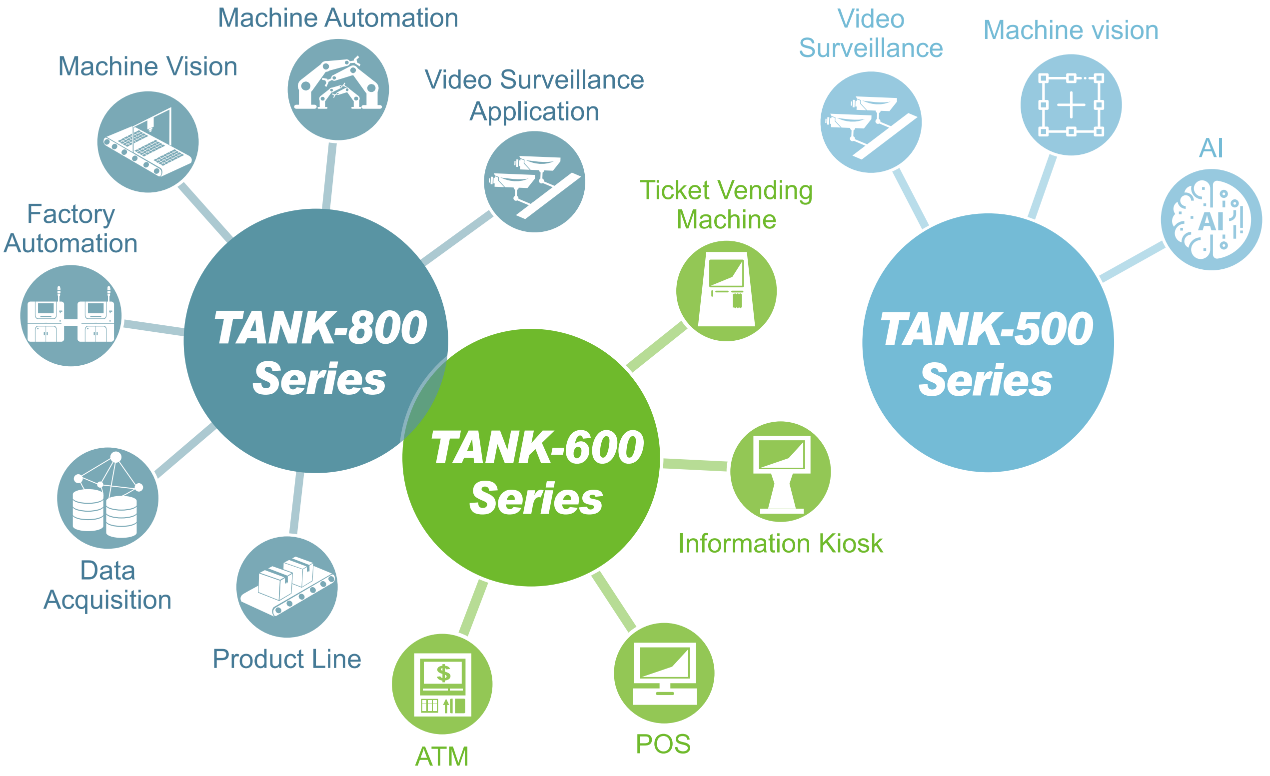
Industrial Automation Solution

IEI offers complete rugged fanless products with a wide range of I/O interfaces and multiple expansion, allowing users to connect to different devices for comprehensive automation solution. IEI's industrial automation solution provides a reliable platform to fulfill a wide variety of application demand, such as machine automation, surveillance application, and information kiosk. "TANK" is a model name for a series of IEI ruggedize embedded box products.

Ruggedized Solution



■ TANK 800 Series

Multiple Expansion Slot

- Great flexibility of expansion slots
- Design fulfills high storage demand
- Wide range temperature

■ TANK 800/600 Series

Multiple Serial Port

- Support up to 8 COM ports
- Support multiple types storage device
- Wide range temperature
- Low power consumption

■ TANK 500 Series

Edge AI inference system

- Nvidia Jetson series module
- Low power consumption
- Integrated AI Box PC

TANK Series Selection Guide

The TANK series contains great coverage of the Intel® desktop, mobile and Atom™ solutions. From high performance to low power consumption, IEI provides a vast series of specifications to fulfill the diverse demands of our customers.

PCI/PCIe Expansion

PCIe Mini Expansion

RS-232 /422/485

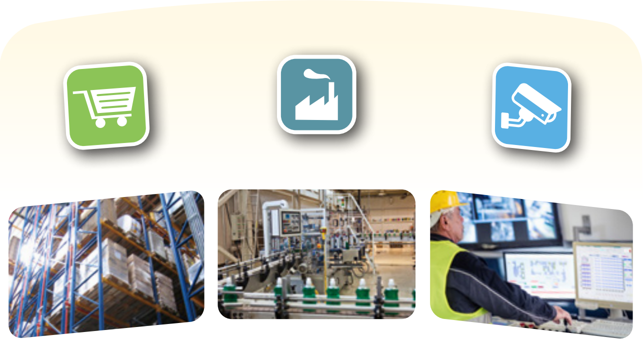
Platform		Multiple PCI/ PCIe Expansion	Multiple PCIe Mini	Multiple COM Port
Desktop	**Coffee Lake/ Coffee Lake-R**	TANK-880-Q370	-	-
	Skylake/ Kaby Lake	TANK-870-Q170 TANK-870e-H110	TANK-871	-
Mobile	**Whiskey Lake-U**	TANK-802-ULT5	-	TANK-802-ULT5/S
Atom®	**Braswell**	-	-	TANK-610-BW

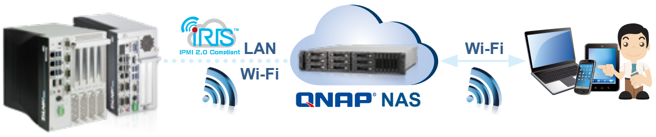
nVIDIA CUDA

Platform		NVIDIA CUDA
NVIDIA Jetson	**NX**	TANK-510AI-NX
	AGX	TANK-500AI-XA

A Variety of Applications

IEI TANK ruggedized embedded box series is ideal for applications that require remote control or multiple video outputs. Furthermore, with the IEI iRIS technology, the users can achieve Internet of Things (IoT) among different devices, such as panel PCs and single board computers.





Key Features

■ Fanless design

Fanless

The advantage of IEI fanless product series is to reduce the failure caused by fan and maintenance efforts. The functional heatsink is implemented to make sure the products can work in harsh environments.

■ Wide range temperature

Operating Temperature

IEI fanless product series has leading-edge thermal design, and has been tested under extreme temperature environments in order to ensure that IEI fanless products can be operated in any harsh environment.

■ Wide range power input

Wide range DC

The 9 V ~ 36 V DC wide power input allows the TANK series to be used in different applications. IEI provides you safe and reliable operations under industrial conditions with a wide range of acceptable inputs.

■ Multiple LAN ports design

Triple LAN

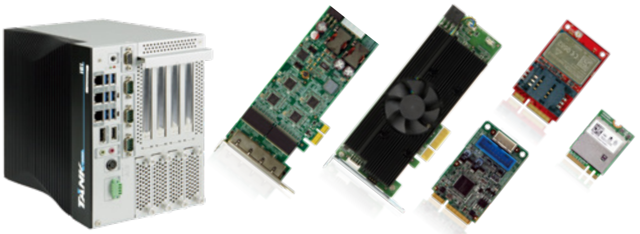
LAN port features inexpensive, highly reliable and easy to install and maintain. Therefore, our new products are equipped with triple LAN ports, supporting high speed communication between devices and easy to segment into intranet and extranet for security.

■ EMC & safety certifications

IEI TANK series has been CE and FCC certified, which proves that we give top priority to quality control and inspection of all our products.

■ Multiple expansion slots

The TANK Series integrate multiple expansion such as PCIe/PCI slots and PCIe mini/M.2 card slots. Users could install the card they need such as graphics card, capture card, I/O card, PoE or AI accelerator card to enhance system function and performance, and it allows system to be customized, upgraded and repaired for faster time to market.



Industrial Automation System

New

	Model Name	TANK-880-Q370	TANK-871-Q170	TANK-870-Q170
Chassis	Color	Black C + Silver	Black C + Silver	Black C + Silver
	Dimensions (WxDxH) (mm)	169 x 255.2 x 225	82.2 x 255.2 x 204	2-slot: 121.5 x 255.2 x 205 4-slot: 154.8 x 255.2 x 205
	System Fan	Fanless	Fanless	Fanless
	Chassis Construction	Extruded aluminum alloys	Extruded aluminum alloys	Extruded aluminum alloys
Motherboard	CPU	8th Gen Intel® Core™ CPU & Intel® Core™ i7-9700TE 1.8GHz (up to 3.8GHz, 8-core, TDP 35W) Intel® Core™ i5-9500TE 2.2GHz (up to 3.6GHz, 6-core, TDP 35W)	7th Gen Intel® Core™ CPU & Intel® Core™ i7-6700TE 2.4 GHz (up to 3.4GHz, quad-core, TDP 35) Intel® Core™ i5-6500TE 2.3 GHz (up to 3.3GHz, quad-core, TDP 35)	
	Chipset	Intel® Q370	Intel® Q170	Intel® Q170
	System Memory	2 x SO-DIMM DDR4 2666/ 2400 (8GB pre-installed) (up to 64GB)	2 x SO-DIMM DDR4 2666 (4GB pre-installed) (up to 32GB)	2 x SO-DIMM DDR4 2666 (4GB pre-installed) (up to 32GB)
IPMI	iRIS Solution	N/A	1 x iRIS-2400 (optional)	1 x iRIS-2400 (optional)
Storage	Hard Drive	4 x 2.5" SATA 6Gb/s HDD/SSD bay (RAID 0/1/5/10 support)	2 x 2.5" SATA 6Gb/s HDD/SSD bay (RAID 0/1 support)	2 x 2.5" SATA 6Gb/s HDD/SSD bay (RAID 0/1 support)
I/O Interfaces	USB	6 x USB 3.2 Gen1	4 x USB 3.2 Gen 1 4 x USB 2.0	4 x USB 3.2 Gen 1 4 x USB 2.0
	Ethernet	3 x RJ-45: 1 x GbE by Intel® I219 2 x GbE by Intel® I210	2 x RJ-45: LAN1: GbE by Intel® I219LM LAN2 (iRIS): GbE by Intel® I210	2 x RJ-45: LAN1: GbE by Intel® I219LM LAN2 (iRIS): GbE by Intel® I210
	COM Port	3 x RS-232/422/485 with AFC (DB-9 with 2.5kV isolation)	2 x RS-232/422/485 with AFC (DB-9) 4 x RS-232 (2 x RJ-45, 2 x DB-9 with 2.5kV isolation)	2 x RS-232/422/485 with AFC (DB-9) 4 x RS-232 (2 x RJ-45, 2 x DB-9 with 2.5kV isolation)
	Digital I/O	8-bit Digital I/O (4-in/ 4-out)	8-bit Digital I/O (4-in/ 4-out)	8-bit Digital I/O (4-in/ 4-out)
	Display	1 x HDMI (up to 3840x2160@30Hz) 1 x DP (up to 4096×2304@60Hz)	1 x VGA (up to 1920 x 1200@60Hz) 1 x HDMI/DP (up to 3840x2160@30Hz/4096×2304@60Hz) 1 x iDP (optional)	1 x VGA (up to 1920 x 1200@60Hz) 1 x HDMI/DP (up to 3840x2160@30Hz/4096×2304@60Hz) 1 x iDP (optional)
	Audio	1 x Line-out, 1 x Mic-in	1 x Line-out, 1 x Mic-in	1 x Line-out, 1 x Mic-in
	Wireless	1 x 802.11a/b/g/n/ac (optional)	1 x 802.11 a/b/g/n/ac (optional)	1 x 802.11 a/b/g/n/ac (optional)
	TPM	1 x TPM 2.0 (2 x 10 pin) (optional)	1 x TPM 2.0 (2 x 10 pin) (optional)	1 x TPM 2.0 (2 x 10 pin) (optional)
Expansions	PCIe Mini	1 x Full-size (PCIe/ USB 2.0/ SATA)	1 x Half-size (PCIe/ USB 2.0) 1 x Full-size (PCIe/ USB 2.0/ SATA)	1 x Half-size (PCIe/ USB 2.0) 1 x Full-size (PCIe/ USB 2.0/ SATA)
	M.2	1 x 2230 A-key (PCIe x2/USB2.0) 2 x 2280 M-key (PCIe x2)	N/A	N/A
	Backplane	1 x PCIe x16 1 x PCIe x1 2 x PCIe x4	N/A	2-slot model: 1 x PCIe x16, 1 x PCI 2-slot model: 2 x PCIe x8 4-slot model: 2 x PCIe x8, 2 x PCI, 1 x Full-size PCIe Mini (PCIe/USB2.0) 4-slot model: 1 x PCIe x16, 3 x PCI, 1 x Full-size PCIe Mini (PCIe/ USB 2.0)
Power	Power Input	DC Jack: 9 ~ 36V DC Terminal Block: 9 ~ 36V DC	DC Jack: 9 ~ 36V DC Terminal Block: 9 ~ 36V DC	DC Jack: 9 ~ 36V DC Terminal Block: 9 ~ 36V DC
	Power Consumption	19V@3.6A (Intel® Core™ i7-8700T with 8GB memory)	19V@3.68 A (Intel® Core™ i7-6700TE with 8 GB memory)	19V@3.68 A (Intel® Core™ i7-6700TE with 8 GB memory)
	Internal Power Connector	12V@10A	5V@3A or 12V@3A	5V@3A or 12V@3A
Reliability	Mounting	Wall mount	Wall mount	Wall mount
	Operating Temperature	-20°C ~ 60°C with air flow (SSD), 10% ~ 95% non-condensing	i7-6700TE: -20°C ~ 45°C with air flow (SSD), 10% ~ 95% non-condensing i5-6500TE: -20°C ~ 60°C with air flow (SSD), 10% ~ 95% non-condensing	i7-6700TE: -20°C ~ 45°C with air flow (SSD), 10% ~ 95% non-condensing i5-6500TE: -20°C ~ 60°C with air flow (SSD), 10% ~ 95% non-condensing
	Operating Shock	Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)	Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)	Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)
	Operating Vibration	MIL-STD-810G 514.6C-1 (SSD)	MIL-STD-810G 514.6 C-1 (SSD)	MIL-STD-810G 514.6 C-1 (SSD)
	Weight (Net/Gross)	5.4 kg/8.45 kg	3.5 kg/4.5 kg	2-slot: 4.2 kg/6.3 kg 4-slot: 4.5 kg/6.5 kg
	Safety/EMC	CE/FCC	CE/FCC/KC	CE/FCC/KC
OS	Supported OS	Microsoft® Windows 10, Linux	Microsoft® Windows® 8 Embedded, Microsoft® Windows® Embedded Standard 7 E, Microsoft® Windows® 10 IoT Enterprise	

Industrial Automation System

New

Model Name		TANK-870e-H110	TANK-802-ULT5	TANK-610-BW
Chassis	Color	Dark silver purple + Silver	Black C + Silver	Black C + Silver
	Dimensions (WxDxH) (mm)	132.6 x 255.2 x 190	Non slot: 185.6 x 252.4 x 67.5 One slot: 185.6 x 252.4 x 102	184 x 200.6 x 58.2
	System Fan	Fanless	Fanless	Fanless
	Chassis Construction	Extruded aluminum alloys	Extruded aluminum alloys	Extruded aluminum alloys
Motherboard	CPU	7th Gen Intel® Core™ CPU & Intel® Core™ i7-6700TE 2.4 GHz (up to 3.4GHz, quad-core, TDP 35) Intel® Core™ i5-6500TE 2.3 GHz (up to 3.3GHz, quad-core, TDP 35)	Intel® Core™ i5-8365UE 1.6 GHz (up to 4.1 GHz, quad-core, TDP 15W) Intel® Celeron® 4205U 1.8 GHz (dual-core, TDP 15W)	Intel® Celeron® N3160 1.6 GHz (up to 2.24GHz, quad-core, TDP 6W)
	Chipset	Intel® H110	SoC	SoC
	System Memory	2 x SO-DIMM DDR4 2666 (4GB pre-installed)(up to 32GB)	2 x SO-DIMM DDR4 2400 MHz (4GB pre-installed)(up to 32GB)	2 x DDR3L SO-DIMM (2GB pre-installed)(up to 8GB)
Storage	Hard Drive	2 x 2.5" SATA 6Gb/s HDD/SSD bay	1 x 2.5" SATA 6Gb/s HDD/SSD bay	1 x 2.5" SATA 6Gb/s HDD/SSD Bay
I/O Interfaces	USB	4 x USB 3.2 Gen1	4 x USB 3.2 Gen 2 2 x USB 2.0	4 x USB 3.2 Gen1
	Ethernet	2 x RJ-45: 2 x GbE by RTL8111G	3 x RJ-45: 1 x GbE by Intel® I219 2 x GbE by Intel® I211	2 x RJ-45: 2 x GbE by Intel® I210
	COM Port	2 x RS-232/422/485 with AFC (DB-9 with 2.5kV isolation)	2 x RS-232/422/485 with AFC (DB-9 with 2.5 kV isolation) 6 x RS-232 (4 x DB-9/2 x RJ-45)	2 x RS-232/422/485 with AFC 6 x RS-232
	Digital I/O	N/A	8-bit Digital I/O (4-in/ 4-out by pin header)	N/A
	Display	1 x VGA (up to 1920 x 1200@60Hz) 1 x HDMI (up to 3840 x 2160@30Hz)	1 x VGA 1 x Lockable HDMI	1 x VGA (up to 1920 x 1200@60Hz) 1 x HDMI (up to 3840 x 2160@30Hz)
	Audio	1 x Line-out, 1 x Mic-in	1 x Line-out, 1 x Mic-in	1 x Line-out, 1 x Mic-in
	Wireless	1 x 802.11a/b/g/n/ac (optional)	1 x 802.11a/b/g/n/ac (optional)	1 x 802.11a/b/g/n/ac (optional)
	TPM	N/A	1 x TPM 2.0 (2 x 10 pin) (optional)	N/A
Expansions	PCIe Mini	1 x Full-size (PCIe/ USB 2.0) 1 x Full-size (PCIe/ USB 2.0/ SATA)	N/A	1 x Half-size (PCIe/USB 2.0) 1 x Full-size (PCIe/SATA)
	M.2	N/A	1 x 2230 A-key (PCIe x2/USB 2.0) 1 x 2242/80 B-key (USB 2.0/SATA)	N/A
	Backplane	3A: 1 x PCIe x16, 2 x PCI 3B: 1 x PCIe x16, 1 x PCIe x4, 1 x PCI 3C: 3 x PCI	One slot: 1 x PCIe Gen 3x4	N/A
Power	Power Input	DC Jack: 9 ~ 36V DC Terminal Block: 9 ~ 36V DC	Terminal Block: 9 ~ 36V DC	DC Jack: 9 ~ 36V DC Terminal Block: 9 ~ 36V DC
	Power Consumption	19V@3.44A (Intel® Core™ i7-6700TE with 8GB memory)	TBD	12V@1.49A (Intel® Celeron® N3160 with 4GB DDR3L memory)
Reliability	Mounting	Wall mount & Din Rail	Wall mount	Wall mount, VESA 100
	Operating Temperature	-20ºC ~ 50°C with air flow (SSD), 10% ~ 95% non-condensing	-20ºC ~ 60°C with air flow(SSD), 10% ~ 95% non-condensing	-40ºC ~ 60°C with air flow(SSD), 10% ~ 95% non-condensing
	Operating Shock	Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)	Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)	Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)
	Operating Vibration	MIL-STD-810G 514.6C-1 (SSD)	MIL-STD-810G 514.6C-1 (SSD)	MIL-STD-810G 514.6C-1 (SSD)
	Weight (Net/Gross)	2.8 kg/4.3 kg	TBD	2.2 kg/3 kg
	Safety/EMC	CE/FCC/KC	CE/FCC	CE/FCC/KC
OS	Supported OS	Microsoft® Windows® 8 Embedded, Microsoft® Windows® Embedded Standard 7 E, Microsoft® Windows® 10 IoT Enterprise	Microsoft Windows 10, Linux	Microsoft® Windows 8 Embedded, Microsoft® Windows® Embedded Standard 7 E

