

Embedded PCs

Pioneering Design & Quick Configuration Support

- ／ ***EPC Full Series***
- ／ ***Integrated software***
- ／ ***Vertical-oriented solutions***



ADVANTECH

Enabling an Intelligent Planet

www.advantech.com

Strong Edge AI and Computing Proponents

Growing competition among SI has made functionality and reducing total cost of ownership (TCO) two of several considerations that attract significant business opportunities. Accordingly, embedded PCs deliver the latest technologies and optimized system designs to lower the TCO for diverse applications while managing both direct and indirect costs. Successful solutions integrate hardware and software components to tackle complex tasks while supporting new edge computing and AI. Edge computers leverage different components for different tasks purposes to ensure stable operation in diverse environments. As such, Advantech embedded PCs are crucial components in industrial edge AI computing applications as they enable product deployment and minimize maintenance. Advantech's high-quality embedded PCs are leaders in the industrial edge computer field.



**Edge
& Com**

Slim and Compact

Designed to fit into applications with limited working space without sacrificing the critical functionality needed for edge AI computing.

EPC-T Series

- 1U Slim EPC with diverse I/O for commonly requested options
- Equipped with CPU from AMD to Intel® Core™ i
- Compact design for T4000 with 180 x 180 mm footprint
- Scalable T3000 design for 1 x full-height PCIe expansion

EPC-U Series

- Fan-less and compact systems with 60s easy maintenance design
- Equipped with Intel® Core™ i7 CPU
- Wireless connectivity ready with valid certifications
- Rugged mechanical design for industrial EMC and safety requirements

Solution-ready hardware platforms that reduce total cost of ownership and enhance overall quality



Industrial-Grade PC-Based Solutions

Reliability, longevity, and operational efficiency

- Comprehensive, tested CPU and peripheral offerings
- IEC regulation compliance for critical environments
- 7-year longevity support and longer technical services from Advantech worldwide offices



Value-Added Software

Predictive, preventive, and preemptive

- DeviceOn: remote monitoring and control for hardware and software with error-free operation
- Optimized time management with power scheduling mechanism
- SUSI API: facilitates development process to save R&D expenditures



Fast Configuration Design

Effectiveness, efficiency, and reduced time-to-market

- Optimal mechanical design for easy assembly and maintenance
- Diverse OS support with image porting service (Linux, Yocto, Ubuntu, and Win10)
- Global CTOS support for fast assembly services

AI
Computing



Ultimate Performance

Designed to carry different expansion types to boost performance while handling complex AI computing and graphics processing

EPC-B Series

- Capacity to accommodate powerful AI graphic cards
- Equipped with CPU from Intel® Core™ i up to Intel® Xeon® and AMD EPYC™ Series
- Thermal designs for heavy AI workloads
- Rugged mechanical design for industrial EMC and safety requirements

EPC-P Series

- Capacity to accommodate PCIE GPU cards
- 2U height mechanical housing
- Diverse expansion options for different scenarios
- Industrial-grade mechanical design

DeviceOn

Numerous IoT Devices Management Utility



Effective AI-based edge computing networks require numerous devices with disparate endpoints on various sites. Maintaining this network is vital to ensuring adequate workflow and service quality. Indeed, secure edge platforms are the prerequisite of successful unmanned operations. Advantech Embedded PCs come pre-installed with DeviceOn IoT device management software for remote management and edge protection. DeviceOn enables effective and efficient tracking, monitoring, and management of edge devices. Advantech Embedded PCs have the potential to enhance hardware operating quality using DeviceOn software packages and empower customers to develop innovative digital solutions.

Comprehensive Management	Remote Access	Efficient Operations
<ul style="list-style-type: none">• Devices status• Peripherals & firmware• Open for extension	<ul style="list-style-type: none">• Real-time monitoring• Remote control• Troubleshooting	<ul style="list-style-type: none">• Zero-touch on-boarding• OTA updates• Batch control

IT/OT Total Security

Ensuring security when everything is connected



One solution suite that covers everything — from prevention, detection, action, and recovery. This solution suite ensures enterprises in every industry stay fully-protected and managed with the latest and greatest IoT device management solutions.

- 24/7 device monitoring
- Real-time abnormal behavior alerts
- Device identity secures edge connectivity
- Regular security patch updates
- System recovery from boot failure
- Data analytics and visualization

Smart Self-Services

Innovative IoT technologies can transform facilities into user-friendly and welcoming locations. Likewise, a study by Gartner indicates that self-service solutions deliver savings to service organizations. Indeed, self-service averages just US 10 cents per contact when compared to US\$ 11.00 accrued by assisted service. Retail stores, chain restaurants, public transport hubs and museums seek solutions capable of creating satisfactory journey experiences while minimizing operation costs. This is particularly important as competition in the service industry is on the rise and results in decreasing profit margins. In sum, AI enabled self-service solutions provide innovative, excellent service while keeping costs in check.



Application Requirements

AI-enhanced software for real-time interactions entailing machine vision and deep learning.

Slim computer designs create stylish kiosks for stores, museums, and/or VIP lounges.

Ability to display diverse content — including images, videos, and 3D models — via kiosks.

Ability to support diverse peripherals — including cameras, barcode scanners, and payment devices — with comprehensive functionality for self-service applications.

Product Highlights



EPC-T4286

- A 1U slim desktop edge computer with compact design (188 x 188 x 44 mm)
- Intel® Core™ i7 CPU with high-speed M.2 expansion supports AI
- Numerous I/O ports for peripheral modules support both digital and legacy devices



EPC-T3229

- The 1U slim desktop edge computer with AMD Ryzen™ V2000 CPU platform
- One full-height PCIe expansion slot supports edge computing requiring high scalability
- Supports 4 x independent displays simultaneously

Software Services



Lock-down utility for programing software dedicated to self-service applications



DeviceOn

Manage myriad Kiosks effectively



Digital Evolution of Medical Applications

COVID-19 led to dramatic changes in medical services, with hospitals and health care organizations undergoing digitalization powered AI and data analytic tools that enable real-time, intelligent service flows.

Advanced information communication technology (ICT) with AI enhanced diagnosis improves the efficiency of clinical decision-making, medical operations, and administrative tasks. Indeed, new technology reduces the likelihood of error as it enables personnel to focus on clinical work requiring human judgement. Empowering these digitized service flows requires powerful edge computers.

Advantech EPC-B5000 series equipped with server-grade computing power and extendable graphics performance, delivering speed, performance, reliability, and expandability to diverse medical visualization and data processing applications. This solution uses digital transformation to enhance the quality of medical services.

High-Speed Data Transmission and Enhanced Security

Empower precise diagnosis, targeted treatment, and greater patient satisfaction

- Modular SATA storage bay with up to 6 x SATA storages for RAID
- High-performance 10Gb Ethernet and USB 3.2
- TPM and BIOS security boot for data integrity

Medical Imaging Diagnosis & PACS

Application Requirements

Increased computing capacity improves the quality and effectiveness of clinical diagnosis by empowering AI algorithms and image interpretation workflows.

Likewise, picture archiving and communication systems (PACS) require secure, high-speed networks that transmit massive image data requiring advanced privacy.

In addition, the flawless operation of edge servers used in PACS requires intricate computing capabilities and sturdy EMC-resistant enclosures to further augment workflow reliability.

