" x 10.04")	250 x 98 x 255 mm (9.84" x 3.86" x 10.04")
	Weight	5.68kg	5.68kg	3.8kg	3.8kg	3.8kg	3.8kg

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