Industrial Automation System

Preliminary

Preliminary

	Model Name	TANK-510AI-NX	TANK-500AI-XA
Chassis	Color	Black C + Silver	Black C + Silver
	Dimensions (WxDxH) (mm)	TBD	TBD
	System Fan	Fanless	Fanless
	Chassis Construction	Extruded aluminum alloys	Extruded aluminum alloys
Motherboard	CPU	6-core NVIDIA Carmel ARM® v8.2 64-bit CPU 6MB L2 + 4MB L3	8-core ARM v8.2 64-bit CPU, 8MB L2 + 4MB L3
	GPU	384-core NVIDIA Volta™ GPU with 48 Tensor Cores	NVIDIA Volta™ architecture with 512 NVIDIA CUDA cores and 64 Tensor cores 11 TFLOPS (FP16) 22 TOPS (INT8)
	System Memory	8GB 128-bit LPDDR4x @ 51.2GB/s	32GB 256-bit LPDDR4x 2133MHz - 137GB/s
Storage	eMMC 5.1	1 x 16GB eMMC 5.1	1 x 32GB eMMC 5.1
	SD	1 x Micro SD card slot	1 x Micro SD card slot
I/O interfaces	USB	4 x USB 3.2 Gen1 1 x USB 2.0 (Micro USB)	4 x USB 3.2 Gen1
	Ethernet	5 x RJ-45: 1 x GbE by NX module 4 x GbE by Intel® I211(IEEE 802.3af PoE)	2 x RJ-45: 2 x GbE by Marvell 88E1512
	COM	1 x RS232/422/485 with AFC (DB9)	1 x RS232/422/485 with AFC (DB9)
	Digital I/O	8-bit Digital I/O (4-in/ 4-out)	8-bit Digital I/O (4-in/ 4-out)
	Display	1 x HDMI	1 x HDMI, 1 x DP
	Can-bus	1	N/A
	TPM	1 x TPM 2.0	1 x TPM 2.0
	Audio	N/A	1 x 2W speaker
Expansions	M.2	1 x 2242/80 B-key (USB2.0/SATA)	1 x 2230 E-key (PCIex1/USB 2.0) 1 x 2242/60/80 M-key (PCIex4) 1 x 2280 M.2 M-key (PCIex2 for IEI module only)
Power	Power Input	DC Jack: 19 ~ 24V DC	DC Jack: 19V DC
Reliability	Mounting	Wall mount	Wall mount
	Operating Temperature	-20ºC ~ 60° C with air flow, 10% ~ 95% non-condensing	MAX: -20ºC ~ 50° with air flow, 10% ~ 95% non-condensing 30W: -20ºC ~ 60° C with air flow, 10% ~ 95% non-condensing
	Storage Temperature	-30ºC ~ 70°C with air flow, 10% ~ 95% non-condensing	-30ºC ~ 70°C with air flow, 10% ~ 95% non-condensing
	Operating Shock	Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)	Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)
	Operation Vibration	MIL-STD-810G 514.6C-1 (SSD)	MIL-STD-810G 514.6C-1 (SSD)
	Weight (Net/ Gross)	TBD	TBD
	Safety / EMC	CE/FCC	CE/FCC
OS	Supported OS	Linux for Jetson Xavier NX	Linux for Jetson AGX Xavier

TANK-880-Q370

- **High-Performance 8th/9th Generation Intel® Core™ Processor**
- **Fanless Embedded Computer**

New

Features

- 8th/9th Gen Intel® Core™ processor platform with Intel® Q370 chipset and DDR4 memory
- Dual independent displays with high resolution support
- Rich high-speed I/O interfaces
- On-board internal power connector for providing power to add-on cards
- Four accessible 2.5" HDD/SSD SATA 6 Gb/s bay (with RAID 0/1/5/10 support)
- Great flexibility for hardware expansion

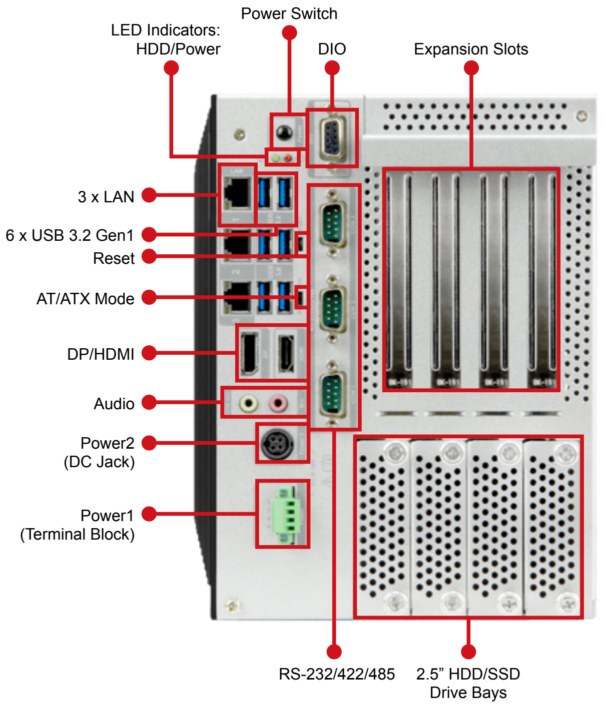
Fanless | PCIe Mini Expansion | RS-232 /422/485 | M.2/NGFF

SUPERSPEED CERTIFIED USB 3.2 Gen 1 | PCIe Slot | Triple LAN

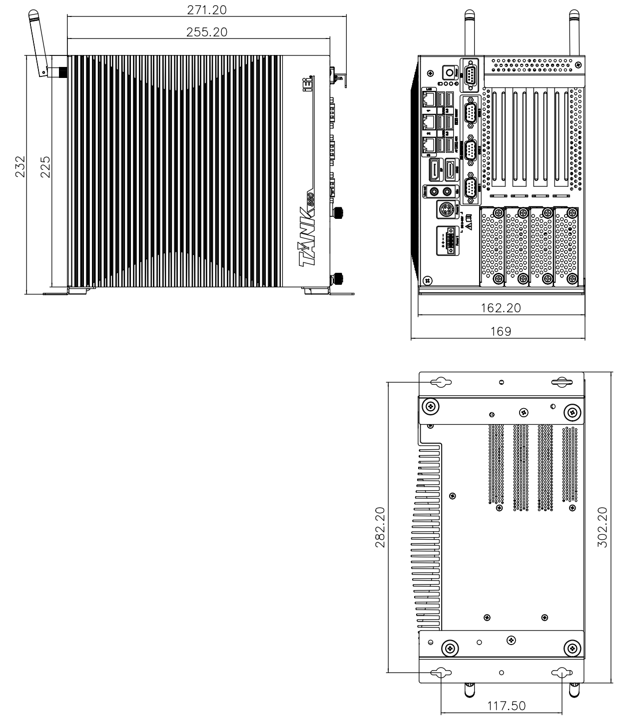
Specifications

Model Name		TANK-880-Q370
Chassis	Color	Black C + Silver
	Dimensions(WxDxH) (mm)	169 x 255.2 x 225
	System Fan	Fanless
	Chassis Construction	Extruded aluminum alloys
Motherboard	CPU	8th Gen Intel® Core™ CPU & Intel® Core™ i7-9700TE 1.8GHz (up to 3.8GHz, 8-core, TDP 35W) Intel® Core™ i5-9500TE 2.2GHz (up to 3.6GHz, 6-core, TDP 35W)
	Chipset	Intel® Q370
	System Memory	2 x SO-DIMM DDR4 2666/2400 (8GB pre-installed)(up to 64GB)
Storage	Hard Drive	4 x 2.5" HDD/SSD SATA 6Gb/s bay (with RAID 0/1/5/10 support)
I/O Interfaces	USB	6 x USB 3.2 Gen1
	Ethernet	3 x RJ-45: 1 x GbE by Intel® I219 2 x GbE by Intel® I210
	COM Port	3 x RS-232/422/485 with AFC (DB-9 with 2.5kV isolation)
	Digital I/O	8-bit Digital I/O (4-in/ 4-out)
	Display	1 x HDMI 1.4b (up to 3840 x 2160@30Hz) 1 x DP (up to 4096 x 2304@60Hz)
	Audio	1 x Line-out, 1 x Mic-in
	TPM 2.0	1 x TPM 2.0 (2 x 10 pin)(optional)
Expansions	PCIe Mini	1 x Full-size (PCIe/ USB 2.0/ SATA)
	M.2	1 x 2230 A-key (PCIe x2/USB2.0) 2 x 2280 M-key (PCIe x2)
	Backplane	1 x PCIe by 16, 1 x PCIe by 1, 2 x PCIe by 4
Power	Power Input	DC Jack: 9 ~ 36V DC Terminal Block: 9 ~ 36V DC
	Power Consumption	19V @ 5.4A (Intel® Core™ i7-9700TE with 8GB memory)
	Internal Power Output	12V @ up to 10A
Reliability	Mounting	Wall mount
	Operating Temperature	-20°C ~ 60°C with air flow (SSD), 10% ~ 95% non-condensing
	Storage Temperature	-40°C ~ 85°C with air flow (SSD), 10% ~ 95% non-condensing
	Operating Shock	Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)
	Operation Vibration	MIL-STD-810G 514.6C-1 (SSD)
	Weight (Net/Gross)	5.4 kg/8.45 kg
	Safety / EMC	CE/FCC
	Watchdog timer	Programmable 1 ~ 255 sec/min
OS	Supported OS	Microsoft® Windows® 10 IoT Enterprise/ Linux

Fully Integrated I/O



Dimensions (Unit: mm)



TANK-880-Q370

Ordering Information

Part No.	Description
TANK-880-Q370-i7R/8G/4A-R10	Ruggedized fanless embedded system with Intel® i7-9700TE 1.8GHz, (up to 3.8GHz, 8-core, TDP 35W), 8GB DDR4 pre-installed memory, 1 x PCIe by 16 & 2 x PCIe by 4 & 1 x PCIe by 1 expansion, HDMI/DP, 9 ~ 36V DC, RoHS
TANK-880-Q370-i5R/8G/4A-R10	Ruggedized fanless embedded system with Intel® i5-9500TE 2.2GHz, (up to 3.6GHz, 6-core, TDP 35W), 8GB DDR4 pre-installed memory, 1 x PCIe by 16 & 2 x PCIe by 4 & 1 x PCIe by 1 expansion, HDMI/DP, 9 ~ 36V DC, RoHS

Options

Part No.		Description
Wi-Fi Module	27319-000009-RS*	Wireless Lan Module;Wireless LAN & Bluetooth M.2 Module;Sparklan;R9701810011;IEEE802.11a/b/g/n/ac;2.412GHz~2.4835GHz, 5.15GHz~5.85GHz;M.2 2230;.;3.3V;22*30*2.15mm;QCNFA364A;QCA6174A-5;2x2 MIMO;Dual Band;WCBN808A-Q2;CCL;CCL;RoHS
Antenna	32505-000900-100-RS*	External Antenna; WLAN; RG 178; 108MM; TANK-700-QM67-R10; PEAK GAIN 2.0DBI; Exceltek; 2.4-2.5GHz/5.15-5.85GHz; REVERSE SMA PLUG; RoHS
RF Cable	32501-004000-100-RS*	RF; RF CABLE; LINE DIAMETER:0.81mm; 250MM;;; 50Ω; Sparklan; 0-6GHz; VSWR≤1.3; I-PEX MHF-4 Plug; REVERSE SMA JACK; NUT x 1; WASHER x 1;; RoHS
Adapter	63040-010150-700-RS	Adapter Power; FSP; FSP150-ABAN3; 9NA1504811; Active PFC; Vin:90 ~ 264VAC; 150W; Dim:75.6*151.3*25.4mm; Plug=6.5mm; Cable=1500mm; Erp(NO LOAD 0.15W); Vout:19VDC; Din 4Pin/lock; CCL; RoHS
Power Cord	32000-000002-RS	European power cord
TPM 2.0 Module	TPM-IN02-R20	20-pin Infineon TPM2.0 module, software mangement tool, firmware v5.5
System Fan	31100-000440-RS	FAN;+12V;4PIN;Everflow;92*92*25mm;3600RPM;TWO BALL BEARING;LINE LENGTH:180MM;4.4+/-0.3MM;F129025BU;F129025BUAFW30aR;AXIAL FAN;WITH FRAME;73.29CFM;11.4~12.6V;44dB;70000hur;TUV, UL, CE;CCL;RoHS
OS:Windows Embedded 10	TANK-880-Q370-W10E64-H-R10	OS Image with Windows® Embedded Standard 10 E High End 64-bit 2019 for TANK-880-Q370-i7 Series, with DVD-ROM, RoHS
OS:Windows Embedded 10	TANK-880-Q370-W10E64-V-R10	OS Image with Windows® Embedded Standard 10 E Value 64-bit 2019 for TANK-880-Q370-i5 Series, with DVD-ROM, RoHS

* Each Wi-Fi module needs two antennas and two RF cables to fully support Wi-Fi function.

Packing List

1 x Chassis Screw	1 x Wall Mount Bracket

TANK-871-Q170

- ■ High-Performance 6th/7th Generation Intel® Core™ Processor
- ■ Fanless Embedded Computer

Features

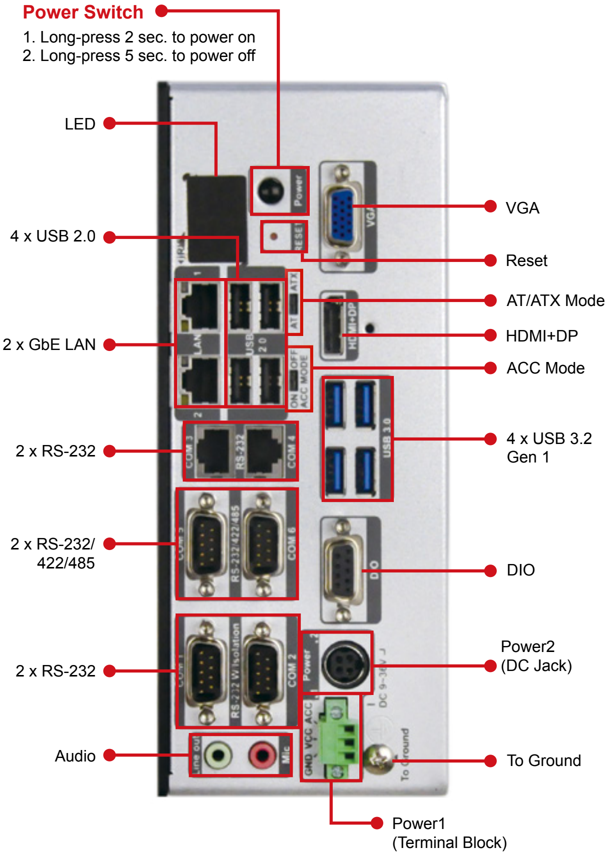
- 6th/7th Gen Intel® Core™ processor platform with Intel® Q170 chipset and DDR4 memory
- Triple independent display with high resolution support
- Rich high-speed I/O interfaces on one side for easy installation
- IEI iRIS-2400 solution

iRIS™ IPMI 2.0 Compliant
Fanless
Triple Display
DDR4 2133

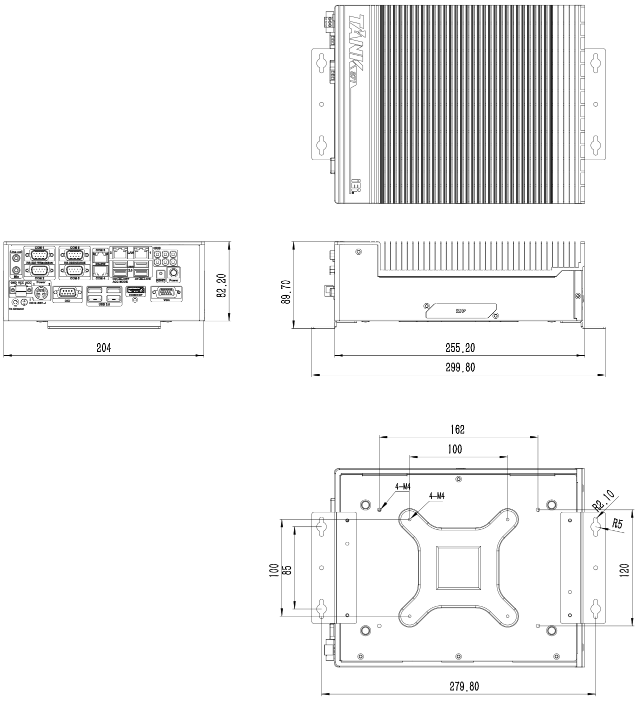
Specifications

Model Name		TANK-871-Q170
Chassis	Color	Black C + Silver
	Dimensions (WxDxH) (mm)	82.2 x 255.2 x 204
	System Fan	Fanless
	Chassis Construction	Extruded aluminum alloy
Motherboard	CPU	7th Gen Intel® Core™ CPU & Intel® Core™ i7-6700TE 2.4 GHz (up to 3.4GHz, quad-core, TDP 35) Intel® Core™ i5-6500TE 2.3 GHz (up to 3.3GHz, quad-core, TDP 35)
	Chipset	Intel® Q170
	System Memory	2 x SO-DIMM DDR4 2666 (4GB pre-installed) (up to 32GB)
IPMI	iRIS solution	1 x iRIS-2400 (optional)
Storage	Hard Drive	2 x 2.5'' SATA 6Gb/s HDD/SSD bay (RAID 0/1 support)
I/O Interfaces	USB	4 x USB 3.2 Gen 1 4 x USB 2.0
	Ethernet	2 x RJ-45: LAN1: GbE by Intel® I219LM LAN2 (iRIS): GbE by Intel® I210
	COM Port	2 x RS-232/422/485 with AFC (DB-9) 4 x RS-232 (2 x RJ-45, 2 x DB-9 with 2.5kV isolation)
	Digital I/O	8-bit Digital I/O (4-in/ 4-out)
	Display	1 x VGA (up to 1920 x 1200@60Hz) 1 x HDMI/DP (up to 3840 x 2160@30Hz /4096×2304@60Hz) 1 x iDP (optional)
	Audio	1 x Line-out, 1 x Mic-in
	Wireless	1 x 802.11a/b/g/n/ac (optional)
Expansions	PCIe Mini	1 x Half-size (PCIe/ USB 2.0) 1 x Full-size (PCIe/ USB 2.0/ SATA)
Power	Power Input	DC Jack: 9 ~ 36V DC Terminal Block: 9 ~ 36V DC
	Power Consumption	19V@3.68A (Intel® Core™ i7-6700TE with 8GB memory)
Reliability	Mounting	Wall mount
	Operating Temperature/Humidity	i7-6700TE: -20ºC ~ 45°C with air flow (SSD), 10% ~ 95% non-condensing i5-6500TE: -20ºC ~ 60°C with air flow (SSD), 10% ~ 95% non-condensing
	Storage Temperature/Humidity	-40ºC ~ 85°C with air flow (SSD), 10% ~ 95% non-condensing
	Operating Shock	Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)
	Operating Vibration	MIL-STD-810G 514.6 C-1 (SSD)
	Weight (Net/Gross)	3.5 kg/4.5 kg
	Safety/EMC	CE/FCC/KC
OS	Supported OS	Microsoft® Windows® 8 Embedded, Microsoft® Windows® Embedded Standard 7 E, Microsoft® Windows® 10 IoT Enterprise

Fully Integrated I/O



Dimensions (Unit: mm)



TANK-871-Q170

Ordering Information

Part No.	Description
TANK-871-Q170i-i7/4G-R10	Ruggedized fanless embedded system with Intel® Core™ i7-6700TE 2.4 GHz (up to 3.4 GHz, quad core, TDP 35W), 4GB DDR4 pre-installed memory, VGA/HDMI+DP/iDP, iRIS-2400 optional, 9 ~ 36V DC, RoHS
TANK-871-Q170i-i5/4G-R10	Ruggedized fanless embedded system with Intel® Core™ i5-6500TE 2.3 GHz (up to 3.3 GHz, quad core, TDP 35W), 4GB DDR4 pre-installed memory, VGA/HDMI+DP/iDP, iRIS-2400 optional, 9 ~ 36V DC, RoHS