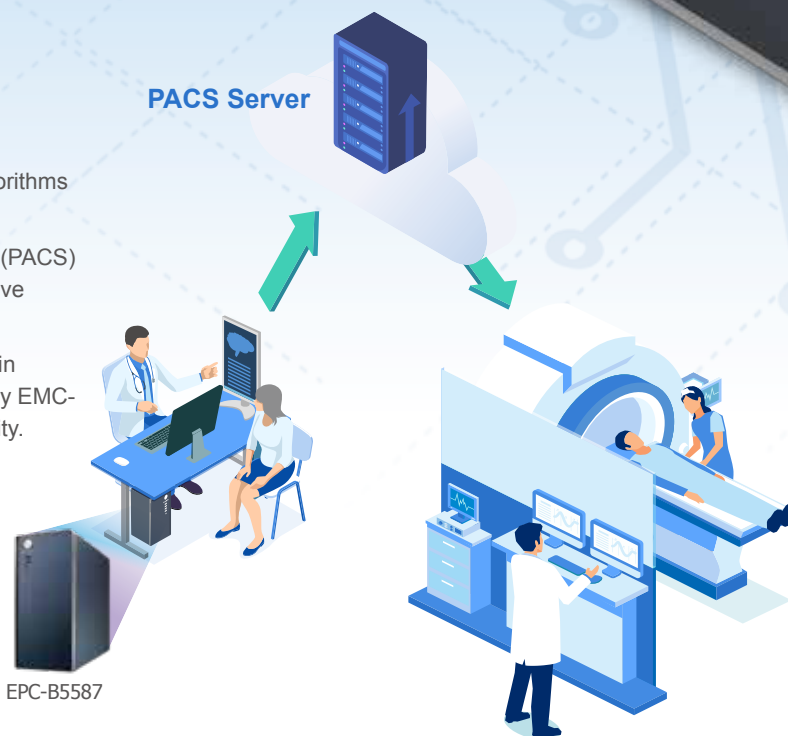
Product Highlights

EPC-B5587

- 10th Gen Intel® XEON® CPU platform
- Up to 1200W PSU to support power-hungry AI
- 2 x 10G Ethernet ports for high-speed communication
- For both industrial and residential EMC environments

EPC-B5587

PACS Server



EPC-B5000 Series

Realize digital transformation in healthcare

Server-Grade Computing Power With Power-Hungry Graphics Scalability

Future-proof hardware capacity for AI computing

- Intel® Xeon® computing platform up to 10 COREs and ECC memory
- Rugged mechanical enclosure capable of enduring vibration and shock
- 1200W 80 Plus Gold certified power supply unit for server grade CPU and 350W graphics cards
- Streamlined thermal design for heat dissipation during AI computing

Medical-Oriented Hardware Design

Longevity and reliability for carefree operation

- Up to 15 years longevity
- Safety Certification: IEC 62368-1 (CB & UL Certified)
- EMC-certified: thorough EMC protection for both industrial and residential environments with ESD Level 4 (8kV / 15kV)



DeviceOn Turnkey Packages for Private Clouds in Smart Hospital

Application Requirements

Real-time management for overall, on-site edge computers

Powerful edge computers serving on the management server side

Product Highlights

EPC-B5592

- AMD EPYC™ 7003 server-grade platform
- Up to 6 x DDR4 RAMs to speed up computing
- 2 x 10G and 2 x 2.5G Ethernet ports for high-speed data transmission
- Embedded EMC with IPMI 2.0 support

DeviceOn

Server Site

- Web-based server side system
- Remote HW & SW management
- OTA software updates

EPC-T4286

- Compact design (188 x 188 x 44 mm) with only 1U height
- 8th/9th Gen Intel Desktop CPU up to i7
- Diverse I/O ports support kiosk peripherals

DeviceOn

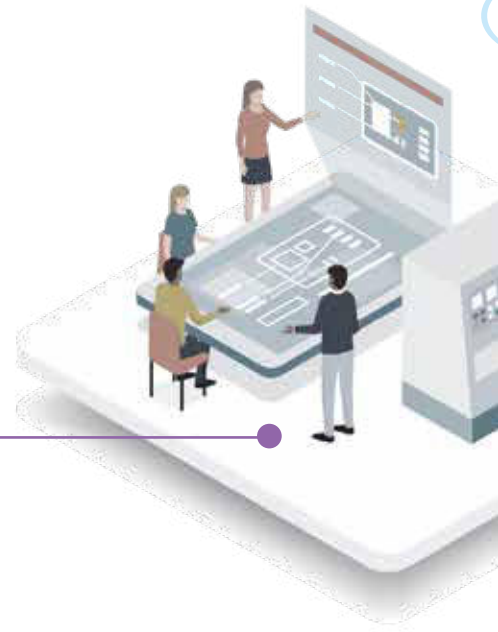
Edge Site

- Failure-proof BIOS update
- Windows10 Lock-down Utility
- Acronis Whitelist Protection

EPC-T4286

Industry 4.0

The increasing pace of technological change will alter production and distribution operations dramatically. Indeed, as nations shift towards localized manufacturing models, enhancing efficiency and competitiveness necessitates the development and adoption of technology. Consequently, using AI solutions in factory automation and smart logistics applications will become increasingly common in the era of Industry 4.0. AI computing will in turn require high-quality hardware solutions capable of providing smooth performance when assigned to different AI tasks.