Options

Part No.	Description
32000-000002-RS	European power cord
63040-010120-300-RS	Adapter Power;FSP;FSP120-AHAN3;9NA1206708;Active PFC;Vin:90 ~ 264VAC;120W;Dim:75.6*151.3*25.4mm;Plug=6.5mm;Cable=1500mm;Erp(NO LOAD 0.15W);Vout:12VDC;Din 4Pin/lock;CCL;RoHS
iRIS-2400-R10	IPMI 2.0 adapter card with AST2400 BMC chip for DDR3 SO-DIMM socket interface
EMB-WIFI-KIT01-R20	1T1R wifi module kit for embedded system, IEEE802.11a/b/g/n/ac WiFi with Bluetooth 4.0/3.0+HS, 1 x wifi module, 2 x 250mm RF cable, 2 xAntenna, RoHS
E-MPCIE-DLAN-R10	PCIe Mini card supports 2-port GbE with Intel I211 controller, with PMS 194C I/O bracket and 250mm cable
E-MPCIE-LAN-R10	PCIe Mini card supports 1-port GbE with Realtek RTL8111E controller, with PMS 194C I/O bracket and 250mm cable
E-MPCIE-UART-KIT01-R10	PCI Express Mini supports quad RS-232/422/485 port module
TANK-870-Q170-WES7E64-R10	OS Image with Windows® Embedded Standard 7 E 64-bit for TANK-870-Q170 Series, with DVD-ROM, RoHS
TANK-870-Q170-W10E64-H-R10	OS Image with Windows® Embedded Standard 10 E High End 64-bit for TANK-870-Q170-i7 Series, with DVD-ROM, RoHS
TANK-870-Q170-W10E64-V-R10	OS Image with Windows® Embedded Standard 10 E Value 64-bit for TANK-870-Q170-i5 Series, with DVD-ROM, RoHS

Packing List

1 x Chassis Screw	1 x Mounting Bracket

TANK-870-Q170

- High-Performance 6th/7th Generation Intel® Core™ Processor
- Fanless Embedded Computer

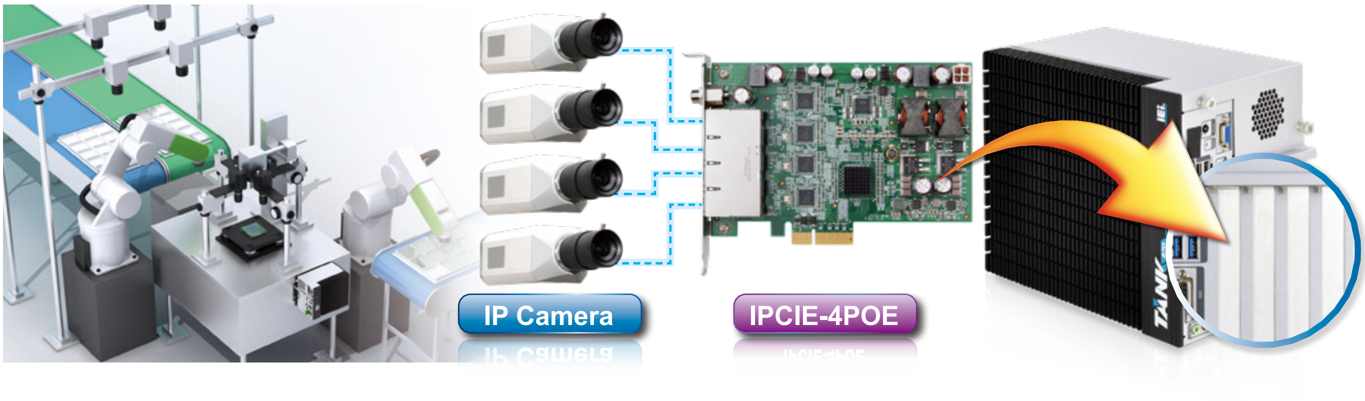
Features

- 6th/7th Gen Intel® Core™ processor platform with Intel® Q170 chipset and DDR4 memory
- Triple independent display with high resolution support
- Rich high-speed I/O interfaces on one side for easy installation
- On-board internal power connector for providing power to add-on cards
- Great flexibility for hardware expansion

QTS-Gateway
IPMI 2.0 Compliant
Fanless
Triple Display
PCI/PCIe Expansion
DDR4 2133

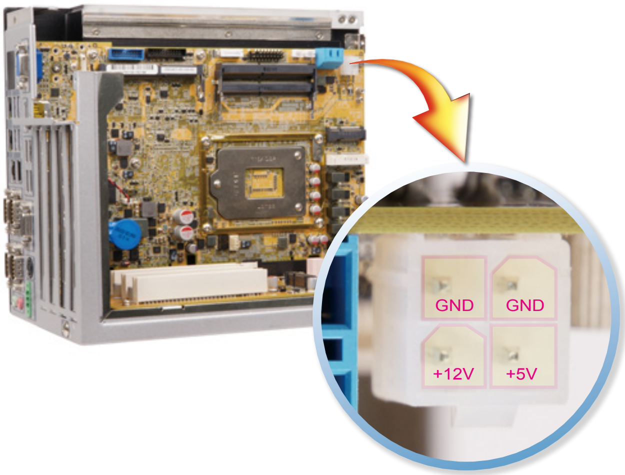
Smart Choice for Surveillance System

The TANK-870-Q170 integrated with IEI PoE Ethernet port expansion card can be used as a surveillance system for factory and public security. IEI PoE expansion card can support up to four PoE IEEE802.3af ports (max. 15.4 W per port) by PCIe x4.

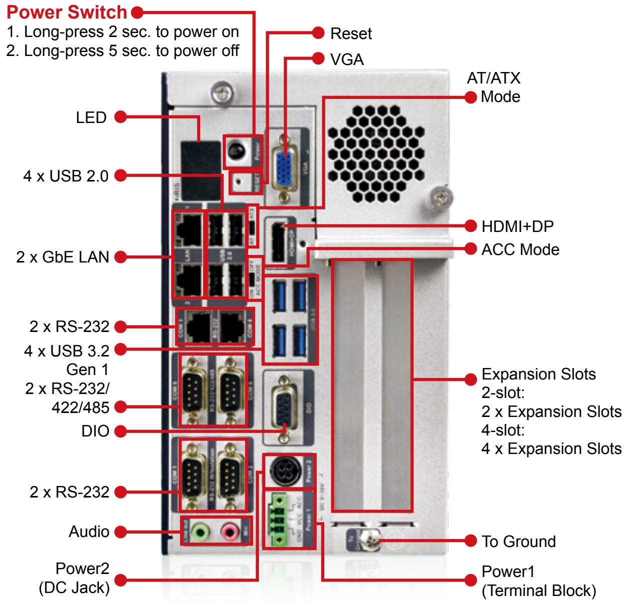


5V@3A or 12V@3A Internal Power Connector

The TANK-870-Q170 provides the most convenient 4-pin internal power connector for add-on card usage, adding more flexibility to the embedded system in industrial environment.



Fully Integrated I/O



Flexible Expansion Interface

Backplane	TANK-870-Q170i-2A	TANK-870-Q170i-2B	TANK-870-Q170i-4A		TANK-870-Q170i-4B	
Slot Type	PCIe x16	PCIe x16	PCIe x16	PCIe x16	PCIe x16	PCI
Signal	PCIe x8	PCIe x16	PCIe x8	PCIe x8	PCIe x16	PCI
Slot Type	PCIe x16	PCI	PCI	PCI	PCI	PCI
Signal	PCIe x8	PCI	PCI	PCI	PCI	PCI
PCIe Mini	N/A	N/A	1		1	

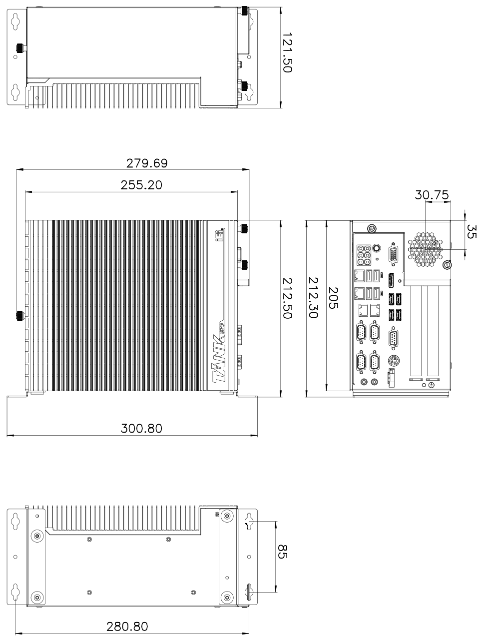
* The expansions described above are provided by the backplanes

Specifications

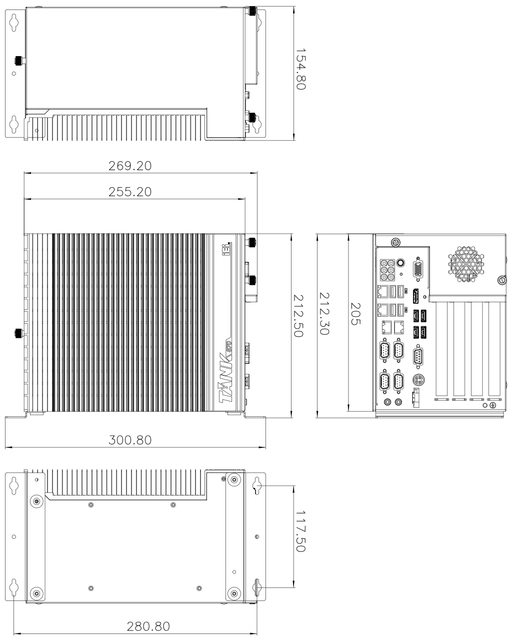
Model Name		TANK-870-Q170
Chassis	**Color**	Black C + Silver
	Dimensions (WxDxH) (mm)	2-slot: 121.5 x 255.2 x 205 4-slot: 154.8 x 255.2 x 205
	System Fan	Fanless
	Chassis Construction	Extruded aluminum alloys
Motherboard	**CPU**	7th Gen Intel® Core™ CPU & Intel® Core™ i7-6700TE 2.4 GHz (up to 3.4GHz, quad-core, TDP 35) Intel® Core™ i5-6500TE 2.3 GHz (up to 3.3GHz, quad-core, TDP 35)
	Chipset	Intel® Q170
	System Memory	2 x SO-DIMM DDR4 2666 (4GB pre-installed)(up to 32GB)
IPMI	**iRIS Solution**	1 x iRIS-2400 (optional)
Storage	**Hard Drive**	2 x 2.5" SATA 6Gb/s HDD/SSD bay (RAID 0/1 support)
I/O Interfaces	**USB**	4 x USB 3.2 Gen 1 4 x USB 2.0
	Ethernet	2 x RJ-45: LAN1: GbE by Intel® I219LM LAN2 (iRIS): GbE by Intel® I210
	COM Port	2 x RS-232/422/485 with AFC (DB-9) 4 x RS-232 (2 x RJ-45, 2 x DB-9 with 2.5kV isolation)
	Digital I/O	8-bit Digital I/O (4-in/ 4-out)
	Display	1 x VGA (up to 1920 x 1200@60Hz) 1 x HDMI/DP (up to 3840 x 2160@30Hz /4096 x 2304@60Hz) 1 x iDP (optional)
	Audio	1 x Line-out, 1 x Mic-in
	Wireless	1 x 802.11 a/b/g/n/ac (optional)
	TPM	1 x TPM 2.0 (2 x 10 pin) (optional)
Expansions	**PCIe Mini**	1 x Half-size (PCIe/ USB 2.0) 1 x Full-size (PCIe/ USB 2.0/ SATA)*
	Backplane	2-slot model: 1 x PCIe x16, 1 x PCI 2-slot model: 2 x PCIe x8 4-slot model: 2 x PCIe x8, 2 x PCI, 1 x Full-size PCIe Mini (PCIe/ USB 2.0) 4-slot model: 1 x PCIe x16, 3 x PCI, 1 x Full-size PCIe Mini (PCIe/ USB 2.0)
Power	**Power Input**	DC Jack: 9 ~ 36V DC Terminal Block: 9 ~ 36V DC
	Power Consumption	19V@3.68A (Intel® Core™ i7-6700TE with 8 GB memory)
	Internal Power output	5V@3A or 12V@3A
Reliability	**Mounting**	Wall mount
	Operating Temperature	i7-6700TE: -20°C ~ 45°C with air flow (SSD), 10% ~ 95% non-condensing i5-6500TE: -20°C ~ 60°C with air flow (SSD), 10% ~ 95% non-condensing
	Storage Temperature	-40°C ~ 85°C with air flow (SSD), 10% ~ 90% non-condensing
	Operating Shock	Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)
	Operating Vibration	MIL-STD-810G 514.6 C-1 (SSD)
	Weight (Net/Gross)	2-slot: 4.2 kg/6.3 kg 4-slot: 4.5 kg/6.5 kg
	Safety/EMC	CE/FCC/KC
OS	**Supported OS**	Microsoft® Windows® 8 Embedded, Microsoft® Windows® Embedded Standard 7 E, Microsoft® Windows® 10 IoT Enterprise

* TANK-870-Q170-QGW has no Full-size PCIe mini slot

Dimensions *(Unit: mm)*



TANK-870-Q170i-2 slot



TANK-870-Q170i-4 slot

Ordering Information

Part No.	Description
TANK-870-Q170i-i5/4G/2A-R11	Ruggedized fanless embedded system with Intel® Core™ i5-6500TE 2.3 GHz (up to 3.3 GHz, quad core, TDP 35W), 4GB DDR4 pre-installed memory, 2 x PCIe by 8 expansion, VGA/HDMI+DP/iDP, iRIS-2400 optional, 9 ~ 36V DC, RoHS
TANK-870-Q170i-i5/4G/2B-R11	Ruggedized fanless embedded system with Intel® Core™ i5-6500TE 2.3 GHz (up to 3.3 GHz, quad core, TDP 35W), 4GB DDR4 pre-installed memory, 1 x PCIe by 16 & 1 x PCI expansion, VGA/HDMI+DP/iDP, iRIS-2400 optional, 9 ~ 36V DC, RoHS
TANK-870-Q170i-i5/4G/4A-R11	Ruggedized fanless embedded system with Intel® Core™ i5-6500TE 2.3 GHz (up to 3.3 GHz, quad core, TDP 35W), 4GB DDR4 pre-installed memory, 2 x PCIe by 8 & 2 x PCI expansion, VGA/HDMI+DP/iDP, iRIS-2400 optional, 9 ~ 36V DC, RoHS
TANK-870-Q170i-i5/4G/4B-R11	Ruggedized fanless embedded system with Intel® Core™ i5-6500TE 2.3 GHz (up to 3.3 GHz, quad core, TDP 35W), 4GB DDR4 pre-installed memory, 1 x PCIe by 16 & 3 x PCI expansion, VGA/HDMI+DP/iDP, iRIS-2400 optional, 9 ~ 36V DC, RoHS
TANK-870-Q170i-i7/4G/2A-R11	Ruggedized fanless embedded system with Intel® Core™ i7-6700TE 2.4 GHz (up to 3.4 GHz, quad core, TDP 35W), 4GB DDR4 pre-installed memory, 2 x PCIe by 8 expansion, VGA/HDMI+DP/iDP, iRIS-2400 optional, 9 ~ 36V DC, RoHS
TANK-870-Q170i-i7/4G/2B-R11	Ruggedized fanless embedded system with Intel® Core™ i7-6700TE 2.4 GHz (up to 3.4 GHz, quad core, TDP 35W), 4GB DDR4 pre-installed memory, 1 x PCIe by 16 & 1 x PCI expansion, VGA/HDMI+DP/iDP, iRIS-2400 optional, 9 ~ 36V DC, RoHS
TANK-870-Q170i-i7/4G/4A-R11	Ruggedized fanless embedded system with Intel® Core™ i7-6700TE 2.4 GHz (up to 3.4 GHz, quad core, TDP 35W), 4GB DDR4 pre-installed memory, 2 x PCIe by 8 & 2 x PCI expansion, VGA/HDMI+DP/iDP, iRIS-2400 optional, 9 ~ 36V DC, RoHS
TANK-870-Q170i-i7/4G/4B-R11	Ruggedized fanless embedded system with Intel® Core™ i7-6700TE 2.4 GHz (up to 3.4 GHz, quad core TDP 35W), 4GB DDR4 pre-installed memory, 1 x PCIe by 16 & 3 x PCI expansion, VGA/HDMI+DP/iDP, iRIS-2400 optional, 9 ~ 36V DC, RoHS
TANK-870-Q170-QGW-2A-R11	Ruggedized Fanless embedded system with Intel® Core i5-6500TE 2.3GHz, (up to 3.3 GHz, quad core, TDP 35W), 8GB DDR4 pre-installed memory, 2 x PCIe by 8 expansion, VGA/HDMI+DP/iDP, iRIS-2400 optional, 9 ~ 36V DC, with QTS-Gateway, RoHS

Options

Part No.	Description
32000-000002-RS	European power cord
63040-010120-300-RS	Adapter Power;FSP;FSP120-AHAN3;9NA1206708;Active PFC;Vin:90 ~ 264VAC;120W;Dim:75.6*151.3*25.4mm;Plug=6.5mm;Cable=1500mm;Erp(NO LOAD 0.15W);Vout:12VDC;Din 4Pin/lock;CCL;RoHS
63040-010150-700-RS	Adapter Power;FSP;FSP150-ABAN3;9NA1504811;Active PFC;Vin:90 ~ 264VAC;150W;Dim:75.6*151.3*25.4mm;Plug=6.5mm;Cable=1500mm;Erp(NO LOAD 0.15W);Vout:19VDC;Din 4Pin/lock;CCL;RoHS
iRIS-2400-R10	IPMI 2.0 adapter card with AST2400 BMC chip for DDR3 SO-DIMM socket interface
EMB-FAN-KIT02-R10	Fan Module;MODIFY 31100-000272-RS;+12V DC;4PIN;40*40*15mm ;STANDARD;;FD124015LB2W3;; L= 400mm MOLEX 5051-04P P=2.54;CCL;RoHS
EMB-WIFI-KIT01-R20	1T1R wifi module kit for embedded system, IEEE802.11a/b/g/n/ac WiFi with Bluetooth 4.0/3.0+HS, 1 x wifi module, 2 x 250mm RF cable, 2 x Antenna, RoHS
DP-DP-R10	DisplayPort to DisplayPort converter board (for IEI IDP connector)
DP-HDMI-R10	DisplayPort to HDMI converter board (for IEI IDP connector)
DP-LVDS-R10	DisplayPort to 24-bit dual channel LVDS converter board (for IEI IDP connector)
DP-VGA-R10	DisplayPort to VGA converter board (for IEI IDP connector)
DP-DVI-R10	DisplayPort to DVI-D converter board (for IEI IDP connector)
IPCIE-4POE-R10	PCI Express Power over Ethernet frame grabber card, 4-port 1000 Base(T), 802.3af compliant, RoHS
TANK-870-Q170-WES7E64-R10	OS Image with Windows® Embedded Standard 7 E 64-bit for TANK-870-Q170 Series, with DVD-ROM, RoHS
TANK-870-Q170-W10E64-H-R10	OS Image with Windows® Embedded Standard 10 E High End 64-bit for TANK-870-Q170-i7 Series, with DVD-ROM, RoHS
TANK-870-Q170-W10E64-V-R10	OS Image with Windows® Embedded Standard 10 E Value 64-bit for TANK-870-Q170-i5 Series, with DVD-ROM, RoHS
TPM-IN02-R20	20-pin Infineon TPM2.0 module, software mangement tool, firmware v5.5

* The TANK-870 can support up to 40°C operating temperature when installing with the IPCIE-4POE-R10.