Remote Management



Edge Equipment Control and Management

DeviceOn



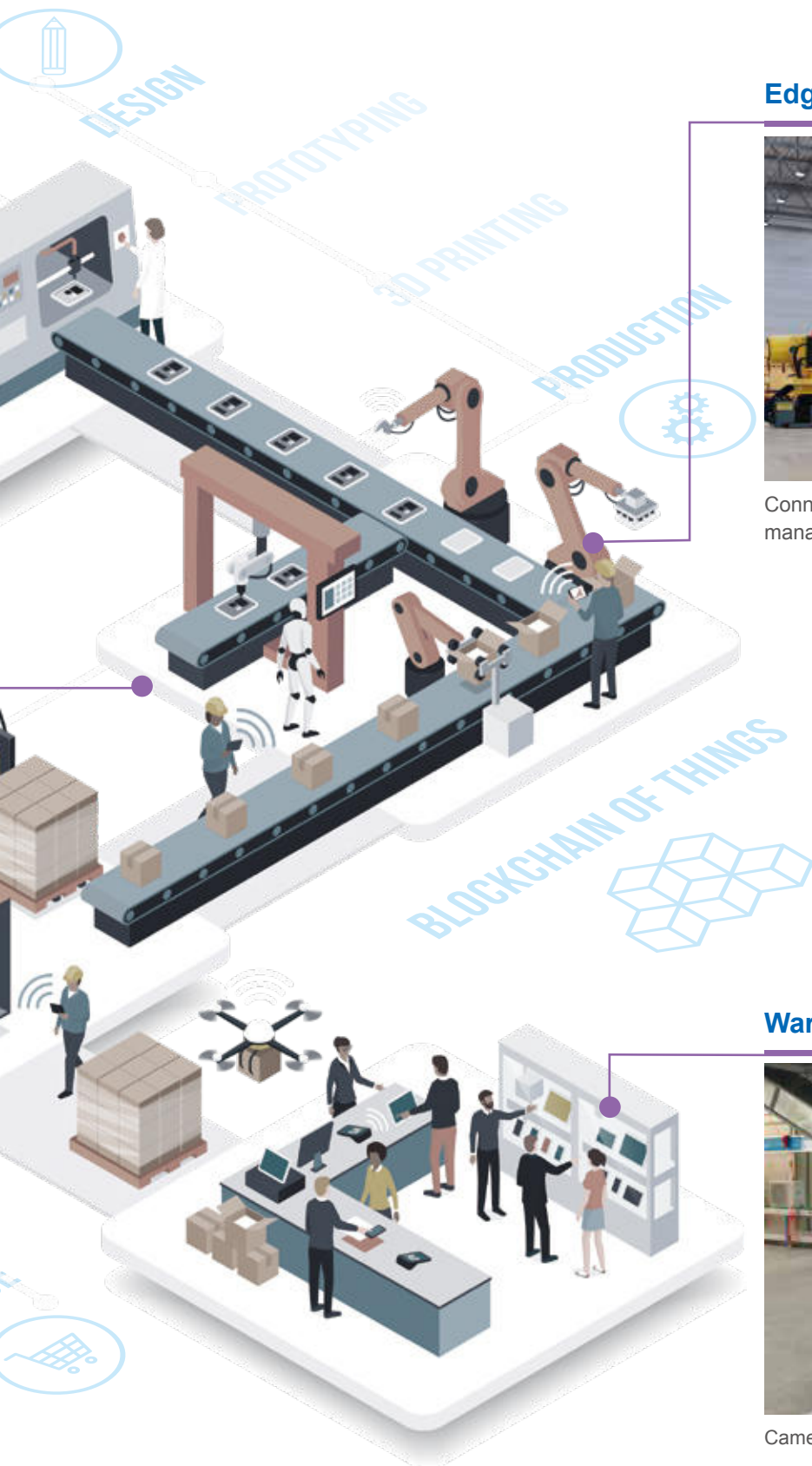
Vision AI at the Edge



Camera-based system for quality inspection



Optimize intralogistics by capturing incoming goods



Edge Data Integration



Connect diverse edge devices to improve factory data management

Warehouse Parcel Logistics



Camera-based data capture computing for Parcel Logistics

Industry 4.0 Operation Management

Edge computing systems are designed to provide a distributed networking architecture that shifts computing from the cloud to the network edge. This reduces latency issues and the cost of transferring data, while providing better security. Successful edge computing architecture requires edge data servers capable of conducting data transfers and managing service flows. This in turn creates a large workload that necessitates a powerful CPU platform. In addition, these systems require slim and compact mechanical housings that accommodate the limited working spaces found in modern offices and factories. The Advantech EPC-T4286 meets the above requirements by providing superior performance and a compact form factor.



EPC-T4286
Slim data server
that orchestrates
AIoT edge
operations

Application Requirements

Flawless computing for highly-automated factories that enhances manufacturing quality and minimizes random errors.

Implementing AIoT devices in scenarios with limited space while maintaining functionality is essential

Up to 3 x GbE LAN for the communications among multiple end points to ensure smooth exchange of data packets

Real-time management for edge computers helps predict hardware status changes and avoid failures

Product Highlights

EPC-T4286

Intel® Core™ i7 8-core for Multitasking

8-core high-performance CPU supports complex parallel computing without extra power consumption

Latest Flexible Design

Plentiful RJ45 Ethernet ports as well as digital and legacy I/O for the high-speed networking and diverse devices

Slim and Compact Mechanical Housing

Compact form factor (188 x 188 x 44mm) accommodates more devices in applications with limited space

Remote Management

Device-on real-time management system capable of enhancing system reliability and labor efficiency

Industry 4.0

Inspection

Factories that leverage AIoT are using robots to reallocate human labor. Likewise, the recent rapid advancement of AI technology is producing a sudden increase in the popularity of robot-guided automated inspection. As the inspection of finished goods is crucial to ensuring manufacturing quality, computers with excellent capacities for graphics analysis and the ability to multi-task are essential considerations.

EPC-P3066

Geared toward machine vision applications



Application Requirements

Consistent inspection operation and real-time feedback to manufacturing lines

High volumes of data to be collected and processed for further analysis

Supports diverse peripheral devices for vision based inspection and motion control

Product Highlights

EPC-P3066



High-Performance Solution Supports Heavy Workloads and Multitasking

- Intel® Xeon® server-grade CPU platform with efficient thermal cooling
- IEC -62368-1 safety certification for computing in industrial environments

Myriad I/O Support Diverse Applications

- Serial ports, GPIO, and USB support diverse automated inspection sensor types
- Up to 4 x PCI or PCIe expansion for high-performance graphic cards and/or legacy motor controllers

Industry 4.0

Parcel Sortation

Modern warehouses are benefiting from smart transformation, with AIoT making faster handling speeds the new industry norm. Correspondingly, the increasing demand for efficient warehousing is driving an increase in the performance required of edge computers. CPU with high graphics performance are essential in meeting these demands, as AI technology is vital to building autonomous warehousing solutions.

EPC-B3588

The driving force
of logistics
modernization



Application Requirements

AI object recognition helps identify and digitalize unclear barcodes and hand-written info

Parallel computing competency empowers complex production lines

High expandability supports diverse applications and peripheral AIoT devices

Consistent error-free operation in diverse warehouse environments and working conditions

Product Highlights

EPC-B3588

Superior Multitasking Performance

12th Gen Intel® Core™ CPU in hybrid architecture for compute intensive workloads and simultaneous background tasks

High-end Image Processing Capabilities

Embedded RTX A4500 in PCIe x16 Gen 5 accelerates graphics processing in intensive AI operations

Highly Reliable Certified Systems

ESD and EMC protection with IEC 61000- 6-2, 6-4 and IEC level-4 standard ESD (contact 8kV, air 15kV) certification

Sufficient Configuration for Function Expansion

Diverse I/O — like COM, USB, and LAN — facilitate the use of PLC, digital sensors, or Ethernet-based equipment

EPC-U3233

AMR / AGV
Accelerator



Application Requirements

Safe AMR use necessitates many devices, and advanced intelligence for automatic obstacle avoidance and route adjustment

Smaller footprints and better maneuverability enable smooth operation in both open & confined spaces

Highly-dependable wireless connections are vital in standard IP networks that enable navigation and tracking

Key Features

Fast and Reliable Fast Processing

Start digital transformation at edge side

- Intel® Core™ i7 with NVMe SSD for intricate computing
- ESD Level 4 protection for unmanned operation

Excellent Functionality & Compact Housing

Ideal for integration within myriad AGV/AMR applications

- Palm-sized footprint: 185 x 120 x 65 mm
- USB 3.2 Gen2 for high-end cameras
- Up to 4 x COM for ultrasound or infrared sensors
- 16-bit GPIO for digital commands over devices
- Wi-Fi/BT communication for remote control

Made for System Integration

Facilitated Configuration for System Integration

Certification Ready



Embedded PCs

EPC-U Series

NEW



Model Name		EPC-U2117	EPC-U2217	EPC-U3233
Barebone system	Description	Fanless with BGA CPU, memory	Fanless with BGA CPU, memory	Fanless with BGA CPU, w/o DRAM, storage
Processor System	CPU	Intel Atom® E3930 (on board)	Intel Atom® E3940 (on board)	Intel® Core™ i7-8665UE Intel® Core™ i5-8365UE Intel® Core™ i3-8145UE Intel® Celeron® 4305UE
	BIOS	AMI EFI 16Mbit SPI	AMI EFI 16Mbit SPI	AMI EFI 256Mbit SPI
Memory	Socket	1 x 204-pin DDR3L SODIMM (Non-ECC)	1 x 204-pin DDR3L SODIMM (Non-ECC)	1, 260-pin DDR4 SODIMM
	Technology	DDR3L 1866MHz SDRAM	DDR3L 1866MHz SDRAM	DDR4 2400MHz SDRAM
	Max Capacity	Up to 8GB SODIMM	Up to 8GB SODIMM	Up to 32GB SODIMM
Graphics	Chipset Integrated	Gen 9 Intel® HD Graphics	Gen 9 Intel® HD Graphics	Gen 9 Intel® UHD Graphics 620
Storage	2.5" HDD Bay	1 (support 2.5" HDD/SSD, max 7.5 mm height)	1 (support 2.5" HDD/SSD, max 7.5 mm height)	-
	mSATA Slot	1, co-lay with F/S Mini PCIe	1, co-lay with F/S Mini PCIe	-
	eMMC	Onboard eMMC 5.1 up to 128GB	Onboard eMMC 5.1 up to 128GB	-
	M.2 2280 slot	-	-	1, M-Key, support PCIe Gen3 x4 SSD, SATA III SSD
	M.2 2242/3042 slot	-	-	1, B-Key, support PCIe Gen3 x2 SSD, SATA III SSD
Ethernet	M.2 2230 slot	-	-	1, E-Key, support PCIe Gen3 x2 SSD
	Interface	10/100/1000 GbE LAN	10/100/1000 GbE LAN	10/100/1000 GbE LAN
	Controller	LAN1: Realtek RTL8111H LAN2: Realtek RTL8111H	LAN1/2: Intel® I210 LAN3: Realtek RTL8111H	LAN1: Intel® I219-LM LAN2: Intel® I211-AT
Audio	Connector	2 (RJ-45)	3 (RJ-45)	2 (RJ-45)
	Codec	Realtek ALC888	Realtek ALC888	Realtek ALC888
Internal expansion Slot	Mini-PCIe	1 (F/S)	1 (F/S)	-
	M.2	1 (E-Key)	1 (E-Key)	1, B-Key PCIe x2, USB 2.0, SATA co-lay 1, E-Key, PCIe x2, USB 2.0 co-lay, support WiFi/ BT or Movidius modules
	SIM slot	-	-	1, Nano SIM
	SD slot	-	-	-
Front Panel	DP++	-	-	-
	DP/HDMI	-	-	-
	VGA	-	-	-
	DVI	-	-	-
	COM	2 (1 RS-232, 1 RS-485)	4 (3 RS-232, 1 RS-422/485)	2, COM1 (RS-232), COM2 (RS-232/422/485)
	LAN	2	3	2
	USB	4 (USB 3.0)	4 (USB 3.0)	2 (USB 3.2 Gen2 x1 Type-A)
	Audio Jack	1	1	-
	Antenna (optional)	-	-	-
	DP++	-	-	-
Rear Panel	DP/HDMI	1/1	1/1	0/2
	VGA	-	-	-
	CAN bus	1 (up to 2.0B)	1 (up to 2.0B)	-
	COM	-	-	-
	LAN	-	-	-
	USB	-	-	-
	Audio Jack	-	-	1
	GPIO	-	16-bit (2 DB9)	16-bit (2 DB9)
	Antenna (optional)	Up to 4	Up to 4	-
	USB	-	-	2, USB 2.0 Type-A
Right Panel	Antenna (optional)	-	-	Up to 3
	COM	-	-	2, COM3 (RS-232), COM4 (RS-232/422/485)
Left Panel	Antenna (optional)	-	-	Up to 3
	COM	-	-	2, COM3 (RS-232), COM4 (RS-232/422/485)
Mounting		Wall Mount (Default) Din Rail (Optional)	Wall Mount (Default) Din Rail (Optional)	Wall Mount (Default) Din Rail (Optional)
Power Requirements	Power Voltage	12V~24V DC-in	12V~24V DC-in	12V~24V DC-in
	Power Input Type (Inlet)	DC Jack (2.5Ø)	DC Jack (2.5Ø)	DC Jack (2.5Ø)
	Consumption	12V@0.987A	12V@1.409A	~24W
Environment	Operating Temperature	0 ~ 50 °C	-20 ~ 60 °C (32 ~ 104 °F) with RF module by max system performance	0 ~ 50 °C
	Non-Operating Temperature	-40 ~ 85 °C and 95% @ 40 °C Non-Condensing	-40 ~ 85 °C and 95% @ 40 °C Non-Condensing	-40 ~ 85 °C and 95% @ 40 °C Non-Condensing
	Humidity	-	-	0.95
	Vibration (5~500Hz)	3G (with 2.5" SSD)	3G (with 2.5" SSD)	3.0 Grms
	Shock	-	-	30G, 11ms, half sine wave
Certification		CE/FCC/CCC/BSMI	CE/FCC/CCC/BSMI	CE/FCC/CB/UL/CCC/BSMI
Physical Characteristics	Dimensions (W x H x D)	170 x 52.6 x 117 mm	70 X 52.6 X 117 mm	170 x 116.7 x 66 mm
	Weight	1.1 kg	1.2 kg	1.9 kg

Note: "-" : means Not Applicable (N/A)