Packing List

- 1 x Chassis Screw
- 1 x Mounting Bracket
- 2 x RJ45 to COM Port Cable

TANK-870e-H110

- **High-Performance 6th/7th Generation Intel® Core™ Processor**
- **Fanless Embedded Computer**

Features

- 6th/7th Gen Intel® Core™ processor platform with Intel® H110 chipset and DDR4 memory
- Support dual display VGA+HDMI
- On-board internal power connector for providing power to add-on cards
- Great flexibility for hardware expansion

Fanless
DDR4 2133
Gigabit Ethernet Dual GbE
PCI/PCIe Expansion

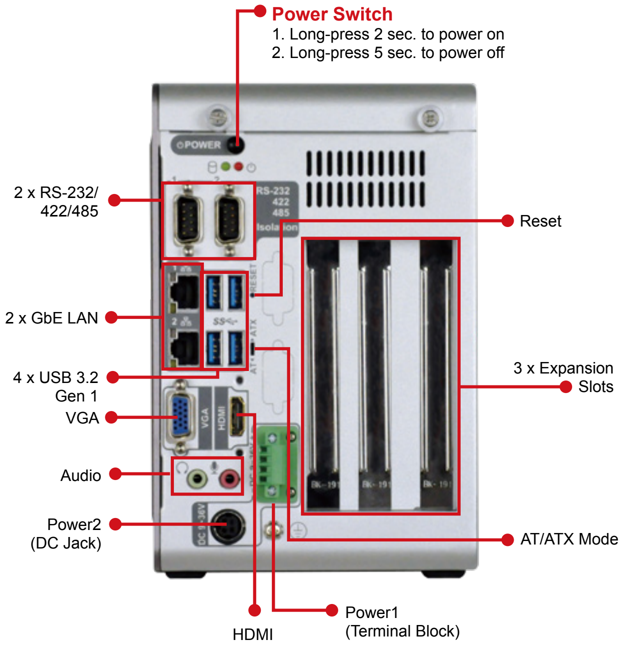
Specifications

Model Name		TANK-870e-H110
Chassis	Color	Dark silver purple + Silver
	Dimensions (WxDxH) (mm)	132.6 x 255.2 x 190
	System Fan	Fanless
	Chassis Construction	Extruded aluminum alloys
Motherboard	CPU	7th Gen Intel® Core™ CPU & Intel® Core™ i7-6700TE 2.4 GHz (up to 3.4GHz, quad-core, TDP 35) Intel® Core™ i5-6500TE 2.3 GHz (up to 3.3GHz, quad-core, TDP 35)
	Chipset	Intel® H110
	System Memory	2 x SO-DIMM DDR4 2666 (4GB pre-installed)(up to 32GB)
Storage	Hard Drive	2 x 2.5" SATA 6Gb/s HDD/SSD bay
I/O Interfaces	USB	4 x USB 3.2 Gen1
	Ethernet	2 x RJ-45: 2 x GbE by RTL8111G
	COM Port	2 x RS-232/422/485 with AFC (DB-9 with 2.5kV isolation)
	Display	1 x VGA (up to 1920 x 1200@60Hz) 1 x HDMI (up to 3840 x 2160@30Hz)
	Audio	1 x Line-out, 1 x Mic-in
	Wireless	1 x 802.11a/b/g/n/ac (optional)
Expansions	PCIe Mini	1 x Full-size (PCIe/ USB 2.0) 1 x Full-size (PCIe/ USB 2.0/ SATA)
	Backplane	3A: 1 x PCIe x16, 2 x PCI 3B: 1 x PCIe x16, 1 x PCIe x4, 1 x PCI 3C: 3 x PCI
Power	Power Input	DC Jack: 9 ~ 36V DC Terminal Block: 9 ~ 36V DC
	Power Consumption	19 V@3.44 A (Intel® Core™ i7-6700TE with 8 GB memory)
	Internal Power Connector	5V@3A or 12V@3A
Reliability	Mounting	Wall mount & DIN Rail
	Operating Temperature	i7-6700TE -20°C ~ 50°C with air flow (SSD), 10% ~ 95% non-condensing i5-6500TE -20°C ~ 60°C with air flow (SSD), 10% ~ 95% non-condensing
	Storage Temperature	-40ºC ~ 85ºC with air flow (SSD), 5% ~ 90% non-condensing
	Operating Shock	Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)
	Operating Vibration	MIL-STD-810G 514.6C-1 (SSD)
	Weight (Net/Gross)	4.2 kg/6.3 kg
	Safety/EMC	CE/FCC/KC
OS	Supported OS	Microsoft® Windows® 8 Embedded, Microsoft® Windows® Embedded Standard 7 E, Microsoft® Windows® 10 IoT Enterprise

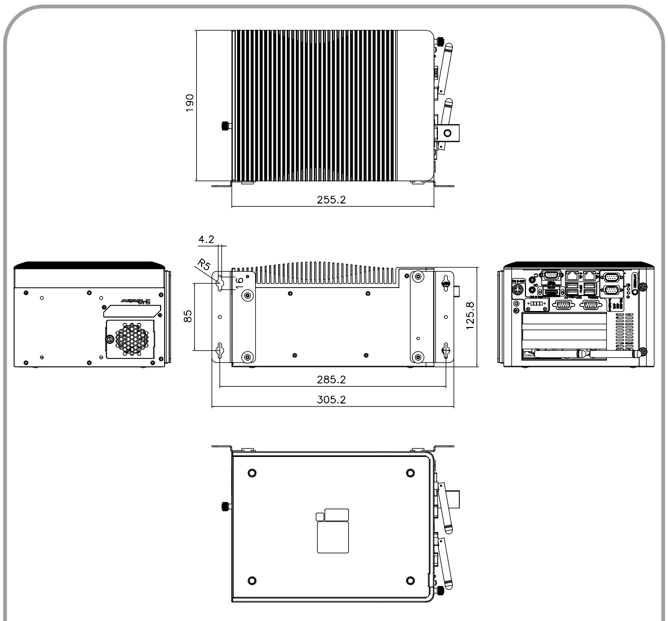
Versatile Expansion Interface

Backplane	3A HPE-3S6		3B HPE-3S7			3C HPE-3PCI
Slot	2 x PCI	1 x PCIe x16	1 x PCI	1 x PCIe x4	1 x PCIe x16	3 x PCI
Signal	PCI	PCIe x16	PCI	PCIe x1	PCIe x16	PCI

Fully Integrated I/O



Dimensions (Unit: mm)



TANK-870e-H110

Ordering Information

Part No.	Description
TANK-870e-H110-i5/4G/3A-R11	Ruggedized fanless embedded system with Intel® Core i5-6500TE 2.3GHz, (up to 3.3 GHz, quad core, TDP 35W), 4GB DDR4 pre-installed memory, 1 x PCIe by 16 & 2 x PCI expansion, VGA/HDMI, 9 ~ 36V DC, RoHS
TANK-870e-H110-i5/4G/3B-R11	Ruggedized fanless embedded system with Intel® Core i5-6500TE 2.3GHz, (up to 3.3 GHz, quad core, TDP 35W), 4GB DDR4 pre-installed memory, 1 x PCIe by 16 & 1 x PCIe by 1 & 1 x PCI expansion, VGA/HDMI, 9 ~ 36V DC, RoHS
TANK-870e-H110-i5/4G/3C-R11	Ruggedized fanless embedded system with Intel® Core™ i5-6500TE 2.3 GHz (up to 3.3 GHz, quad core, TDP 35W), 4GB DDR4 pre-installed memory, 3 x PCI expansion, VGA/HDMI, 9 ~ 36V DC, RoHS
TANK-870e-H110-i7/4G/3A-R11	Ruggedized fanless embedded system with Intel® Core i7-6700TE 2.4GHz, (up to 3.4 GHz, quad core, TDP 35W), 4GB DDR4 pre-installed memory, 1 x PCIe by 16 & 2 x PCI expansion, VGA/HDMI, 9 ~ 36V DC, RoHS
TANK-870e-H110-i7/4G/3B-R11	Ruggedized fanless embedded system with Intel® Core i7-6700TE 2.4GHz, (up to 3.4 GHz, quad core, TDP 35W), 4GB DDR4 pre-installed memory, 1 x PCIe by 16 & 1 x PCIe by 1 & 1 x PCI expansion, VGA/HDMI, 9 ~ 36V DC, RoHS
TANK-870e-H110-i7/4G/3C-R11	Ruggedized fanless embedded system with Intel® Core™ i7-6700TE 2.4 GHz (up to 3.4 GHz, quad core, TDP 35W), 4GB DDR4 pre-installed memory, 3 x PCI expansion, VGA/HDMI, 9 ~ 36V DC, RoHS

Options

Part No.	Description
32000-000002-RS	European power cord
63040-010120-300-RS	Adapter Power;FSP;FSP120-AHAN3;9NA1206708;Active PFC;Vin:90 ~ 264VAC;120W;Dim:75.6*151.3*25.4mm;Plug=6.5mm;Cable=1500mm;Erp(NO LOAD 0.15W);Vout:12VDC;Din 4Pin/lock;CCL;RoHS
EMB-FAN-KIT02-R10	Fan Module;MODIFY 31100-000272-RS;+12V DC;4PIN;40*40*15mm ;STANDARD;;FD124015LB2W3; L= 400mm MOLEX 5051-04P P=2.54;CCL;RoHS
EMB-WIFI-KIT11-R20	1T1R wifi module kit for embedded system, IEEE802.11a/b/g/n/ac WiFi with Bluetooth 4.0/3.0+HS, 1 x wifi module, 2 x 400mm RF cable, 2 x Antenna, RoHS
DK-75-R10	DIN mount kit adapter for VESA-75
E-MPCIE-DLAN-R10	PCIe Mini card supports 2-port GbE with Intel I211 controller, with PMS 194C I/O bracket and 250mm cable
E-MPCIE-LAN-R10	PCIe Mini card supports 1-port GbE with Realtek RTL8111E controller, with PMS 194C I/O bracket and 250mm cable
E-MPCIE-UART-KIT01-R10	PCI Express Mini supports quad RS-232/422/485 port module
TANK-870e-H110-WES7E64-R10	OS Image with Windows® Embedded Standard 7 E 64-bit for TANK-870e-H110 Series, with DVD-ROM, RoHS
TANK-870e-H110-W10E64-H-R10	OS Image with Windows® Embedded Standard 10 E High End 64-bit for TANK-870e-H110-i7 Series, with DVD-ROM, RoHS
TANK-870e-H110-W10E64-V-R10	OS Image with Windows® Embedded Standard 10 E Value 64-bit for TANK-870e-H110-i5 Series, with DVD-ROM, RoHS

Packing List

1 x Chassis Screw	1 x Mounting Bracket

TANK-802-ULT5

- *Fanless Embedded System*
- *Intel® Core™ i5-8365UE 1.6GHz (quad core) Solution*

New

Features

- Intel® Core™ i5-8365UE/ Celeron™ 4205U Processor
- Triple GbE LAN Ports
- Multiple USB 3.2 Gen 2 (10Gb/s)
- Up to 8 COM Ports
- Modulized Flexible Expansion

Fanless

Triple LAN

RS-232 /422/485

M.2

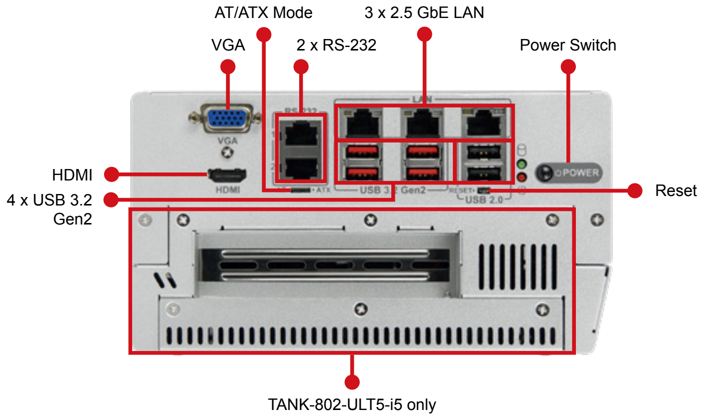
PCIe Mini Expansion

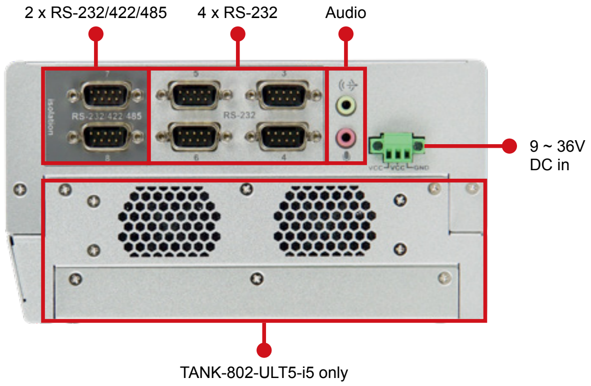
USB 3.2 Gen 2

Specifications

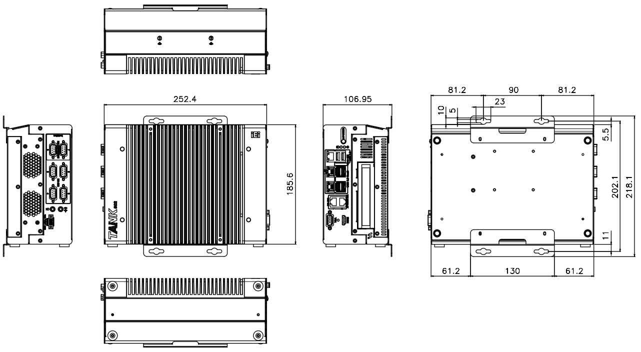
Model Name		TANK-802-ULT5-i5	TANK-802-ULT5-i5/S	TANK-802-ULT5-C/S
Chassis	Color	Black C + Silver		
	Dimensions (WxDxH)(mm)	102 x 252.4 x 185.6	67.5 x 252.4 x 185.6	
	System Fan	Fanless		
	Chassis Construction	Extruded aluminum alloy		
Motherboard	CPU	Intel® Core™ i5-8365UE 1.6GHz (up to 4.1GHz, quad-core, TDP 15W)		Intel® Celeron® 4205U 1.8GHz (dual-core, TDP 15W)
	Chipset	SoC		
	System Memory	2 x SO-DIMM DDR4 2400 (4GB pre-installed) (up to 32GB)		
Storage	SATA	1 x 2.5" SATA 6Gb/s HDD/SSD bay		
I/O Interfaces	USB	4 x USB 3.2 Gen 2 2 x USB 2.0		
	Ethernet	3 x RJ-45: 1 x GbE by Intel® I219 2 x GbE by Intel® I211		
	COM Port	2 x RS-232/422/485 with AFC (DB-9 with 2.5 kV isolation) 6 x RS-232 (4 x DB-9/2 x RJ-45)		
	Digital I/O	8-bit Digital I/O (4-in/ 4-out by pin header)		
	Display	1 x Lockable HDMI, 1 x VGA		
	Audio	1 x Line-out, 1 x Mic-in		
	TPM	1 x TPM 2.0 (2 x 10 pin) (optional)		
	Others	1 x Power button 1 x Reset button 1 x AT/ATX switch 1 x LED for power (green) 1 x LED for HDD (yellow)		
Expansions	PCIe Mini	1x Full-size with SIM card slot (PCIe/USB2.0)		
	M.2	1 x 2230 A-key (PCIe x2/USB 2.0) 1 x 2242/80 B-key (USB 2.0/SATA)		1 x 2230 A-key (PCIe x2/USB 2.0) 1 x 2242/80 B-key (SATA)
	Backplane	1 x PCIe Gen3x4	N/A	N/A
Power	Power Input	Terminal Block: 9 ~ 36V DC		
	Power Consumption	36V @ 1.4A (Intel® Core™ i5-8365UE with 4GB memory)		
	Internal Power Output	12V @ up to 5A		
Reliability	Mounting	Wall mount		
	Operating Temperature	-20 ~ 60° C with air flow, 10% ~ 95% non-condensing		
	Storage Temperature	-40 ~ 85°C with air flow, 10% ~ 95% non-condensing		
	Operating Shock	Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)		
	Operation Vibration	MIL-STD-810G 514.6C-1 (SSD)		
	Weight (Net/Gross)	3.3 kg/5.4 kg	2.75 kg/4.85 kg	2.75 kg/4.85 kg
	Safety / EMC	CE/FCC/EAC		
	Watchdog timer	Programmable 1~255 sec/min		
OS	Supported OS	Microsoft Windows 10, Linux		

Fully Integrated I/O

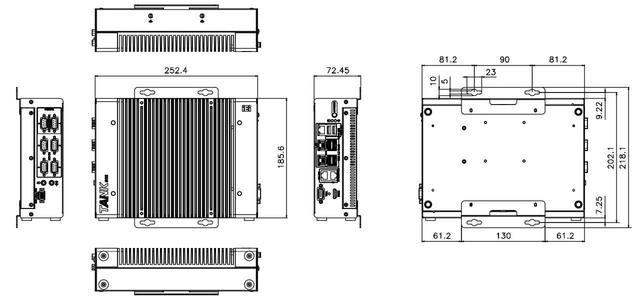




Dimensions *(Unit: mm)*



TANK-802-ULT5-i5



TANK-802-ULT5-i5/S
TANK-802-ULT5-C/S

Ordering Information

Part No.	Description
TANK-802-ULT5-i5/4G-R10	Ruggedized Fanless embedded system with Intel® Whiskey Lake i5-8365UE 1.6GHz (up to 4.1GHz, Quad core, TDP 15W), 4GB DDR4 pre-installed memory, HDMI/VGA, 3 GbE LAN, 8 COM, 9~36V DC and RoHS
TANK-802-ULT5-i5/4G/S-R10	Ruggedized Fanless embedded system with Intel® Whiskey Lake i5-8365UE 1.6GHz (up to 4.1GHz, Quad core, TDP 15W), 4GB DDR4 pre-installed memory, HDMI/VGA, 3 GbE LAN, 8 COM, 9~36V DC, PCIex4 extension layer and RoHS
TANK-802-ULT5-C/4G/S-R10	Ruggedized embedded system with Intel® Whiskey Lake Celeron™ 4205U 1.8GHz (Dual core, TDP 15W), 4GB DDR4 pre-installed memory, HDMI/VGA, 3 GbE LAN, 8 COM, 9~36V DC and RoHS

Options

Item	Part No.	Description
Adapter[1]	**63040-010060-210-RS**	Adapter Power;FSP;FSP060-DHAN3;9NA0608010;;Vin:90~264VAC;60W;Dim:62.0x110*31.5mm;Plug=7.5mm;Cable=1200mm;Erp(NO LOAD 0.21W);Vout:12VDC;Φ2.5/Φ5.5/lock;CCL;RoHS
Adapter[1/2]	**63040-010096-230-RS**	Adapter Power;FSP;FSP096-AHAN3;9NA0961412 ;Active PFC;Vin:90~264VAC;96W;Dim:75.6 x 151.3 x 25.4mm;Plug=7.5mm;Cable=1500mm;Erp(NO LOAD 0.15W);Vout:12VDC;Φ2.5/Φ5.5/lock;CCL;RoHS
Power cable[1]	**32102-026500-100-RS**	WIRE CABLE;POWER CABLE;;2;200MM;18AWG;(A)DC JACK 5.5x2.5, NUT+WASHER;(B)TERMINAL BLOCK:3P P=3.5;SHANGHAI YING YU;RoHS
Power cord	**32000-000002-RS**	European power cord
System Fan	**31100-000272-RS**	FAN;+12V DC;4PIN;YEN SUN;40x40x15mm;6000RPM;TWO BALL BEARING;LINE LENGTH:220MM;4.3+/0.3.32.0+/0.3;FD124015LB;FD124015LB-NBG(2W3);AXIAL FAN;WITH FRAME;6.1CFM;7~13.2V;28dB;80000HUR;UL, CUL, TUV;CCL;RoHS
Wifi module[3]	**27319-000009-RS**	Wireless LAN Module;Wireless LAN & Bluetooth M.2 Module;Sparklan;R9701810011;IEEE802.11a/b/g/n/ac;2.412GHz~2.4835GHz, 5.15GHz~5.85GHz;M.2 2230;.;3.3V;22x30x2.15mm;QCNFA364A;QCA6174A-5;2x2 MIMO;Dual Band;WCBN808A-Q2;CCL;CCL;RoHS
Antenna[3]	**32505-000900-100-RS**	External Antenna;WLAN;RG 178;108MM;PEAK GAIN 2.0DBI;Exceltek;2.4-2.5GHz/5.15-5.85GHz;REVERSE SMA PLUG;RoHS
RF Cable[3]	**32501-004000-100-RS**	RF;RF CABLE;LINE DIAMETER:0.81mm;250MM;;;50Ω;Sparklan;0-6GHz;VSWR≤1.3;I-PEX MHF-4 Plug;REVERSE SMA JACK;NUTx1;WASHERx1;;RoHS
TPM Module	**TPM-IN03-R10**	20-pin Infineon SPI TPM2.0 module, software mangement tool, firmware V7.63
PoE cards[4]	**GPOE-4P-R20**	PCI Express Power over Ethernet card, 4-port 1000 Base(T), 802.3at/af compliant, low profile, RoHS