Embedded PCs

EPC-T Series



Model Name		EPC-T1217	EPC-T2285	EPC-T2286
Barebone system	Description	Fanless barebone, w/ adapter, w/o SSD, memory	Fan-base barebone, w/o adapter, HDD, memory	Fan-base barebone, w/o adapter, HDD, memory
Processor System	Thermal Solution	Fanless (0.7 m/s air flow)	2x chassis fan (4 cm/23.8 CFM)	2x chassis fan (4cm /23.8 CFM)
	CPU	Intel® Pentium® N4200 (on board)	6th/7th Gen Intel® Core™ i processor (LGA1151)	8th Gen Intel® Core™ i processor (LGA1151)
	BIOS	AMI 128Mbit, SPI	AMI EFI 128Mbit, SPI	AMI EFI 128Mbit, SPI
Memory	Socket	2 x 204-pin SODIMM (Non-ECC)	260-pin DDR4 SODIMM	260-pin DDR4 SODIMM
	Technology	DDR3L 1866 MHz SDRAM	Dual Channel DDR4 2133 MHz SDRAM	Dual Channel DDR4 2666 MHz SDRAM
	Max Capacity	8GB / 8GB per SODIMM	32GB / up to 16GB per SODIMM	32GB / up to 16GB per SODIMM
Graphics	Chipset Integrated	Gen 9 Intel® Graphics Engines and media encode/decode engine	Intel® HD Graphics, Supports DirectX 12, OpenCL 4.5	Intel® UHD Graphics, Supports DirectX 12, OpenCL 4.5
Storage	2.5" HDD Bay	1 (supports 2.5" SSD, max 9.5 mm height)	1 (supports 2.5" HDD/SSD, max 9.5 mm height)	1 (supports 2.5" HDD/SSD, max 9.5 mm height)
	mSATA Slot	1 (share w/ Full-size Mini-PCIe slot)	1 (share w/ Full-size Mini-PCIe slot)	1 x B-Key of M.2 for SSD
Ethernet	Interface	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps
	Controller	LAN1: Realtek RTL8111H LAN2: Realtek RTL8111H	LAN1: Realtek RTL8111H LAN2: Realtek RTL8111H	LAN1: Realtek RTL8111H LAN2: Realtek RTL8111H LAN3: Intel® I211AT
	Connector	2 (RJ-45)	2 (RJ-45)	3 (RJ-45)
Audio	Codec	Realtek ALC888S	Realtek ALC888S	Realtek ALC888S
Internal expansion Slot	Mini-PCIe	1 (Full-size)	2 (Full-size, Half-size)	-
	Expansion Slot	-	-	-
	M.2	1 (E-Key, type: 2230)	-	2, (1 B-Key for SSD and 3G/4G, type: 2242, 3042 mm, with SIM card holder; 1 E-Key for wireless, type: 2230 mm)
Front Panel	SIM slot	1	1	1
	SD slot	-	-	-
	DP++	-	-	-
	DP/HDMI	-	-	-
	VGA	-	-	-
	DVI	-	-	-
	COM	5 (4 RS-232, 1 RS232/422/485, 1 support 5V/12V)	2 (1 RS-232/422/485, 1 RS-232/422/485 and support 5V/12V)	4 (3 RS-232, 1 RS-232/422/485 by BOM option)
	Lan	-	-	-
	USB	4 (USB 2.0; optional)	4 (USB 2.0)	4 (USB 2.0)
	Audio Jack	2 (Line-Out, Mic-In)	2 (Line-Out, Mic-In)	2 (Line-Out, Mic-In) (Optional)
	Remote Power Jack	0	0	1
	Antenna (optional)	up to 2	up to 2	up to 2
Rear Panel	DP++	-	1	-
	DP/HDMI	1/1	1 (HDMI 1.4)	1/1
	VGA	1	-	-
	DVI	-	-	-
	COM	1 (RS232)	-	2 (1 RS-232/422/485, 1 supports 5V/12V by jumper selection)
	Lan	2 (RJ-45)	2 (RJ-45)	3 (RJ-45)
	USB	4 (USB 3.0)	4 (USB 3.0)	4 (USB 3.0)
	Audio Jack	1 (line out)	2 (Line-Out, Mic-in)	2 (Line-Out, Mic-in)
	GPIO	8-bit (optional)	8-bit (optional)	8-bit (optional)
	Antenna (optional)	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)
	Switch	1 (Power Switch); 1 (Reset Switch)	1 (Power Switch); 1 (Reset Switch)	1 (Power Switch); 1 (Power Remote Jack)
	Circular Cutouts	-	1 (Reserved for internal cable)	1 (Reserved for internal cable)
Mounting		Wall Mount, VESA Mount, Rack Mount	Wall Mount, VESA Mount, Rack Mount, DIN rail	Wall Mount, VESA Mount, Rack Mount, DIN rail
Power Requirements	Power Voltage	12V DC-in	12V DC-in	12V DC-in
	Power Input Type (Inlet)	2.5Ø DC jack	DC jack (2.5Ø with locked design)	DC jack (2.5Ø with locked design)
Environment	Consumption	21.5W (N4200, max load)	89.36W (idle with Intel i7-6700 Processor)	86.4W (i7-8700, max load)
	Operating Temperature	Fanless: 0 ~ 45 °C (32 ~ 113 °F)	0 ~ 50 °C (32 ~ 122 °F)	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)
	Humidity	10~95% @ 40°C, non-condensing	10~95% @ 40 °C, non-condensing	10~95% @ 40 °C, non-condensing
	Vibration (5~500Hz)	3 Grms (SSD x 1)	0.5 Grms (HDD x 1); 3 Grms (SSD x 1)	0.5 Grms (HDD x 1); 3 Grms (SSD x 1)
	Shock	-	-	-
Certification		CE, FCC	CE/FCC/CCC/BSMI	CE/FCC/CCC/BSMI
Physical Characteristics	Dimensions (W x H x D)	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")	250 x 44.2 x 225 mm (9.84" x 1.74" x 8.85")
	Weight	3.1 kg	3.68 kg	3.68 kg

Note: "-" : means Not Applicable (N/A)

Embedded PCs

EPC-T Series

NEW


Model Name		EPC-T3285	EPC-T3217	EPC-T4218	EPC-T4286
Barebone System	Description	Fan-base barebone, w/o HDD, memory	Fanless barebone, w/ adapter,w/o SSD, memory	Fanless barebone, w/ adapter,w/o SSD, memory	w/Fan, w/o adaptor, memory
Processor System	Thermal Solution	2 x Chassis Fan (4 cm / 23.8 CFM)	Fanless (0.7 m/s air flow)	Fanless (0.7 m/s air flow)	2 Chassis Fans, 1 CPU cooler
	CPU	6th/7th Gen Intel® Core™ i processor (LGA1151)	Supports Intel® Pentium®, Celeron® Quad Core & Dual Core processor	Intel® Celeron® J6413	8th Gen Intel® Core™ i processor (LGA1151)
	BIOS	AMI EFI 128Mbit SPI	AMI 128Mbit SPI	AMI 256Mbit SPI	AMI EFI 128Mbit SPI
Memory	Socket	2 x 260-pin DDR4 SODIMM	2 x 204-pin SODIMM	2 x 260-pin SODIMM (Non-ECC)	260-pin DDR4 SODIMM
	Technology	Dual Channel DDR4 2133 MHz SDRAM	Dual channel DDR3L 1866 MHz SDRAM	DDR4 3200 MHz SDRAM	Dual Channel DDR4 2666 MHz SDRAM
	Max Capacity	32GB (up to 16GB per SODIMM)	8 GB/8 GB per SODIMM	32 GB/32 GB per SODIMM	32 GB/up to 16GB per SODIMM
Graphics	Chipset Integrated	Intel® HD Graphics, Supports OpenGL 5.x, DirectX 12, OpenGL 2.X	Gen 9 Intel® Graphics Engines and media encode/decode engine	Gen 11 Intel® Graphics Engines	Intel® UHD Graphics, Supports DirectX 12, OpenGL 4.5
Storage	2.5" HDD Bay	2 (supports 2 x 2.5" HDD/SSD, or 1 3.5" HDD)	2 (supports 2 x 2.5" HDD/SSD, or 1 3.5" HDD)	1 (supports 2.5" SSD, max 7 mm height)	1 (supports 2.5" HDD/SSD, max 7 mm height)
	mSATA Slot	1 (share w/ Full-size Mini-PCle slot)	1 (F/S with SIM card holder)	-	1 x B-Key of M.2 for SSD
Ethernet	Interface	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps Ethernet
	Controller	LAN1: Realtek RTL8111H LAN2: Realtek RTL8111H	LAN1: Realtek RTL8111H LAN2: Realtek RTL8111H	GbE LAN1: Realtek 8111H GbE LAN2: Realtek 8111H	LAN1/2: Realtek RTL8111H LAN3: Intel® I211AT
	Connector	2 (RJ-45)	2 (RJ-45)	2 (RJ-45)	3 (RJ-45)
Audio	Codec	Realtek ALC888S	Realtek ALC888	Realtek ALC888	Realtek ALC888
Internal expansion Slot	Mini-PCle	2 (Full-size, Half-size) 1 PCIe slot (Full height)	1 (Full-size)	-	-
	M.2	-	1 (E-Key for wireless module, type: 2230)	E-Key for wireless module (Type: 2230) B-Key for storage and LTE module, only support PCIe1 signal (Type: 2242/2280)	2 (1x B-Key for SSD and 3G/4G w/ Type: 2242, 3042 mm; with SIM card holder; 1 x E-Key for wireless w/ Type: 2230 mm)
	SIM slot	1	1	1	1
	SD slot	-	-	-	-
Front Panel	DP++	-	-	1	-
	DP/HDMI	-	-	0/1	1/1
	VGA	-	-	-	-
	DVI	-	-	-	-
	COM	2 (1 RS-232/422/485, 1 RS-232/422/485 with 5V/12V)	4 (1 RS-232/422/485, 3 RS-232)	2 (RS-232)	2 (RS-232)
	LAN	-	-	2 (RJ-45)	3 (RJ45)
	USB	4 (USB 2.0)	4 (USB 2.0)	8 (3 USB 3.0, 5 USB 2.0)	6 (4 USB 3.0, 2 USB 2.0)
	Audio Jack	2 (Line-Out, Mic-In)	2 (Line-Out, Mic-In)	1 (Line-Out)	2 (1 Line-out, 1 Mic-in)
	Remote Power Jack	-	-	1	1
	Antenna (optional)	up to 2	up to 2	-	up to 2
Rear Panel	DP++	1	-	-	-
	DP/HDMI	1 (HDMI1.4)	1/1	-	-
	VGA	-	1	-	-
	DVI	-	-	-	-
	COM	-	-	4 (RS-232, optional)	4 (RS-232, optional)
	LAN	2 (RJ-45)	2 (RJ-45)	-	-
	USB	4 (USB 3.0)	4 (USB 3.0)	-	-
	Audio Jack	2 (Line-Out, Mic-in)	1 (Line-Out)	-	-
	GPIO	8-bit (optional)	8-bit (optional)	-	-
	Antenna (optional)	up to 2	up to 2	-	2
Miscellaneous	LED Indicators	2 (Power LED, HDD LED)	2 (Power LED, HDD LED)	2 (Power LED, HDD LED)	2 (Power LED, HDD LED)
	Switch	1 (Power Switch); 1 (Reset Switch)	1 (Power Switch); 1 (Reset Switch)	1 (Power Switch)	1 (Power Switch)
	Circular Cutouts	-	-	-	1 (Reserved for internal cable)
Mounting		Wall Mount, Rack Mount	Wall Mount, Rack Mount	Wall Mount, VESA Mount, Rack Mount, DIN rail	Wall Mount, VESA Mount, Rack Mount, DIN rail
Power Requirements	Power Voltage	12V DC-in (optional 9~36V)	12V DC-in (optional 9~36V)	12V	12V DC-In
	Power Input Type (Inlet)	DC jack (2.5Ø)	DC jack (2.5Ø)	DC Jack (2.5Ø)	DC Jack (2.5Ø)
	Consumption	102.3W (i7-7700, max load)	21.5W (N4200, max load)	TBD	86.4W (i7-8700, max load)
Environment	Operating Temperature	0 ~ 40 °C (32 ~ 104 °F)	0 ~ 40 °C (32 ~ 104 °F)	0 ~ 50 °C (32 ~ 122 °F)	0 ~ 50 °C (32~122 °F)
	Non-Operating Temperature	-20 ~ 60 °C (-4 ~ 140 °F)	-20 ~ 60 °C (-4 ~ 140 °F)	-40 ~ 85 °C (-40 ~ 185 °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
	Vibration (5~500Hz)	1 Grms (2.5" HDD x 1); 0.5 Grms (HDD x 2, 3.5" HDD x 1)	1 Grms (2.5" HDD x 1); 0.5 Grms (HDD x 2, 3.5" HDD x 1)	3 Grms (SSD x 1)	0.5 Grms (HDD x 1); 3 Grms (SSD x 1)
Certification	Shock	-	-	-	-
		CE/FCC	CE/FCC		CE/FCC/CCC/CB/UL
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")	188 x 44 x 188 mm (7.4" x 1.7" x 7.4")	188 x 44 x 188 mm (7.4" x 1.7" x 7.4")
	Weight	5.68 kg	5.68 kg	3.1 kg	3.1 kg

Note: "-": means Not Applicable (N/A)

Embedded PCs

EPC-P Series



Model Name		EPC-P3066	EPC-P3086
Barebone system	Description	Fan-base barebone, w/ C246 chipset	Fan-base barebone, w/ H310 chipset
Processor System	CPU	Supports 8th Gen Intel® Core™ i7/i5/i3 processor	Supports 8th Gen Intel® Core™ i7/i5/i3 processor
	BIOS	AMI EFI 256Mbit SPI	AMI EFI 256Mbit SPI
Memory	Socket	2 x 260-pin DDR4 SODIMM 2	2 x 260-pin DDR4 SODIMM 2
	Technology	Dual Channel DDR4 2400/2666 MHz Non-ECC SDRAM	Dual Channel DDR4 2400/2666 MHz Non-ECC SDRAM
	Max Capacity	Up to 32GB (16GB per SODIMM)	Up to 32GB (16GB per SODIMM)
Graphics	Chipset Integrated	Intel® HD Graphics Supports DirectX 11.1, OpenGL 5.0 and OpenCL 2.1	Intel® HD Graphics Supports DirectX 11.1, OpenGL 5.0 and OpenCL 2.1
Storage	2.5" HDD Bay	2 (supports 2 x 2.5" HDD)	2 (supports 2 x 2.5" HDD)
	mSATA Slot	2 (Full-size, Half-size)	1 (Full-size, Half-size)
Ethernet	Interface	10/100/1000 Mbps	10/100/1000 Mbps
	Controller	LAN1: Intel® I219LM PHY LAN 2: Intel® I210AT LAN 3: Realtek RTL8111H	LAN1: Intel® I219LM LAN2: Intel® I211AT
Audio	Codec	Realtek ALC888	Realtek ALC888
	Mini-PCIe	2 (F/S)	1 (F/S, H/S); co-lay mSATA
Internal expansion Slot	M.2	2 (1 B-Key, 1 E-Key)	-
	SIM slot	2 (optional)	-
	SD slot	-	-
	HDMI	1	1
	VGA (default)	1	1
	COM	6 (2 RS-232/422/485, 4 RS-232)	6 (2 RS-232/422/485, 4 RS-232)
	GPIO	16-bit (2 DB-9)	16-bit (2 DB-9)
	LAN	3 (RJ-45)	2 (RJ-45)
	USB	6 (USB 3.0)	4 (USB 3.0); 2 (USB 2.0)
	LED indicator	5 (COM1 TX/RX, COM2 TX/RX, HDD LED)	5 (COM1 TX/RX, COM2 TX/RX, HDD LED)
Front Panel	Power SW / LED	1	1
	Remote Control	Power SW+/SW- ; Power LED+/- ; RST +/-	Power SW+/SW- ; Power LED+/- ; RST +/-
	Power input	12~24V	12~24V
	i Door window (option)	1	1
	Audio Jack	Supported by project	Supported by project
	Antenna (optional)	up to 2	up to 2
Riser Card option	1 PCIe x16 1 PCIe x4	✓	✓
	1 PCIe x8 3 PCIe x4	✓	-
	2 PCIe x8 2 PCI	✓	✓ (1 PCIe x16, 2 PCI)
	1 PCIe x16 3 PCIe x1	✓	✓
Mounting		Wall mount, Rack mount	Wall mount, Rack mount
Power Requirements	Power Voltage	12 ~ 24V DC input	12~24V DC input
	Power Input Type (Inlet)	Terminal block 4P	Terminal block 4P
	Consumption	TBD	TBD
Environment	Operating Temperature	0 ~ 50 °C (Fan W/SSD)	0 ~ 50 °C (Fan W/SSD)
	Non-Operating Temperature	-20 ~ 60 °C (-4 ~ 140 °F)	-20 ~ 60 °C (-4 ~ 140 °F)
	Humidity	10~95% @ 40°C, non-condensing	10~95% @ 40°C, non-condensing
	Vibration (5~500Hz)	1 Grms (HDD*1); 0.5 Grms (HDD*2)	1 Grms (HDD*1); 0.5 Grms (HDD*2)
Certification		CE/FCC/BSMI/CCC/KCC	CE/FCC/BSMI/CCC/KCC
Physical Characteristics	Dimensions (W x D x H)	335 x 260 x 88 mm (13.2" x 10.23" x 3.46")	335 x 260 x 88 mm (13.2" x 10.23" x 3.46")
	Weight	6.8 kg	6.8 kg