[1] It is required to order Power Cable together with Adapter for power usage
[2] Please select 96W adapter if intend to add add-on card
[3] Each Wi-Fi module needs two antennas and two RF cables to fully support Wi-Fi function
[4] Only applicable for TANK-802-ULT5-i5/4G-R10

Packing List

1 x Wall Mount Bracket	1 x Screw kit

TANK-610-BW

Fanlesss Embedded System

Features

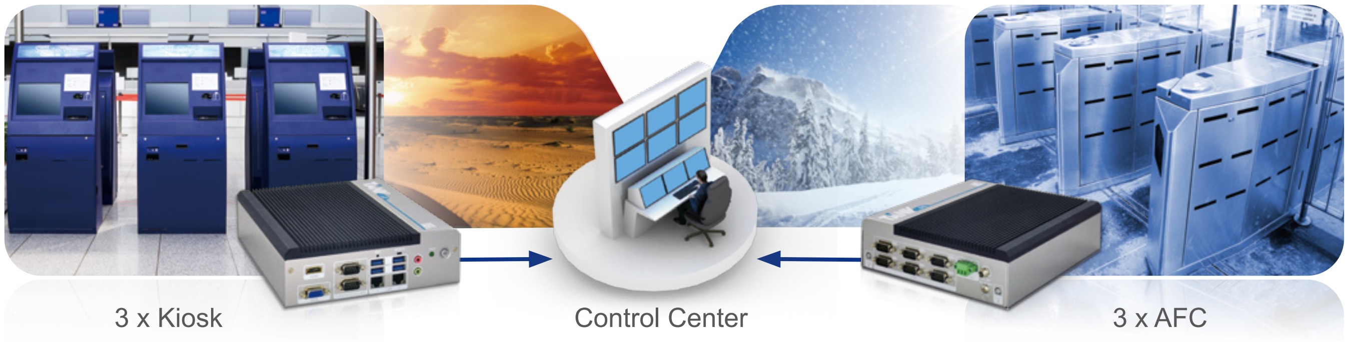
- Intel® Celeron® N3160 processor
- Multiple COM ports: six RS-232 and two RS-232/422/485
- VGA and HDMI dual independent display
- mSATA and one 2.5" SATA storage device
- Wide range temperature

Fanless | -40°C ~ 60°C | PCIe Mini Expansion | USB 3.2 Gen 1 | Dual GbE

Specifications

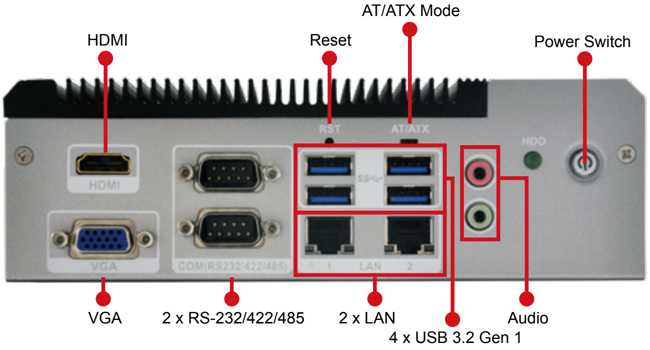
Model Name		TANK-610-BW
Chassis	Color	Black C + Silver
	Dimensions (WxDxH) (mm)	184 x 200.6 x 58.2
	System Fan	Fanless
	Chassis Construction	Extruded aluminum alloy
Motherboard	CPU	Intel® Celeron® N3160 1.6 GHz (up to 2.24GHz, quad-core, TDP 6W)
	Chipset	SoC
	System Memory	2 x DDR3L SO-DIMM (2GB pre-installed)(up to 8GB)
Storage	Hard Drive	1 x 2.5" SATA 6Gb/s HDD/SSD Bay
I/O Interfaces	USB	4 x USB 3.2 Gen1
	Ethernet	2 x RJ-45: 2 x GbE by Intel® I210
	COM Port	2 x RS-232/422/485 with AFC 6 x RS-232
	Display	1 x VGA (up to 1920 x 1200@60Hz) 1 x HDMI (up to 3840 x 2160@30Hz)
	Audio	1 x Line-out, 1 x Mic-in
	Wireless	1 x 802.11a/b/g/n/ac (optional)
Expansions	PCIe Mini	1 x Half-size (PCIe/USB 2.0) 1 x Full-size (PCIe/SATA)
Power	Power Input	DC Jack: 9 ~ 36V DC Terminal Block: 9 ~ 36V DC
	Power Consumption	12 V@1.49 A (Intel® Celeron® N3160 with 4 GB DDR3L memory)
Reliability	Mounting	Wall mount, VESA 100
	Operating Temperature	-40°C ~ 60°C with air flow (SSD), 10% ~ 95% non-condensing
	Storage Temperature	-40°C ~ 80°C with air flow (SSD), 10% ~ 95% non-condensing
	Operating Shock	Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)
	Operating Vibration	MIL-STD-810G 514.6C-1 (SSD)
	Weight (Net/Gross)	2.2 kg/3 kg
	Safety/EMC	CE/FCC
OS	Supported OS	Microsoft® Windows 8 Embedded, Microsoft® Windows® Embedded Standard 7 E

Various Applications

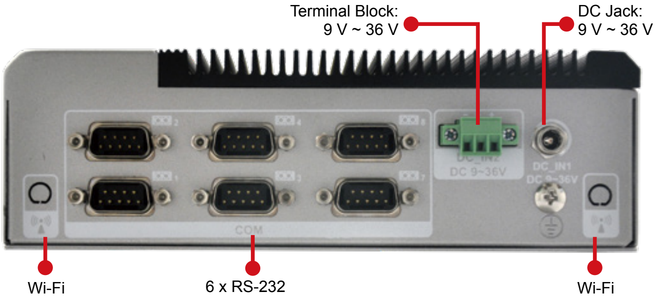


Fully Integrated I/O

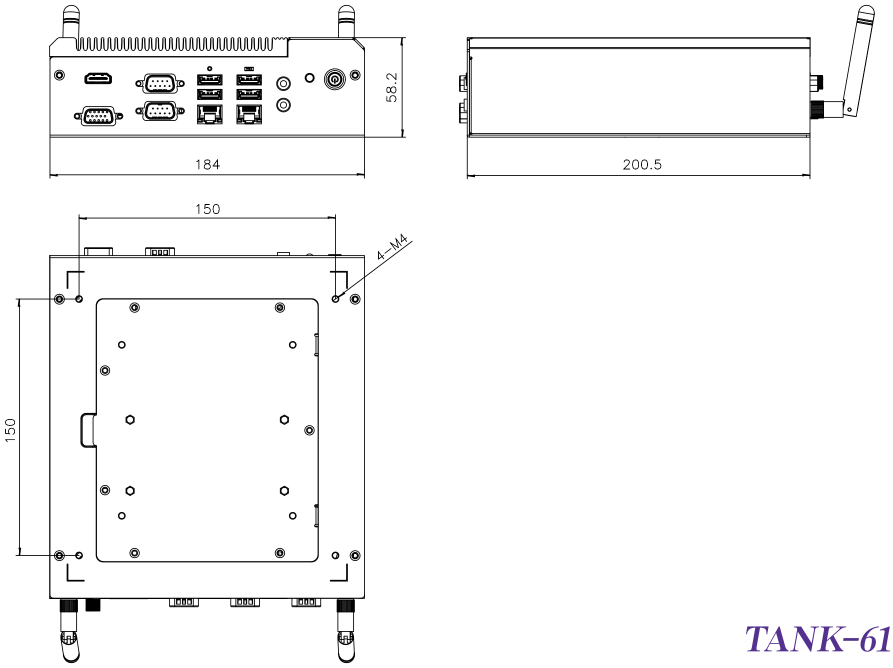
Front View



Rear View



Dimensions (Unit: mm)



TANK-610-BW

Ordering Information

Part No.	Description
TANK-610-BW-N3/2G-R10	Fanless wide temperature embedded system with Intel® Celeron® N3160 1.6GHz, (up to 2.24 GHz, quad-core, TDP 6W), 2GB DDR3L pre-installed memory, 9 V ~ 36 V DC, with RS-232/422/485, USB 3.2 Gen 1 (5Gb/s), VGA/HDMI, dual Intel® PCIe GbE, RoHS

Options

Part No.	Description
AFLWK-19	VESA 100 mount kit
EMB-WIFI-KIT11-R20	1T1R wifi module kit for embedded system, IEEE802.11a/b/g/n/ac WiFi with Bluetooth 4.0/3.0+HS, 1 x wifi module, 2 x 350mm RF cable, 2 x Antenna, RoHS
TANK-610-BW-WES7E64-R10	OS Image with Windows® Embedded Standard 7 E 64-bit for TANK-610 BW Series, with DVD-ROM, RoHS, R10
DK-100-R10	VESA 100 to DIN-Rail mounting kit

Packing List

Item	Qty	Description
Power cord	1	1500 mm, European Standard
Power adapter (Meet PSE & ErP)	1	FSP065-REBN2, 90 V ~ 264 V AC input, 65 W, 19 V DC output, ErP
Wall mount bracket	1	Wall mount bracket/holder
Screw set	1	

TANK-510AI-NX

- *NVIDIA Jetson Xavier NX 8GB processor*

Preliminary

Features

- NVIDIA Jetson Xavier NX 8GB processor
- 4 x PoE ports (IEEE 802.3 af compliant)
- Edge AI inference system

nVIDIA

PoE

Fanless

RS-232 /422/485

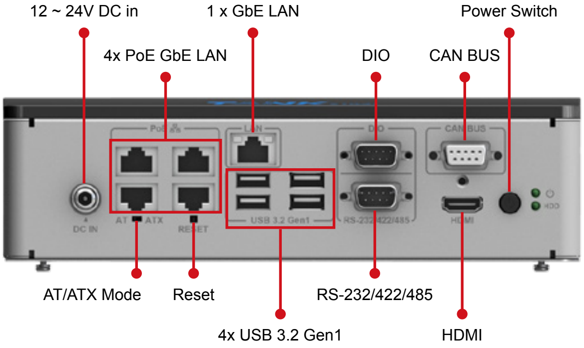
M.2

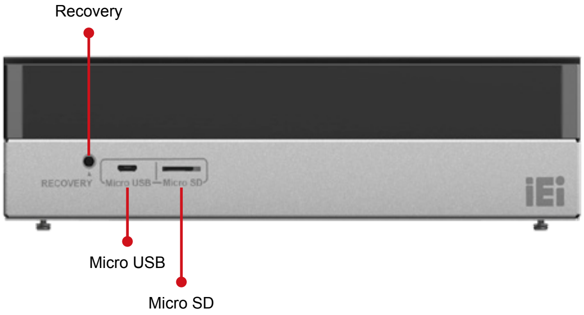
SUPERSPEED CERTIFIED USB
USB 3.2 Gen 1

Specifications

Model Name		TANK-510AI-NX
Chassis	Color	Black C + Silver
	Dimensions (WxDxH)(mm)	156 x 148 x 73.9
	System Fan	Fanless
	Chassis Construction	Extruded aluminum alloys
Motherboard	CPU	6-core NVIDIA Carmel ARM® v8.2 64-bit CPU 6MB L2 + 4MB L3
	GPU	384-core NVIDIA Volta™ GPU with 48 Tensor Cores
	System Memory	8 GB 128-bit LPDDR4x
Storage	eMMC	1 x 16GB eMMC 5.1
	Micro SD Card	1 x Micro SD Slot
I/O Interfaces	USB	4 x USB 3.2 Gen1 1 x USB 2.0 (Micro USB)
	Ethernet	5 x RJ-45: 1 x GbE by NX module 4 x GbE by Intel® I211 (IEEE 802.3af PoE)
	COM Port	1 x RS232/422/485 with AFC
	Digital I/O	8-bit Digital I/O (4-in/ 4-out)
	Display	1 x HDMI
	Can Bus	1 (DB9)
	TPM	1 x TPM 2.0
Expansions	M.2	1 x 2242/80 B-key (SATA/USB 2.0)
Power	Power Input	DC Jack: 19~24V DC
Reliability	Mounting	Wall mount
	Operating Temperature	-20 ~ 60°C with air flow, 10% ~ 95% non-condensing
	Storage Temperature	-30 ~ 70°C with air flow, 10% ~ 95% non-condensing
	Operating Shock	Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)
	Operation Vibration	MIL-STD-810G 514.6 C-1 (with SSD)
	Weight (Net/Gross)	TBD
	Safety / EMC	CE/FCC/EAC
	Watchdog timer	Programmable 1~255 sec/min
OS	Supported OS	Linux for Jetson NX

Fully Integrated I/O





Ordering Information

Part No.	Description
TANK-510AI-NX/8G-R10	Fanless embedded AI system with NVIDIA Xavier module(6 core ARM CPU with 384 CUDA cores) , 8GB LPDDR4 memory,16GB eMMC 5.1, one HDMI display, 19-24V DC and RoHS

Packing List

1 x Screw kit	1 x Wall Mount Bracket

TANK-500AI-XA

■ *NVIDIA Jetson AGX Xavier 32GB processor*

Preliminary

Features

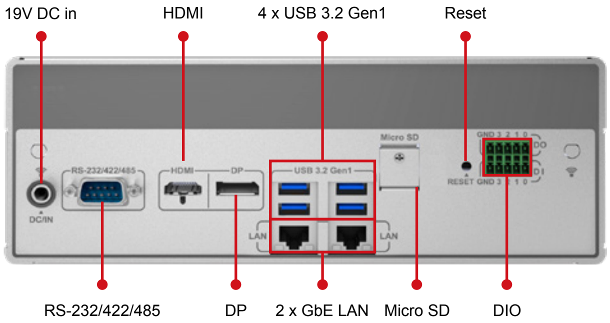
- NVIDIA Jetson AGX Xavier 32GB processor
- Low power consumption
- Integrated AI Box PC bundle with Linux Ubuntu 18.04
- Edge AI inference system

nVIDIA | Fanless | RS-232/422/485 | M.2/NGFF | SUPERSPEED USB USB 3.2 Gen 1

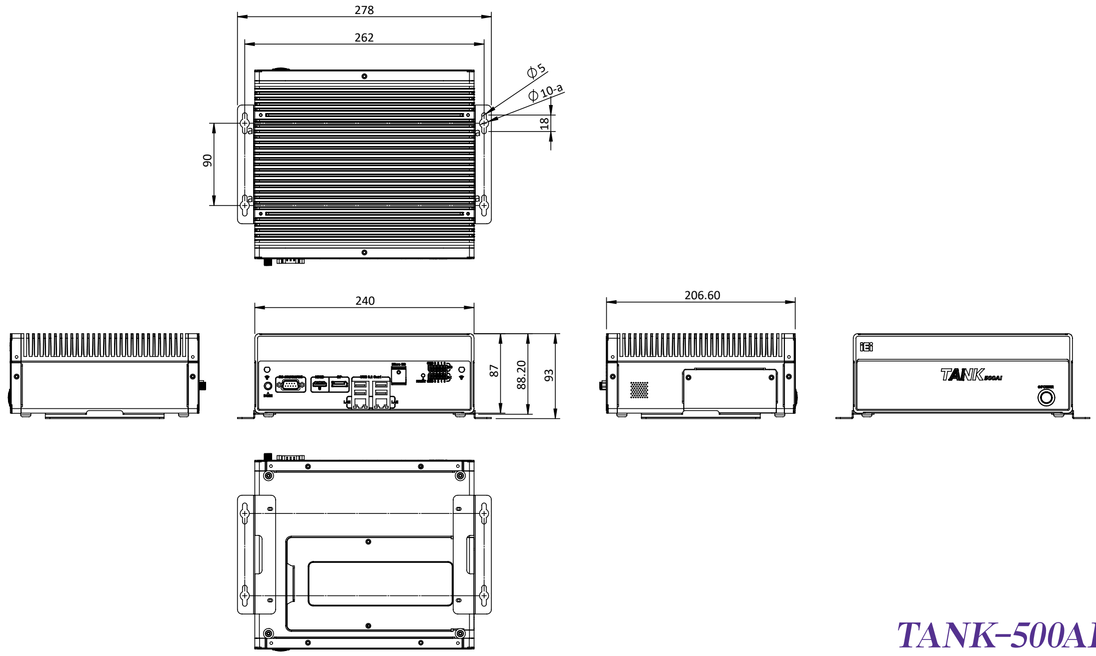
Specifications

Model Name		TANK-500AI-XA
Chassis	**Color**	Black C + Silver
	Dimensions (WxDxH)(mm)	240 x 206.6 x 87
	System Fan	Fanless
	Chassis Construction	Extruded aluminum alloys
Motherboard	**CPU**	8-core ARM v8.2 64-bit CPU, 8MB L2 + 4MB L3
	GPU	NVIDIA Volta™ architecture with 512 NVIDIA CUDA cores and 64 Tensor cores 11 TFLOPS (FP16) 22 TOPS (INT8)
	System Memory	32 GB 256-bit LPDDR4x 2133MHz - 137GB/s
Storage	**eMMC**	1 x 32GB eMMC 5.1
	Micro SD Card	1 x Micro SD slot
I/O Interfaces	**USB**	4 x USB 3.2 Gen1 1 x USB 2.0 Type C OTG mode (internal for programming internal flash) 1 x USB 2.0 Type A (internal)
	Ethernet	2 x RJ-45: 2 x GbE by Marvell 88E1512
	COM Port	1 x RS232/422/485 with AFC
	Digital I/O	8-bit Digital I/O (4-in/ 4-out)
	Display	1 x HDMI (up to 3840 x 2160 @ 60HZ) 1 x DP (up to 3840 x 2160 @ 60HZ)
	Audio	1 x 2W speaker
	TPM	1 x TPM 2.0
Expansions	**M.2**	1 x 2230 M.2 E-key (PCIe x1/USB 2.0) 1 x 2242/60/80 M-key (PCIe x4) 1 x 2280 M.2 M-key (PCIex2 for IEI module only)
Power	**Power Input**	DC Jack: 19V DC
	Power Consumption	TBD
Reliability	**Mounting**	Wall mount
	Operating Temperature	MAX: -20~ 50° with air flow, 10% ~ 95% non-condensing 30W: -20~ 60°C with air flow, 10% ~ 95% non-condensing
	Storage Temperature	-30~70°C with air flow, 10% ~ 95% non-condensing
	Operating Shock	Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)
	Operation Vibration	MIL-STD-810G 514.6C-1 (SSD)
	Weight (Net/Gross)	TBD
	Safety/EMC	CE/FCC
OS	**Supported OS**	Linux for Jetson AGX Xavier

Fully Integrated I/O



Dimensions (Unit: mm)



TANK-500AI-XA

Ordering Information

Part No.	Description
TANK-500AI-XA/32G-R10	Fanless embedded AI system with NVIDIA Xavier module(8 core ARM CPU with 512 CUDA cores), 32GB LPDDR4 memory, 32GB eMMC 5.1, one HDMI display, 19V DC and RoHS

Options

Item	Part No.	Description
Wi-Fi Module	**27319-000009-RS***	Wireless Lan Module;Wireless LAN & Bluetooth M.2 Module;Sparklan;R9701810011;IEEE802.11a/b/g/n/ac;2.412 GHz~2.4835GHz, 5.15GHz~5.85GHz;M.2 2230;3.3V;22x30x2.15mm;QCNFA364A;QCA6174A-5;2x2 MIMO;Dual Band;WCBN808A-Q2;CCL;CCL;RoHS
Antenna	**32505-000900-100-RS***	External Antenna;WLAN;RG 178;108MM;TANK-700-QM67-R10;PEAK GAIN 2.0DBI;Exceltek;2.4-2.5GHz/5.15-5.85GHz;REVERSE SMA PLUG;RoHS
RF Cable	**32501-004000-100-RS***	RF;RF CABLE;LINE DIAMETER:0.81mm;250mm;50Ω;Sparklan;0-6GHz;VSWR≤1.3;I-PEX MHF-4 Plug;REVERSE SMA JACK;NUTx1;WASHERx1;;RoHS

* Each Wi-Fi module needs two antennas and two RF cables to fully support Wi-Fi function.

Packing List

1 x Screw kit	1 x Wall Mount Bracket

DIN-Rail Embedded System

	Model Name	DRPC-330-A7K	DRPC-230-ULT5
Chassis	Color	Black	Black & Silver
	Dimensions (WxDxH)(mm)	58.75 x 130 x 174	Non-slot: 81 x 150 x 190 One-slot: 127 x 150 x 190
	System Fan	Fanless	Fanless
	Chassis Construction	Extruded aluminum alloy	Extruded aluminum alloy
Motherboard	CPU	Marvell® ARMADA® 88F7040 1.4 GHz (quad-core)	Intel® CoreTM i5-8365UE 1.6 GHz (up to 4.1 GHz, quad-core, TDP 15W) Intel® Celeron™4205U 1.8 GHz (dual-core, TDP 15W)
	Chipset	SoC	SoC
	System Memory	1 x On-board DDR4 (4GB pre-installed)	2 x SO-DIMM DDR4 2400 (8GB pre-installed)
Storage	Hard Drive	N/A	1 x 2.5" SATA 6Gb/s HDD/SSD bay
	eMMC	1 x eMMC5.1 (32GB pre-installed)	N/A
	Micro SD	1 x Micro SD slot	N/A
I/O Interfaces	USB	2 x USB 3.2 Gen1	i5 model: 6 x USB 3.2 Gen2 Celeron model: 4 x USB 3.2 Gen2, 2 x USB 2.0
	Ethernet	2 x RJ-45: 2 x GbE by Marvell 88E1512 1 x SFP+: 1 x 10GbE by Marvell 88F7040	3 x RJ-45: 1 x GbE by Intel® I219 2 x GbE by Intel® I210
	COM Port	1 x Console (RJ-45) 2 x RS232/422/485 with AFC (DB9 with 2.5kV isolation) 2 x RS232 (DB9 with 2.5kV isolation)	4 x RS232/422/485 with AFC (DB9) 2 x RS232 (RJ-45)
	Digital I/O	N/A	8-bit Digital I/O (4-in/ 4-out)(pin header)
	Display	N/A	1 x HDMI (up to 3840 x 2160@30Hz) 1 x DP (up to 4096 x 2304@60Hz)
	Wireless	1 x 802.11a/b/g/n/ac (optional)	1 x 802.11a/b/g/n/ac (optional)
	TPM	1 x TPM 2.0 (2 x 10 pin)(optional)	1 x TPM 2.0 (2 x 10 pin)(optional)
	Other	1 x Power button, 1 x Reset button, 1 x Clear CMOS, 1 x LED for Power (Green), 1 x LED for Storage (Yellow), 1 x LED for Alarm (Red)	1 x Power Button, 1 x Reset Button, 1 x AT/ATX Switch, 1 x LED for Power (Green), 1 x LED for HDD (Yellow)
Expansions	PCIe Mini	N/A	1 x Full-size with SIM card slot (PCIe/USB 3.0/SATA)
	M.2	1 x 2230 A-key (PCIe x 1/USB 2.0) 1 x 2280 B-key (PCIe x 1) 1 x 2242/80 B-key with SIM card slot (PCIe x 1/USB 3.0/USB 2.0)	i5 model: 1 x 2230 A-key (PCIe x 1/USB 2.0) Celeron model: 1 x 2230 A-key (PCIe x 1)
	Backplane	N/A	One-slot: 1 x PCIe Gen3 x 4, 1 x USB2.0
Power	Power Input	Terminal block: 9 ~ 36V DC	Terminal block: 12 ~ 24V DC
	Power Consumption	36V @ 0.86A (Marvell® ARMADA® 88F7040 with 4GB memory)	12V @ 4.98A (Intel® CoreTM i5-8365UE with 8GB memory)
	Remote PWR	N/A	N/A
Reliability	Mounting	DIN-Rail	DIN-Rail
	Operating Temperature	-20°C ~ 60°C with air flow, 10% ~ 95% non-condensing	-20°C ~ 60°C with air flow, 10% ~ 95% non-condensing
	Storage Temperature	-40°C ~ 80°C with air flow, 10% ~ 95% non-condensing	-40°C ~ 85°C with air flow (SSD), 10% ~ 95% non-condensing
	Operating Shock	Half-sine wave shock 5G, 11ms, 100 shocks per axis	Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)
	Operating Vibration	MIL-STD-810G 514.6C-1	MIL-STD-810G 514.6C-1 (SSD)
	Weight (Net/ Gross)	1.3KG/ 1.45KG	Non-slot: 2.9KG/ 3.2KG One-slot: 3.2KG/ 3.5KG
	Safety/EMC	CE/ FCC	CE/ FCC
	Watchdog Timer	Programmable 1 ~ 255 sec/min	Programmable 1 ~ 255 sec/min
OS	Supported OS	Ubuntu 18.10	Microsoft® Windows 10, Linux

DIN-Rail Embedded System

Model Name		DRPC-140-EHL	DRPC-130-AL	DRPC-120-BT
Chassis	Color	TBD	Black	Black
	Dimensions (WxDxH) (mm)	Single layer: 79 x 216 x 230 Dual layer: 124 x 216 x 230	58.75 x 130 x 174	74.08 x 140 x 171.5
	System Fan	Fanless	Fanless	Fanless
	Chassis Construction	Extruded aluminum alloy	Extruded aluminum alloy	Extruded aluminum alloy
Motherboard	CPU	Intel® Atom™ x6425RE 1.9 GHz (quad-core, TDP 12W)	Intel® Atom™ x5-E3930 1.3 GHz (up to 1.8 GHz, dual-core, TDP 6.5W)	Intel® Atom™ E3845 1.91 GHz (quad-core, TDP 10W)
	Chipset	SoC	SoC	SoC
	System Memory	1 x SO-DIMM DDR4 2400	1 x SO-DIMM DDR3L 1333/1600 (4GB pre-installed)	1 x SO-DIMM DDR3L 1066 (2GB pre-installed)
IPMI	iRIS Solution	N/A	N/A	1 x iRIS-2400 (optional)
Storage	Hard Drive	1 x 2.5" SATA 6Gb/s HDD/SSD bay	1 x 2.5" SATA 6Gb/s HDD/SSD bay	1 x 2.5" SATA 3Gb/s HDD/SSD bay
	eMMC	1 x eMMC5.1	1 x eMMC 5.0 (optional, up to 32GB)	N/A
I/O Interfaces	USB	2 x USB 3.2 Gen2 4 x USB 2.0	4 x USB 3.2 Gen1	2 x USB 3.2 Gen1 2 x USB 2.0
	Ethernet	3 x RJ-45: 3 x 2.5GbE by Intel® GPY215	2 x RJ-45: 2 x GbE by Intel® I211	2 x RJ-45: 1 x GbE by Intel® I211 1 x GbE by Intel® I210
	COM Port	2 x RS232/422/485 with AFC (DB9) 2 x RS232 (DB9) Dual layer: 1 x RS232/422/485 with AFC (DB9 with 2kV isolation)	4 x RS232/422/485 with AFC (DB9)	2 x RS232/422/485 with AFC (DB9 with 3kV isolation) 2 x RS232 (DB9 with 3kV isolation)
	Digital I/O	Dual layer: 16-bit Digital I/O (8-in/ 8-out)(with 2kV isolation)	8-bit Digital I/O (4-in/ 4-out)	8-bit Digital I/O (4-in/ 4-out)
	CAN-bus	Dual layer: 1 x port support two CAN-bus (DB9 with 2kV isolation)	1 x port support two CAN-bus (DB9 with 2.5kV isolation)	N/A
	Display	1 x HDMI (up to 4096 x 2160@60Hz) 1 x DP (up to 4096 x 2160@60Hz)	2 x HDMI (up to 3840 x 2160@30Hz)	1 x HDMI (up to 1920 x 1200@60Hz) 1 x VGA (up to 1920 x 1200@60Hz)
	Wireless	1 x 802.11a/b/g/n/ac (optional)	1 x 802.11a/b/g/n/ac (optional)	1 x 802.11a/b/g/n/ac (optional)
	TPM	1 x TPM 2.0 (2 x 10 pin) (optional)	1 x TPM 2.0 (2 x 10 pin) (optional)	N/A
	Motor connector	Dual layer: 4 x PWM, 1 x ESTOP, 4 x Servo alarm, 4 x QEP (2 x DB44 with 2kV isolation)	N/A	N/A
	Other	1 x Power Button, 1 x Reset Button, 1 x AT/ATX Switch, 1 x LED for Power (Red), 1 x LED for HDD (Green), 1 x LED for 5G Power (Green), 1 x LED for 5G Signal (Green)	1 x Power Button, 1 x Reset Button, 1 x AT/ATX Switch, 1 x LED for Power (Green), 1 x LED for HDD (Yellow)	1 x Power Button, 1 x Reset Button, 1 x AT/ATX Switch
Expansions	PCIe Mini	1 x Full-size (PCIe/USB 2.0/SATA)	1 x Half-size (PCIe/USB 2.0) 1 x Full-size (PCIe/USB 2.0/SATA)	1 x Half-size (PCIe) 1 x Full-size (PCIe/USB 2.0/SATA)
	M.2	1 x 2230 A-key (PCIe x 1/USB 2.0) 1 x 3042/52/80 B-key with USIM slot (PCIe x 1/USB 3.0/USB 2.0)	N/A	N/A
Power	Power Input	Terminal block: 12 ~ 24V DC	Terminal block: 12 ~ 24V DC	Terminal block: 9 ~ 30V DC
	Power Consumption	TBD	12V @ 2.88 A (Intel® Atom™ x5-E3930 with 4GB memory)	12V @ 2.1 A (Intel® Atom™ E3845 with 2GB memory)
	Remote PWR	N/A	Terminal block: PSON	N/A
Reliability	Mounting	DIN-Rail	DIN-Rail	DIN-Rail
	Operating Temperature	-20°C ~ 60°C with air flow (SSD), 10% ~ 95% non-condensing	-20°C ~ 60°C with air flow (SSD), 10% ~ 95% non-condensing	-20°C ~ 60°C with air flow (SSD), 10% ~ 95% non-condensing
	Storage Temperature	-40°C ~ 85°C with air flow (SSD), 10% ~ 95% non-condensing	-40°C ~ 85°C with air flow (SSD), 10% ~ 95% non-condensing	-40°C ~ 85°C with air flow (SSD), 10% ~ 95% non-condensing
	Operating Shock	Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)	Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)	Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)
	Operating Vibration	MIL-STD-810G 514.6C-1 (SSD)	MIL-STD-810G 514.6C-1 (SSD)	MIL-STD-810G 514.6C-1 (SSD)
	Weight (Net/ Gross)	TBD	1.4KG/ 2.5KG	1.4KG/ 2.5KG
	Safety/EMC	CE/ FCC	CE/ FCC	CE/ FCC
	Watchdog Timer	Programmable 1 ~ 255 sec/min	Programmable 1 ~ 255 sec/min	Programmable 1 ~ 255 sec/min
OS	Supported OS	Microsoft® Windows 10, Linux	Microsoft® Windows 10, Linux	Microsoft® 8, Microsoft® Windows® Embedded Standard 7 E

DRPC-330-A7K

- Fanless DIN-Rail Embedded System
- Marvell® ARMADA® 88F7040 Solution

New

Features

- Marvell® ARMADA® 88F7040
- Supporting 10GbE SFP+
- Multiple COM Ports with isolation
- Multiple expansion slots
- Wide power input 9 ~ 36V

Fanless
Dual LAN
RS-232 /422/485
M.2
SFP+
Micro SD

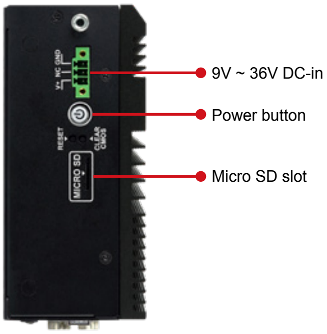
Specifications

Model Name		DRPC-330-A7K
Chassis	Color	Black
	Dimensions (WxDxH)(mm)	58.75 x 130 x 174
	System Fan	Fanless
	Chassis Construction	Extruded aluminum alloy
Motherboard	CPU	Marvell® ARMADA® 88F7040 1.4 GHz (quad-core)
	Chipset	SoC
	System Memory	1 x On-board DDR4 2400 (4GB pre-installed)
Storage	eMMC	1 x eMMC5.1 (32GB pre-installed)
	Micro SD	1 x Micro SD slot
I/O Interfaces	USB	2 x USB 3.2 Gen1
	Ethernet	2 x R-J45: 2 x GbE by Marvell® 88E1512 1 x SFP+:* 1 x 10GbE by Marvell® 88F7040
	COM Port	1 x Console (RJ-45) 2 x RS232/422/485 with AFC (DB9 with 2.5kV isolation) 2 x RS232 (DB9 with 2.5kV isolation)
	Wireless	1 x 802.11a/b/g/n/ac (optional)
	TPM	1 x TPM 2.0 (2 x 10 pin) (optional)
	Other	1 x Power button 1 x Reset button 1 x Clear CMOS 1 x LED for Power (Green) 1 x LED for Storage (Yellow) 1 x LED for Alarm (Red)
Indicators	Indicators	1 x Power (Green), 1 x Storage (Yellow), 1 x Alarm (Red)
Expansions	M.2	1 x 2230 A-key (PCIex1/USB 2.0) 1 x 2280 B-key (PCIex1) 1 x 2242/80 B-key with SIM card slot (PCIe*1/USB 3.0/USB 2.0)
Power	Power Input	Terminal block: 9 ~ 36V DC
	Power Consumption	36V @ 0.86A
Reliability	Mounting	DIN-Rail
	Operating Temperature	-20 ~ 60 °C with air flow, 10% ~ 95% non-condensing
	Storage Temperature	-40 ~ 80 °C with air flow, 10% ~ 95% non-condensing
	Operating Shock	Half-sine wave shock 5G, 11ms, 100 shocks per axis, IEC68-2-27
	Operating Vibration	MIL-STD-810G 514.6C-1
	Weight (Net/Gross)	1.3KG/ 1.45KG
	Safety/EMC	CE/ FCC
	Watchdog Timer	Programmable 1 ~ 255 sec/min
OS	Supported OS	Ubuntu 18.10

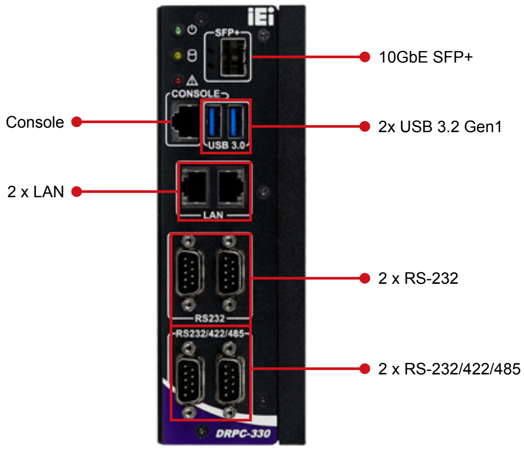
*The 10GbE SPF+ port has no transceiver.

Fully Integrated I/O

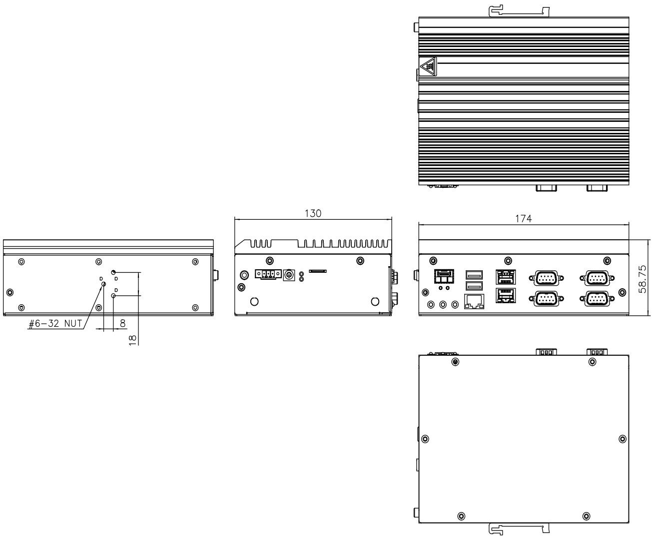
Top View



Front View



Dimensions *(Unit: mm)*



DRPC-330-A7K

Ordering Information

Part No.	Description
DRPC-330-A7K-A1/4G-R10	Fanless system with Marvell Armada 7040 processor, 4GB DDR4 on-board memory, two 1GbE, one 10GbE via SFP+ (without tranceiver), multiple M.2 expansions, COM, 9~36VDC, RoHS

Options

Item	Part No.	Description
Adapter*	**63040-010036-210-R**	Adapter Power;FSP;FSP036-RHBN3;9NA0362707;;Vin:90~264VAC;36W;Dim:37.8*89.8*27.0mm;Plug=7.5mm;Cable =1500mm;Erp(NO LOAD 0.075W);Vout:12VDC;Φ2.5/Φ5.5/lock;CCL;RoHS
Power cable*	**32102-026500-100-RS**	WIRE CABLE;POWER CABLE;;2;200MM;18AWG;(A)DC JACK 5.5X2.5, NUT+WASHER ;(B)TERMINAL BLOCK:3P P=3.5;SHANGHAI YING YU;RoHS
Power cord	**32702-000200-100-RS**	European power cord
USB to console cable	**32013-004000-100-RS**	Round cable; LAN CABLE; FTDI console cable; 2; 1800MM; (A)USB A TYPE 4P MALE+PCB:FTDI_FT232RL; (B)RJ-45 8P8C; RoHS
Wifi module**	**27319-000009-RS**	Wireless Lan Module;Wireless LAN & Bluetooth M.2 Module;Sparklan;R9701810011;IEEE802.11a/b/g/n/ac;2.412GHz~2.4835GHz, 5.15GHz~5.85GHz;M.2 2230;.;3.3V;22*30*2.15mm;QCNFA364A;QCA6174A-5;2x2 MIMO;Dual Band;WCBN808A-Q2;CCL;CCL;RoHS
Antenna**	**32505-000900-100-RS**	External Antenna;WLAN;RG 178;108MM;TANK-700-QM67-R10;PEAK GAIN 2.0DBI;Exceltek;2.4-2.5GHz/5.15-5.85GHz;REVERSE SMA PLUG;RoHS
RF cable**	**32501-004000-100-RS**	RF;RF CABLE;LINE DIAMETER:0.81mm;250MM;50Ω;Sparklan;0-6GHz;VSWR≤1.3;I-PEX MHF-4 Plug;REVERSE SMA JACK;NUT x 1;WASHER x 1;RoHS
TPM Module	**TPM-IN03-R10**	20-pin Infineon SPI TPM2.0 module, software mangement tool, firmware V7.63

*It is required to order Power Cable together with Adapter for power usage.
** Each Wi-Fi module needs two antennas and two RF cables to fully support Wi-Fi function

Packing List

1 x Din-rail mounting bracket	1 x Screw kit

DRPC-230-ULT5

- *Fanless DIN-Rail Embedded System*
- *Whiskey Lake 8th Intel® Core™ Solution (up to 4 cores)*

New

Features

- Intel® Core™ i5-8365UE/ Celeron™4205U
- Triple GbE LAN Ports
- Multiple USB 3.2 Gen 2 (10Gb/s)
- Multiple COM Ports
- Modulized Flexible Expansion

Fanless | Triple LAN | RS-232 /422/485 | M.2 | PCIe Mini Expansion | SUPERSPEED USB 3.2 Gen 2