Note: "-": means Not Applicable (N/A)

EPC-B Series



Model Name		EPC-B2205	EPC-B2275	EPC-B2276
Barebone system	Description	Fan-base barebone, w/ 150W PSU, w/o HDD, memory	Fan-base barebone, w/ 150W PSU, w/o HDD, memory	Fan-base barebone, Coffee lake, w/ 150W Adapter, w/o HDD, memory
Processor System	Thermal Solution	2 x chassis fan (7 cm / 28 CFM)	2 x chassis fan (7 cm / 28 CFM)	2 x chassis fan (7 cm / 28 CFM)
	CPU	6th/7th Gen Intel® Core™ i processor Pentium®/ Celeron® (LGA1151) with Intel® H110 chipset	6th/7th Gen Intel® Core i processor (LGA1151)	8th/9th Gen Intel® Core™
	BIOS	AMI EFI 128Mbit SPI	AMI EFI 128Mbit, SPI	i processor (LGA1151)
Memory	Socket	2 x 260-pin DDR4 SODIMM	2 x 260-pin DDR4 SODIMM (Non-ECC)	2 x 260 PIN DDR4 SODIMM (Non-ECC)
	Technology	Dual Channel DDR4 2400/2133 MHz non ECC SDRAM (Only supports DDR4 2133 MHz SDRAM for SKL-S CPU)	Dual Channel DDR4 2133 MHz SDRAM	Technology Dual Channel DDR4 2666 MHz SDRAM
	Max Capacity	Up to 32GB (16GB per SODIMM)	32 GB / up to 16GB per SODIMM	64GB (up to 32GB perSODIMM)
Graphics	Chipset Integrated	Integrated Intel® HD Graphics 530	Intel® HD Graphics, Supports OpenGL 5.x, DirectX 12, OpenCL 2.X	Intel® HD Graphics 630 / Intel® HD Graphics 615
Storage	2.5" HDD Bay	2 (supports 2 x 2.5" HDD/SSD, or 1 slim ODD & 1 x 2.5" HDD/SSD)	2 (supports 2 x 2.5" HDD/SSD, or 1 slim ODD & 1 x 2.5" HDD/SSD)	2 (supports 2 x 2.5" HDD/SSD, or 1 slim ODD & 1 x 2.5" HDD/SSD)
	mSATA Slot	1 (share w/ Full-size Mini-PCIe slot)	1 (Full-size, Half-size)	-
Ethernet	Interface	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps
	Controller	LAN1: Realtek RTL8111H LAN2: Realtek RTL8111H	LAN1: Intel® I219LM LAN2: Intel® I211AT	LAN1: Intel® I219LM LAN2: Intel® I211AT
	Connector	2 (RJ-45)	2 (RJ-45)	2 (RJ-45)
Audio	Codec	Realtek ALC888, High Definition Audio (HD)	Realtek AL C888, High Definition Audio (HD)	Realtek ALC888S
Internal expansion Slot	Mini-PCIe	1 (Full-size)	1+1 (Full-size, Half-size)	-
	M.2	1 (B-Key, 2242)	1 (B-Key, 2242)	1 (B-Key, 2242, 3042) 1 (E-Key, 2230)
	SIM slot	-	-	1
	SD slot	-	-	-
	DP++	-	-	-
	DP/HDMI	-	-	-
	VGA	-	-	-
	DVI	-	-	-
Front Panel	COM	4 (optional)	1 (RS232/422/485, optional)	up to 2 (RS232/422/485, optional)
	LAN	-	-	-
	USB	2 (USB 2.0; optional)	4 (USB 2.0; optional)	up to 2 (USB 3.0, optional)
	Audio Jack	-	-	-
	Antenna (optional)	up to 2	up to 2	up to 2
	DP++	-	-	-
	DP/HDMI	1/0	1/1	2 / 1
	VGA	1	1	-
	DVI	1 (DVI-D)	-	-
	COM	-	1 (RS232, supports 5V/12V)	-
Rear Panel	LAN	2 (RJ-45)	2 (RJ-45)	2 (RJ-45)
	USB	4 (USB 3.0); 4 (USB 2.0)	4 (USB 3.0)	5 USB 3.1 + 2 USB USB 3.0
	Audio Jack	3 (Line-in, Line-out, Mic-in)	3 (Mic-in, Line-out, Line-in)	3 (Mic-in, Line-out, Line-in)
	GPIO	8-bit (optional)	8-bit (optional)	8-bit (optional)
	Antenna (optional)	up to 2 (optional)	up to 2 (optional)	-
	LED Indicators	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)
	Circular Cutouts	-	-	-
Mounting		Wall mount	Wall mount	Wall mount
Power Requirements	Power Voltage	Power Voltage: 100V~240V AC input	Power Voltage: 100V~240V AC input	12V DC input
	Power Input Type (Inlet)	Power Code input	Power Code input	DC Jack (2.5Φ)
	Consumption	TBD	TBD	TBD
Environment	Operating Temperature	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)
	Humidity	10~95% @ 40°C, non-condensing	10~95% @ 40°C, non-condensing	10~95% @ 40°C, non-condensing
	Vibration (5~500Hz)	1 Grms (HDD*1+ODD*1); 0.5 Grms (HDD*2)	1 Grms (HDD*1+ODD*1); 0.5 Grms (HDD*2)	1 Grms (HDD*1+ODD*1); 0.5 Grms (HDD*2)
	Shock	CE/FCC/CCC/CB/UL/BSMI	CE/FCC/CCC	CE/FCC/CCC/BSMI
Physical Characteristics	Dimensions (W x H x D)	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	3.8 kg	3.8 kg	3.8 kg