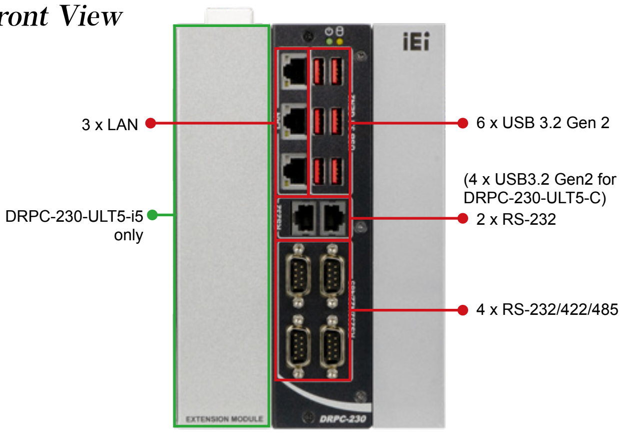
Specifications

Model Name		DRPC-230-ULT5-i5/S	DRPC-230-ULT5-i5	DRPC-230-ULT5-CS
Chassis	Color	Black & Silver		
	Dimensions (WxDxH)	81 x 150 x 190	127 x 150 x 190	81 x 150 x 190
	System Fan	Fanless		
	Chassis Construction	Extruded aluminum alloy		
Motherboard	CPU	Intel® Core™ i5-8365UE 1.6 GHz (up to 4.1 GHz, quad-core, TDP 15W)		Intel® Celeron™4205U 1.8 GHz (dual-core, TDP 15W)
	Chipset	SoC		
	System Memory	2 x SO-DIMM DDR4 2400 (8GB pre-installed)		
Storage	Hard Drive	1 x 2.5'' SATA 6Gb/s HDD/SSD bay		
I/O Interfaces	USB	6 x USB 3.2 Gen2		4 x USB 3.2 Gen2 2 x USB 2.0
	Ethernet	3 x RJ-45: 1 x GbE by Intel® I219 2 x GbE by Intel® I210		
	COM Port	4 x RS232/422/485 with AFC (DB9) 2 x RS232 (RJ-45)		
	Digital I/O	8-bit Digital I/O (4-in/ 4-out)(pin header)		
	Display	1 x HDMI (up to 3840 x 2160@30Hz) 1 x DP (up to 4096 x 2304@60Hz)		
	Wireless	1 x 802.11a/b/g/n/ac (optional)		
	TPM	1 x TPM 2.0 (2 x 10 pin)(optional)		
	Other	1 x Power Button, 1 x Reset Button, 1 x AT/ATX Switch, 1 x LED for Power (Green), 1 x LED for HDD (Yellow)		
Expansions	PCIe Mini	1 x Full-size with SIM card slot (PCIe/USB 3.0/SATA)		
	M.2	1 x 2230 A-key (PCIe x 1/USB 2.0)		1 x 2230 A-key (PCIe x 1)
	Backplane	-	1 x PCIe Gen3 x 4, 1 x USB 2.0	-
Power	Power Input	Terminal block: 12 ~ 24V DC (Reserved internal 40W power with 12V DC output)		
	Power Consumption	12V @ 4.98A (Intel® Core™ i5-8365UE with 8GB memory)		
Reliability	Mounting	DIN-Rail		
	Operating Temperature	-20°C ~ 70°C with air flow (SSD), 10% ~ 95% non-condensing*		
	Storage Temperature	-40°C ~ 85°C with air flow (SSD), 10% ~ 95% non-condensing		
	Operating Shock	Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)		
	Operating Vibration	MIL-STD-810G 514.6C-1 (SSD)		
	Weight (Net/Gross)	2.9KG/ 3.2KG	3.2KG/ 3.5KG	2.9KG/ 3.2KG
	Safety/EMC	CE/ FCC		
	Watchdog Timer	Programmable 1 ~ 255 sec/min		
OS	Supported OS	Microsoft® Windows 10, Linux		

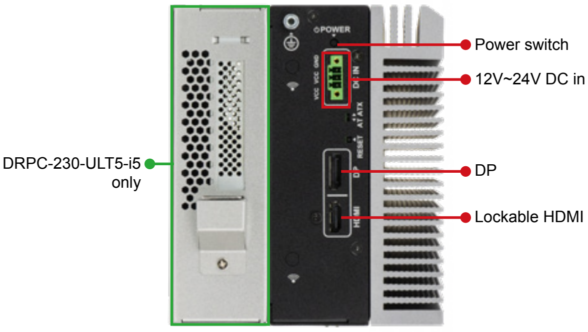
*CPU does not throttle under 60°C

Fully Integrated I/O

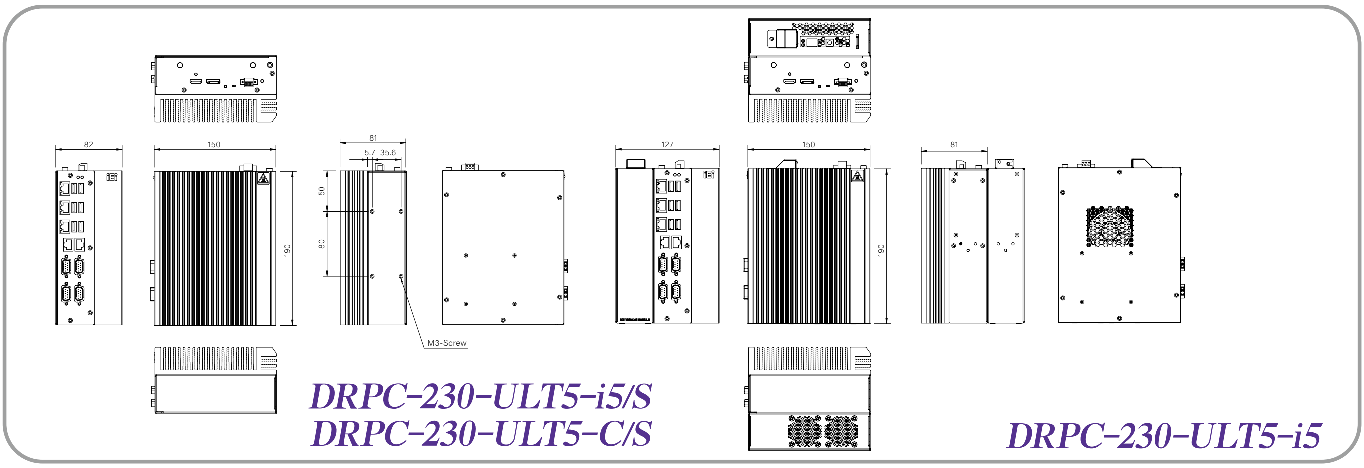
Front View



Top View



Dimensions (Unit: mm)



Ordering Information

Part No.	Description
DRPC-230-ULT5-i5/8G/S-R11	Fanless embedded system, Intel® Whiskey Lake i5-8365UE 1.6GHz (quad core, TDP 15W), 8GB DDR4 pre-installed memory, HDMI/DP, 3 PCIe GbE, 6 COM, 12~24V DC and RoHS
DRPC-230-ULT5-i5/8G-R11	Fanless embedded system, Intel® Whiskey Lake i5-8365UE 1.6GHz (quad core, TDP 15W), 8GB DDR4 pre-installed memory, HDMI/DP, 3 PCIe GbE, 6 COM, 12~24V DC, PCIe x4 expansion layer and RoHS
DRPC-230-ULT5-C/8G/S-R11	Fanless embedded system, Intel® Whiskey Lake Celeron™ 4205U 1.8GHz (dual core, TDP 15W), 8GB DDR4 pre-installed memory, HDMI/DP, 3 PCIe GbE LAN, 6 COM, 12~24V DC and RoHS

Options

Item	Part No.	Description
Adapter[1]	**63040-010060-211-RS**	Adapter Power;FSP;FSP060-DHAN3;9NA0608097;;Vin:90~264VAC;60W;Dim:62.0*110*31.5mm;Plug=7.5mm;Cable=1200mm;Erp(NO LOAD 0.21W);Vout:12VDC;Φ2.5/Φ5.5/lock;CCL;RoHS
Adapter[1/2]	**63040-010096-230-RS**	Adapter Power;FSP;FSP096-AHAN3;9NA0961412 ;Active PFC;Vin:90~264VAC;96W;Dim:75.6 x 151.3 x 25.4mm;Plug=7.5mm;Cable=1500mm;Erp(NO LOAD 0.15W);Vout:12VDC;Φ2.5/Φ5.5/lock;CCL;RoHS
Power cable[1]	**32102-026500-100-RS**	WIRE CABLE;POWER CABLE;;2;200MM;18AWG;(A)DC JACK 5.5 x 2.5, NUT+WASHER;(B)TERMINAL BLOCK:3P P=3.5;SHANGHAI YING YU;RoHS
Power cord	**32000-000002-RS**	European power cord
RJ-45 to D-SUB cable	**32005-004600-200-RS**	ROUND CABLE;RS-232/422/485;RS-232 CABLE;2;300MM;26AWG;(A)D-SUB 9P MALE+4#40 Screw;(B)RJ-45 8P8C PLUG, Iron+Sheathed;Wins Precision;RoHS
Wifi module[3]	**27319-000009-RS**	Wireless Lan Module;Wireless LAN & Bluetooth M.2 Module;Sparklan;R9701810011;IEEE802.11a/b/g/n/ac;2.412GHz~2.4835GHz, 5.15GHz~5.85GHz;M.2 2230;.;3.3V;22 x 30 x 2.15mm;QCNFA364A;QCA6174A-5;2x2 MIMO;Dual Band;WCBN808A-Q2;CCL;CCL;RoHS
Antenna[3]	**32505-000900-100-RS**	External Antenna;WLAN;RG 178;108MM;TANK-700-QM67-R10;PEAK GAIN 2.0DBI;Exceltek;2.4-2.5GHz/5.15-5.85GHz;REVERSE SMA PLUG;RoHS
RF cable[3]	**32501-004000-100-RS**	RF;RF CABLE;LINE DIAMETER:0.81mm;250MM;50Ω;Sparklan;0-6GHz;VSWR≤1.3;I-PEX MHF-4 Plug;REVERSE SMA JACK;NUT x 1;WASHER x 1;RoHS
TPM Module	**TPM-IN03-R10**	20-pin Infineon SPI TPM 2.0 module, software mangement tool, firmware V7.63
System fan[4]	**31100-000365-RS**	FAN;+12V;4PIN;YEN SUN;40 x 40 x 10mm;6500RPM;TWO BALL BEARING;LINE LENGTH:150MM;3.4+/-0.1MM;FD124010HB;FD124010HB-NBG(2W7T);AXIAL FAN;WITH FRAME;6.599CFM;7~13.2V;29dB;75000hur;UL, CUL, TUV;CCL;RoHS
Accelerator cards[4]	**Mustang-V100-MX8**	Computing Accelerator Card with 8 x Movidius Myriad X MA2485 VPU, PCIe Gen2 x 4 interface, RoHS
	Mustang-V100-MX4	Computing Accelerator Card with 4 x Intel® Movidius™ Myriad™ X MA2485 VPU, PCIe Gen2 x 2 interface, RoHS
OS: Windows Embedded 10	**DRPC-230-ULT5-W10E64-V-R10**	OS Image with Windows® Embedded Standard 10 E Value 64-bit 2019 for DRPC-230-ULT5 Series, with DVD-ROM, RoHS

[1] It is required to order Power Cable together with Adapter for power usage
[2] Please select 96W adapter if intend to add accelerator cards
[3] Each Wi-Fi module needs two antennas and two RF cables to fully support Wi-Fi function
[4] Only applicable for DRPC-230-ULT5-i5/8G-R10

Packing List

1 x Din-rail mounting kit	1 x Screw kit

DRPC-140-EHL

- **Fanless DIN-Rail Embedded System**
- **Intel® Atom SoC BGA Processor (Elkhart Lake ATom® X6425RE)**

Preliminary

Features

- Elkhart Lake ATom® X6425RE
- Triple 2.5GbE LAN Ports
- Multiple USB 3.2 Gen2 (10Gbit/s)
- Multiple COM Ports
- Modulized Flexible Expansion
- Support TSN (Time-Sensitive Networking)

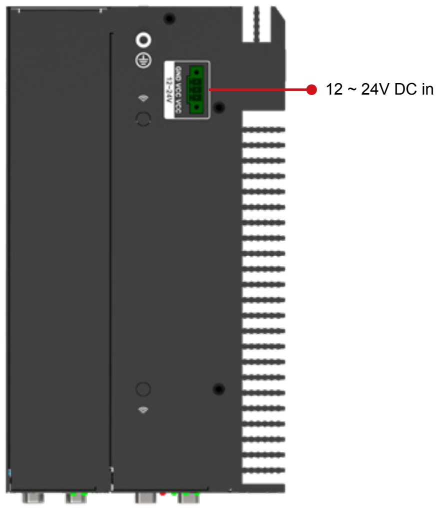
Fanless | Triple LAN | RS-232 /422/485 | M.2 | PCIe Mini Expansion | USB 3.2 Gen 2 | CAN-Bus

Specifications

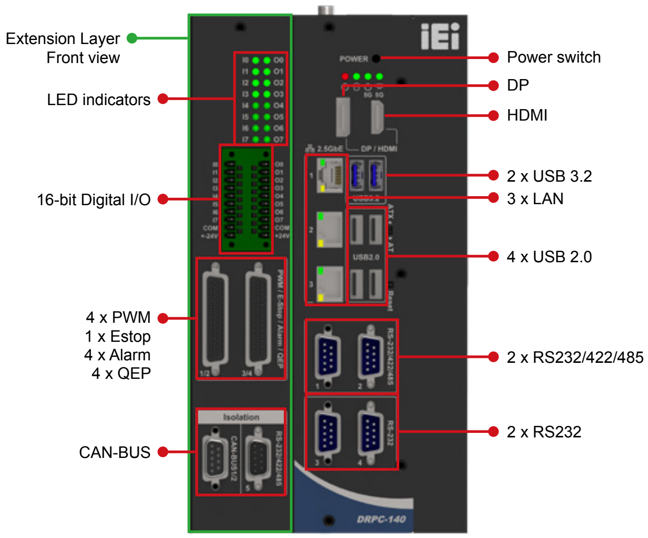
Model Name		DRPC-140-EHL-E1/S	DRPC-140-EHL-E1
Chassis	Color	Black	
	Dimensions (WxDxH)(mm)	79 x 216 x 230	124 x 216 x 230
	System Fan	Fanless	
	Chassis Construction	Extruded aluminum alloy	
Motherboard	CPU	Intel® ATom® X6425RE (up to 1.8GHz, 4-core, TDP 12W)	
	Chipset	SoC	
	System Memory	1 x SO-DIMM DDR4 3200 MHz (8GB pre-installed)	
Storage	Hard Drive	1 x 2.5" SATA 6Gb/s HDD/SSD bay	
	eMMC	1 x eMMC 5.1	
I/O Interfaces	USB	2 x USB 3.2 Gen2 4 x USB 2.0	
	Ethernet	3 x 2.5 GbE by Intel® GPY215PHY (colay GPY 211)	
	COM Port	2 x RS-232/422/485 (DB-9) 2 x RS-232 (DB-9)	2 x RS-232/422/485 (DB-9) 2 x RS-232 (DB-9) 1 x RS-232/422/485 (DB-9)
	Digital I/O	8-bit Digital I/O (4-in/ 4-out)(Pin Header on board)	8-bit Digital I/O (4-in/ 4-out) (Pin Header on board) 16-bit Digital I/O 8-in (24Vdc, Sink/Source) 8-out (24Vdc, Sink)
	Moto Conn.	-	4 x PWM 1 x ESTOP 4 x Servo alarm 4 x QEP
	CANBus	-	2 (1 x DB-9)
	Display	1 x HDMI (up to 4096 x 2160 @60Hz) 1 x DP (up to 4096 x 2160 @60Hz)	
	Wireless	1 x 802.11a/b/g/n/ac (optional)	
	TPM	1 x TPM 2.0 By pin header (optional)	
	Others	1 x Power Button, 1 x Reset Button, 1 x AT/ATX Switch, 1 x LED for Power (Red) 1 x LED for HDD (Green), 1 x LED for 5G Power (Green), 1 x LED for 5G Signl (Green)	
Expansions	PCIe Mini	1 x Full-size PCIe Mini slot (PCIe/USB 2.0/SATA)	
	M.2	1 x 2230 A-key (PCIe/USB 2.0) 1 x 3042/52/80 B-key with USIM slot (PCIe/USB 2.0/USB 3.2 Gen1)	
Power	Power Input	Terminal block: 12 ~ 24V DC	
	Power Consumption	TBD	
Reliability	Mounting	DIN-Rail	
	Operating Temperature	-20°C ~ 60°C with air flow (SSD), 10% 95%, non-condensing	
	Storage Temperature	-40°C ~ 85°C with air flow (SSD), 10% 95%, non-condensing	
	Operating Shock	Half-sine wave shock 5G, 11ms, 100 shocks per axis, IEC68-2-27	
	Operation Vibration	MIL-STD-810G 514.6C-1 (SSD)	
	Weight (Net/Gross)	TBD	TBD
	Safety / EMC	CE/FCC Class A	CE/FCC Class A EMS Surge: (Expansion com port) CM mode +/-2KV DM mode +/-1KV
	Watchdog timer	Programmable 1 ~ 255 sec/min	
OS	Supported OS	Microsoft® Windows® 10, Linux	

Fully Integrated I/O

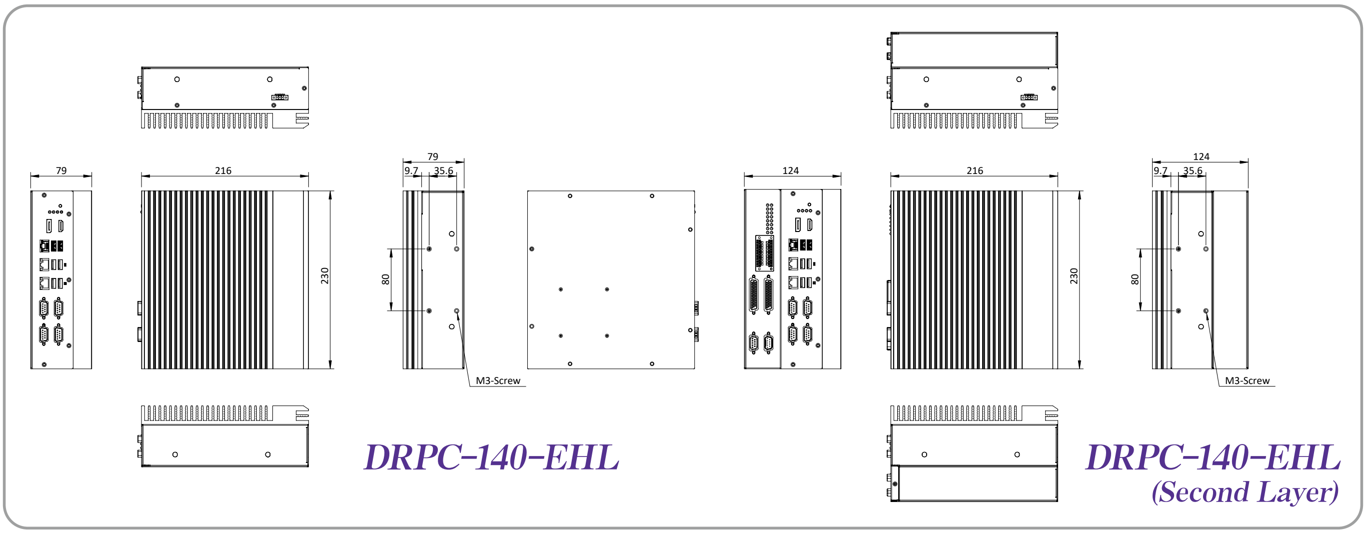
Top View



Front View



Dimensions (Unit: mm)



Ordering Information

Part No.	Description
DRPC-140-EHL-E1/8G/S-R10	Fanless embedded system, Intel® Atom® X6425RE, 8GB DDR4 pre-installed memory, HDMI/DP, 3 SGMII 2.5GbE, 4 COM, 12~24V DC and RoHS
DRPC-140-EHL-E1/8G-R10	Fanless embedded system, Intel® Atom® X6425RE, 8GB DDR4 pre-installed memory, HDMI/DP, 3 SGMII 2.5GbE, 4 COM, 12~24V DC, Riser card extension layer and RoHS

Options

Item	Part No.	Description
Adapter	**TBD**	TBD
Power cable	**TBD**	TBD
Wi-Fi Module	**27319-000009-RS***	Wireless Lan Module;Wireless LAN & Bluetooth M.2 Module;Sparklan;R9701810011;IEEE802.11a/b/g/n/ac;2.412GHz~2.4835GHz, 5.15GHz~5.85GHz;M.2 2230;.;3.3V;22*30*2.15mm;QCNFA364A;QCA6174A-5;2x2 MIMO;Dual Band;WCBN808A-Q2;CCL;CCL;RoHS
Antenna	**32505-000900-100-RS***	External Antenna;WLAN;RG 178;108MM;TANK-700-QM67-R10;PEAK GAIN 2.0DBI;Exceltek;2.4-2.5GHz/5.15-5.85GHz;REVERSE SMA PLUG;RoHS
RF Cable	**32501-004000-100-RS***	RF;RF CABLE;LINE DIAMETER:0.81mm;250MM;;;50Ω;Sparklan;0-6GHz;VSWR≤1.3;I-PEX MHF-4 Plug;REVERSE SMA JACK;NUT x 1;WASHER x 1;;RoHS
TPM Module	**TPM-IN02-R20**	20-pin Infineon TPM2.0 module, software mangement tool, firmware v5.5
Motion cards**	**TBD**	Motion control I/O Card with DIO 8 IN / 8 OUT, 4 x PWM, 4 x Servo alarm, 4 x QEP, CAN-BUS, RS232/422/485, RoHS

* Each Wi-Fi module needs two antennas and two RF cables to fully support Wi-Fi function.