Embedded PCs

EPC-B Series

NEW



NEW



NEW



NEW



Model Name		EPC-B3522	EPC-B3588		EPC-B5505	EPC-B5587
Barebone system	Description	Fan-based 3U system with PSU		Fan-based 4U system with PSU		Fan-based 4U system with PSU
	Thermal Solution	Default CPU Cooler: 1970005287T001		Default CPU Cooler: 1970005349T000		Default CPU cooler: 1960047669N001 (65W) Optional CPU Cooler: 1960067860N001 (80W) Sys Fan: 1750009361-01
	CPU	Ryzen™ 9 5950X Ryzen™ 9 5900X Ryzen™ 7 5800X Ryzen™ 7 5600G Ryzen™ 7 5700G Ryzen™ Embedded 5950E Ryzen™ Embedded 5900E Ryzen™ Embedded 5800E	Intel® Core™ i9-12900E Intel® Core™ i9-12900TE Intel® Core™ i7-12700E Intel® Core™ i7-12700TE Intel® Core™ i5-12500E Intel® Core™ i5-12500TE Intel® Core™ i3-12100E Intel® Core™ i3-12100TE Intel® Pentium® G7400E	Intel® Pentium® G7400TE Intel® Celeron® G6900E Intel® Celeron® G6900TE Intel® Core™ i9-12900 Intel® Core™ i7-12700 Intel® Core™ i5-12500 Intel® Core™ i5-12400 Intel® Core™ i3-12100	Intel® Core™ i7-6700 / Intel® Core™ i7-6700TE Intel® Core™ i5-6500 / Intel® Core™ i5-6500TE Intel® Core™ i3-6100 / Intel® Core™ i3-6100TE	*W1290E / *W1290TE *W1270E / *W1270TE *W1250E / *W1250TE Intel® Core™ i9-10900E / Intel® Core™ i9-10900TE Intel® Core™ i7-10700E / Intel® Core™ i7-10700TE Intel® Core™ i5-10500E / Intel® Core™ i5-10500TE
	BIOS	AMI 256Mbit SPI		AMI 128Mbit SPI		AMI 256Mbit SPI
	Socket	4 x 288-pin UDIMM		2 x 288-pin UDIMM		4 x 288-pin UDIMM
Memory	Technology	Dual Channel DDR4 2400/2666/2933/3200 MT/s Non-ECC SDRAM/ ECC SDRAM		Dual Channel DDR4 up to 4400 MT/s Non-ECC SDRAM		Dual Channel DDR4 2400/2666/2933 MT/s Non-ECC SDRAM/ ECC SDRAM
	Max Capacity	128GB (32GB per DIMM)		32GB (16GB per DIMM)		128GB (32GB per DIMM)
Graphics	Chipset Integrated	APU : Radeon™ Graphics CPU: N/A (Discrete Graphics Card Required)		Intel® HD Graphics		Intel® HD Graphics
Storage	2.5" HDD Bay	4 (supports 2.5" SSD, max 7 mm height)		2 (supports 2.5" SSD, max 7 mm height)		6 (supports 2.5" SSD, max 7 mm height)
	mSATA Slot	-		-		-
Ethernet	Interface	10/100/1000 Mbps / 2.5 Gbps		10/100/1000 Mbps		10/100/1000 Mbps / 10 Gbps
	Controller	LAN1/2: Intel® I225 (optional) LAN3/4: RTL8119i		GbE LAN1: Realtek RTL8111G GbE LAN2: Realtek RTL8111G		LAN1: Intel® I219LM LAN2: Intel® I210AT LAN3/4: Intel® X550-AT2
Audio	Connector	4 (RJ-45)		2 (RJ-45)		4 (RJ-45)
	Codec	ALC897		Realtek ALC892		Realtek ALC888S
Internal expansion Slot	Mini-PCIe	-		-		-
	M.2	1 (2280 M-Key, PCIe Gen4 x4 from CPU, Gen3 x4 from APU) 1 (2230 E-Key, USB 2.0 and PCIe Gen4 x1 from X570)		1 (2280 M-Key, PCIe Gen4 x4)		M.2 M-Key 2280
	SIM slot	-		-		-
	SD slot	-		-		-
Front Panel	DP++	-		-		-
	DP/HDMI	-		-		-
	VGA	-		-		-
	DVI	-		-		-
	COM	-		-		-
	Lan	-		-		-
	USB	2 (optional)		-		4
	Audio Jack	-		-		-
	Remote Power Jack	1		-		1
	Antenna (optional)	2 (optional)		-		-
Rear Panel	DP++	1		-		2
	DP/HDMI	0/1		1/0		-
	VGA	1		1		1
	DVI	-		1		-
	COM	6 (optional)		6		6
	Lan	4		2		4
	USB	8		-		4
	Audio Jack	2		2		2
	GPIO	-		-		-
Miscellaneous	LED Indicators	1 Power LED 1 Storage LED		1 Power-On LED 1 Power LED 1 Storage LED 2 LAN LED		1 Power-On LED 1 Power LED 1 Storage LED 2 LAN LED
	Switch	1		1 (Power Switch)		1 (Power Switch)
Power Requirements	Circular Cutouts	-		-		-
	Power Voltage	ATX AC Power-In		ATX AC Power-In		ATX AC Power-In
Environment	Power Input Type (Inlet)	ATX AC Power-In		ATX AC Power-In		ATX AC Power-In
	Consumption	TBD		TBD		TBD
	Operating Temperature	0 ~ 40°C w/o Expansion card 0 ~ 35°C w/ GPU card		0 ~ 40°C w/o Expansion card		0 ~ 40°C w/o GPU card 0 ~ 35°C w/ GPU card
	Non-Operating Temperature	-20 ~ 60°C		-20 ~ 60°C		-20 ~ 60°C
	Humidity	10 ~ 95% @ 40 °C, non-condensing		10 ~ 95% @ 40 °C, non-condensing		10 ~ 95% @ 40 °C, non-condensing
	Vibration (5~500Hz)	1 Grms w/o GPU card (Tested with 2.5" SSD)		3Grms w/o GPU card (Tested with 2.5" SSD & 4U Type)		3Grms w/o GPU card 1Grms w/ GPU card (Tested with 2.5" SSD & 4U Type)
	Shock	10G, 11ms, half sine wave		10G, 11ms, half sine wave		10G, 11ms, half sine wave
Certification		CE & CB / FCC / CCC / UL / BSMI (Certified w/o any add-on cards)		CE / FCC / CCC (Certified w/o any add-on cards)		CE & CB / FCC / CCC / UL / BSMI (Certified w/o any add-on cards)
Physical Characteristics	Dimensions (W x H x D)	360 x 310 x 133.4 mm		380 x 176 x 467 mm		380 x 176 x 467 mm
	Weight	6.8 kg		15 kg		15 kg

Note: "-": means Not Applicable (N/A)

IoT Gateway



Model Name		UTX-3117
Processor System	CPU	Intel® E3900 series & N series Processor
	Core Number	Quad Core / Dual Core
	BIOS	AMI EFI 16 Mbit, SPI
	Chipset	-
Memory	Technology	Dual Channel DDR3L 1866 MHz SDRAM
	Max Capacity	8GB / up to 8GB per DIMM
	Socket	2 x 204-pin DDR3L SODIMM (Non-ECC)
Display	Controller	Gen 9 Intel® HD Graphics
	VGA	-
	HDMI	1
	Display Port	1
Storage	2.5" HDD bay	1 (support 2.5" HDD/SSD, max 7.5 mm height)
	mSATA	1, co-lay with H/S Mini PCIe
Ethernet	Interface	10/100/1000 GbE LANs.
	Controller	LAN1: Intel® I210 LAN2: Realtek RTL8111H
	Connector	2 (RJ-45)
Audio	Chipset	Realtek ALC888, High Definition Audio (HD)
	Connector	Mic-in, Line-out combo
Internal expansion Slot	Mini-PCIe	2 (1 x F/S Mini PCIe slot, 1 x H/S Mini PCIe slot), 1 M.2 (E-Key)
	SIM Socket	1
Front Panel	USB	2 (USB 3.0)
	Audio	Mic-in, Line-out Combo
	LAN	2
	Power Button	1
	LED Indicators	1(HDD LED)
Rear Panel	HDMI	1
	VGA	- (change to DP1.2 port)
	USB	-
	USB	2 (USB 3.0)
	COM	2 (1RS-232 & 1RS-422/485)
	Power Jack	1 (DC12~24V)
Power	Control	1(Power button)
	Voltage	12~24VDC ± 10%
	Power Consumption	12V @ 0.61A
	Power Adapter	AC to DC adapter 12/24V/3A
Environment	Operating Temperature	-20 ~ 60 °C (32 ~ 104 °F) with RF module by max system performance
	Non-Operating Temperature	-40 ~ 85 °C and 95% @ 40 °C Non-Condensing
	Vibration	3G (with 2.5" SSD)
Dimensions (W x H x D)		152 x 37.1 x 128 mm (5.6" x 1.46" x 5.04")
Weight		1.2 kg
Certification	EMC	CE/FCC/CCC
	Safety	CCC

Note: "-" : means Not Applicable (N/A)