** Only applicable for DRPC-140-EHL-E1/8G/S-R10

Packing List

1 x Din-rail mounting kit	1 x Screw kit	1 x SATA cable

DRPC-130-AL

- ***Fanless DIN-Rail Embedded System***
- ***Intel® Atom™ x5-E3930 1.3GHz (up to 1.8 GHz) Solution***

Features

- Intel® Atom™ x5-E3930 1.3GHz (up to 1.8 GHz)
- DDR3L 1.35V SO-DIMM supported
- Serial, CAN bus and digital I/O interface

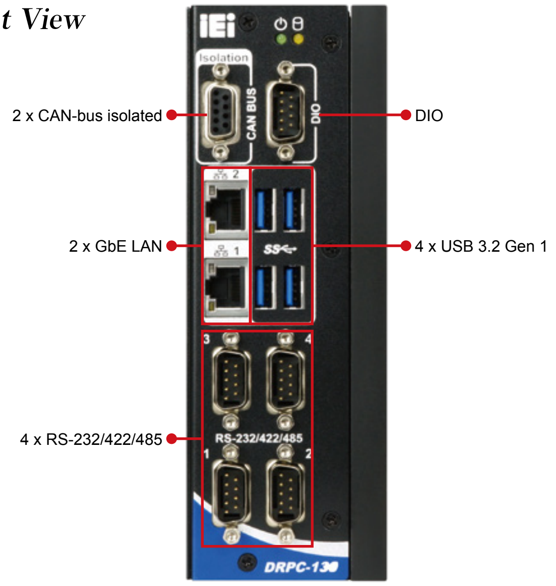
Fanless | CAN-Bus | Dual LAN | RS-232 /422/485 | PCIe Mini Expansion

Specifications

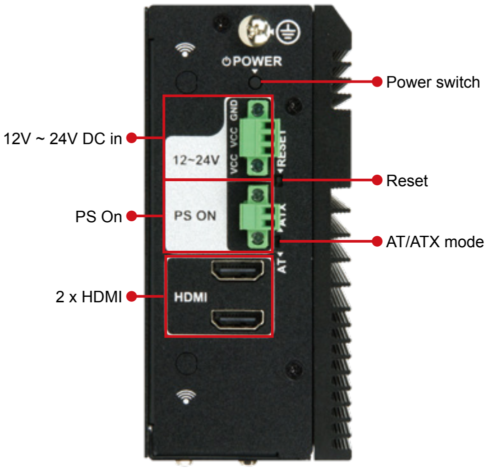
Model Name		DRPC-130-AL
Chassis	**Color**	Black
	Dimensions (WxDxH) (mm)	58.75 x 130 x 174
	System Fan	Fanless
	Chassis Construction	Extruded aluminum alloy
Motherboard	**CPU**	Intel® Atom™ x5-E3930 1.3 GHz (up to 1.8 GHz, dual-core, TDP 6.5W)
	Chipset	SoC
	System Memory	1 x SO-DIMM DDR3L 1333/1600 (4GB pre-installed)
Storage	**Hard Drive**	1 x 2.5" SATA 6Gb/s HDD/SSD bay
	eMMC	1 x eMMC 5.0 (optional, up to 32GB)
I/O Interfaces	**USB**	4 x USB 3.2 Gen1
	Ethernet	2 x RJ-45: 2 x GbE by Intel® I211
	COM Port	4 x RS232/422/485 with AFC (DB9)
	Digital I/O	8-bit Digital I/O (4-in/ 4-out)
	CAN-bus	1 x port support two CAN-bus (DB9 with 2.5kV isolation)
	Display	2 x HDMI (up to 3840 x 2160@30Hz)
	Wireless	1 x 802.11a/b/g/n/ac (optional)
	TPM	1 x TPM 2.0 (2 x 10 pin)(optional)
	Other	1 x Power Button, 1 x Reset Button, 1 x AT/ATX Switch, 1 x LED for Power (Green), 1 x LED for HDD (Yellow)
Expansions	**PCIe Mini**	1 x Half-size (PCIe/USB 2.0) 1 x Full-size (PCIe/USB 2.0/SATA)
Power	**Power Input**	Terminal block: 12 ~ 24V DC
	Power Consumption	12V @ 2.88 A (Intel® Atom™ x5-E3930 with 4GB memory)
	Remote PWR	Terminal block: PSON
Reliability	**Mounting**	DIN-Rail
	Operating Temperature	-20°C ~ 60°C with air flow (SSD), 10% ~ 95% non-condensing
	Storage Temperature	-40°C ~ 85°C with air flow (SSD), 10% ~ 95% non-condensing
	Operating Shock	Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)
	Operating Vibration	MIL-STD-810G 514.6C-1 (SSD)
	Weight (Net/Gross)	1.4KG/ 2.5KG
	Safety/EMC	CE/ FCC
	Watchdog Timer	Programmable 1 ~ 255 sec/min
OS	**Supported OS**	Microsoft® Windows 10, Linux

Fully Integrated I/O

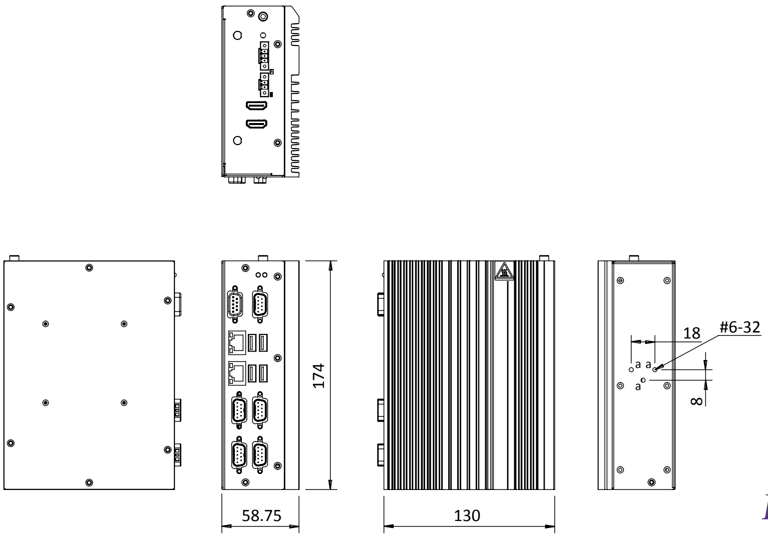
Front View



Top View



Dimensions (Unit: mm)



DRPC-130-AL

Ordering Information

Part No.	Description
DRPC-130-AL-E1-R11	Fanless embedded system, Intel® Apollo Lake x5-E3930 1.3GHz (up to 1.8GHz, dual core), two HDMI, 8-bit DIO, CAN-Bus, COM, 12~24V DC and RoHS
DRPC-130-AL-E1/4GB-R11	Fanless embedded system, Intel® Apollo Lake x5-E3930 1.3GHz (up to 1.8GHz, dual core), 4GB DDR3L pre-installed memory, two HDMI, 8-bit DIO, CAN-Bus, COM, 12~24V DC and RoHS

Options

Item	Part No.	Description
Adapter*	**63040-010036-210-RS**	Adapter Power;FSP;FSP060-DHAN3;9NA0608010;Vin:90~264VAC;60W;Dim:62.0*110*31.5mm;Plug=7.5mm;Cable=1200mm;Erp(NO LOAD 0.21W);Vout:12VDC;Φ2.5/Φ5.5/lock;CCL;RoHS
Power Cable*	**32102-026500-100-RS**	WIRE CABLE;POWER CABLE;2;200MM;18AWG;(A)DC JACK 5.5X2.5, NUT+WASHER ;(B)TERMINAL BLOCK:3P P=3.5;SHANGHAI YING YU;RoHS
Power Cord	**32702-000400-200-RS**	European power cord
Wireless Kit	**EMB-WIFI-KIT01-R20**	1T1R Wi-Fi module kit for embedded system, IEEE802.11a/b/g/n/ac Wi-Fi with Bluetooth 4.0/3.0+HS, 1 x Wi-Fi module, 2 x 250mm RF cable, 2 x Antenna, RoHS
TPM Module	**TPM-IN02-R20**	20-pin Infineon TPM2.0 module, software mangement tool, firmware v5.5
DIN-Rail Mounting Kit	**DK-DRPC-R10**	Rugged DIN-rail mounting kit for DPRC series only
OS: Windows Embedded 10	**DRPC-130-W10E64-E-R10**	OS Image with Windows® 10 IoT Enterprise Entry 64-bit for DRPC-130-AL Series, with DVD-ROM, RoHS

*It is required to order Power Cable together with Adapter for power usage

Packing List

1x Din-rail mounting kit	1 x Screw kit

DRPC-120-BT

- ***Fanless DIN-Rail Embedded System***
- ***Intel® E3845 1.91GHz Solution***

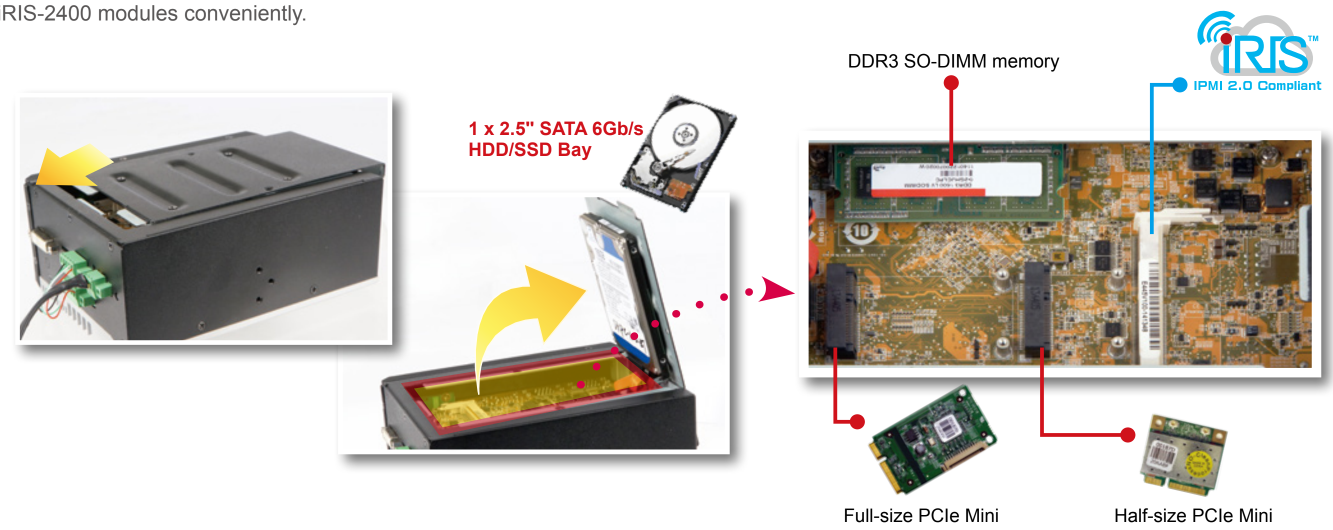
Features

- Intel® Atom™ E3845 1.91GHz
- 1 x 2.5" SATA HDD/SSD drive bay
- DDR3L 1.35V SO-DIMM support
- Programmable OLED display
- 8-bit digital I/O (4-bit inputs/outputs)
- IEI iRIS-2400 solution

iRIS IPMI 2.0 Compliant | Fanless | PCIe Mini Expansion | Dual LAN | RS-232 /422/485

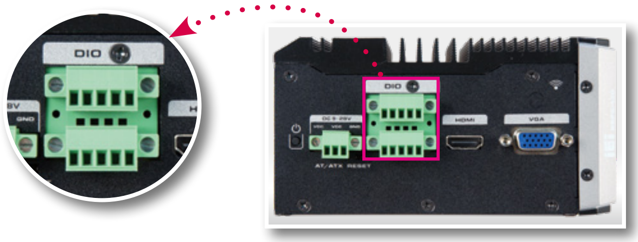
User Friendly Installation

The DRPC-120 is designed with an easy removable back cover for users to install SATA HDD, PCIe Mini cards, DDR3 memory modules or iRIS-2400 modules conveniently.



8-Channel Digital I/O

The DRPC-120 is outfitted with 8-channel (4-bit input and 4-bit output) digital I/O to provide digital input and output signals for control of industrial devices.



Fanless

The DRPC-120 series provides the best components for generating less heat, while maintaining high system performance. With the fanless design, the DRPC-120 reduces system failure caused by fans and extends the lifetime of the device.

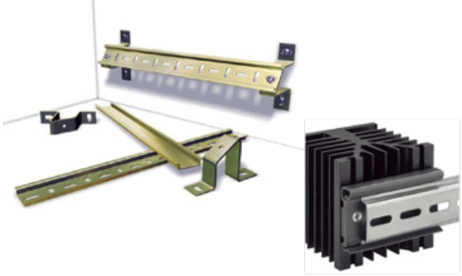
iRIS Solution

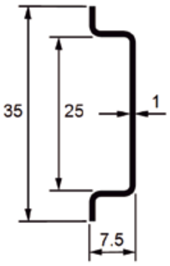
IPMI 2.0 Compliant

By installing the IEI iRIS-2400 module, the DRPC-120 is capable to complete your IoT application through the advanced remote control features, such as power management and control, remote KVM for device status monitoring, sending active alerts and warning messages by e-mail or SMS.

DIN Rail Standard

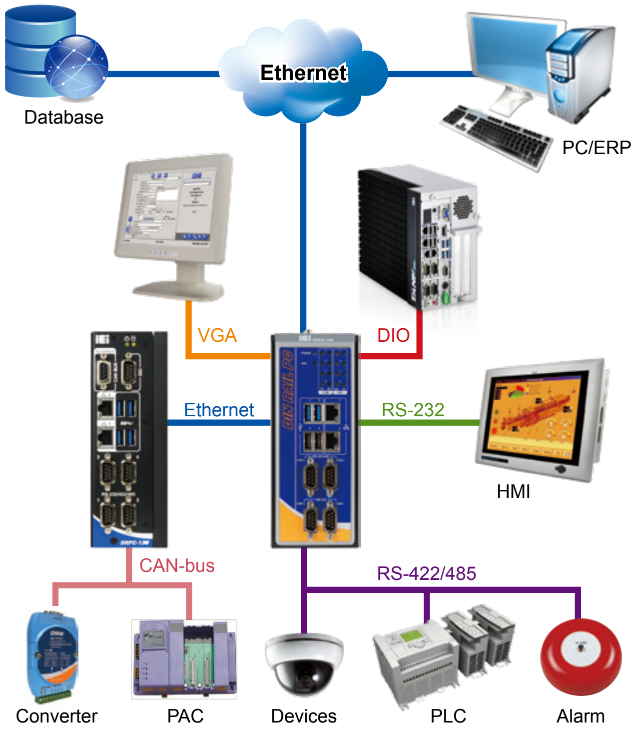
A DIN rail is a metal rail of a standard type widely used for mounting circuit breakers and industrial control equipment inside equipment racks. These products are typically made from cold rolled carbon steel sheet with a zinc-plated and chromated bright surface finish. The term derives from the original specifications having been published by Deutsches Institut für Normung (DIN) in Germany, which have since been adopted as European (EN) and international (ISO) standards.





Communication Gateway

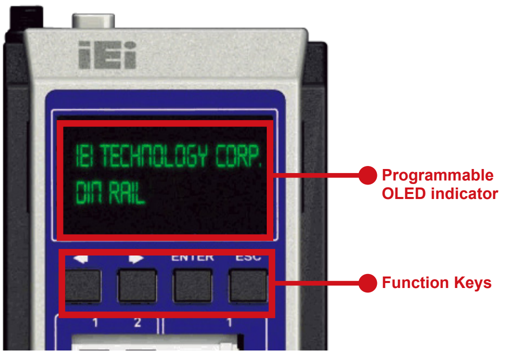
For high surge ESD automation environments, the DRPC series provides isolated digital IO, CAN-bus and serial communication ports.



OLED Indicator Function

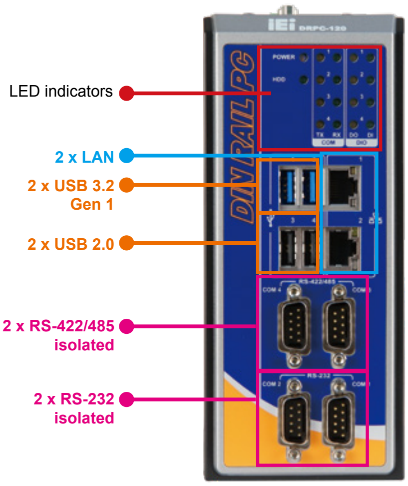
- **Programmable OLED Display**
  Users can program their own APIs to show any information by the OLED display.
- **Programmable Function Keys**
  Users can program the four keys to control OLED display.
- **Terminal Screen & Status Display**
  It supports both text format and graphic format.
- **Protocol & Demo Source Code Open**
  IEI provides the protocol & demo source code for users to program their own usage.

DRPC-120 OLED indicator

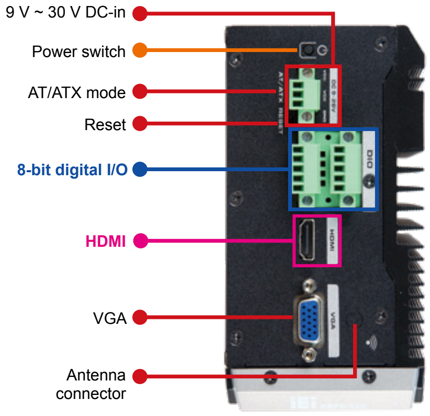


Fully Integrated I/O

Front View



Top Side View



Specifications

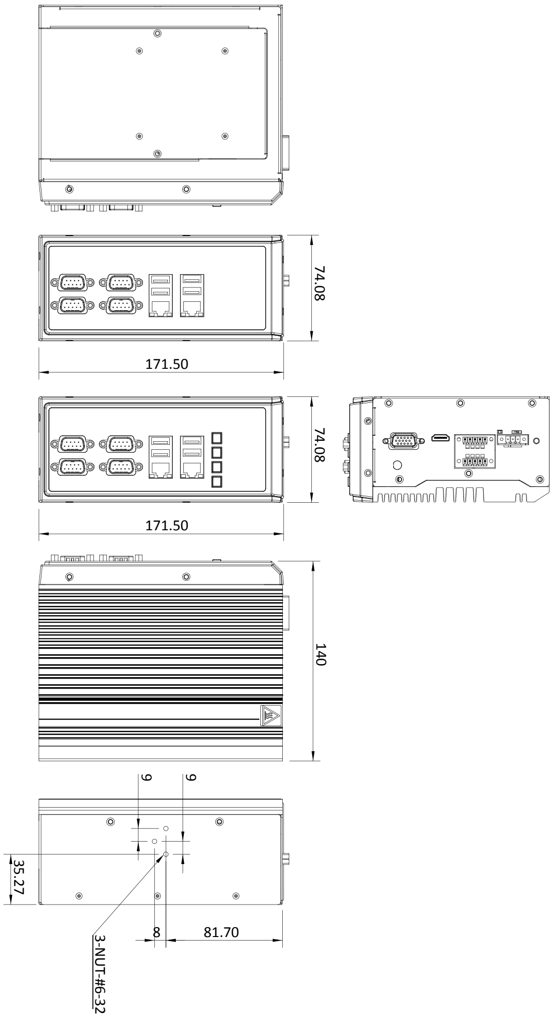
Model Name		DRPC-120-BT
Chassis	Color	Black
	Dimensions (WxDxH) (mm)	74.08 x 140 x 171.5
	System Fan	Fanless
	Chassis Construction	Extruded aluminum alloy
Motherboard	CPU	Intel® Atom™ E3845 1.91 GHz (quad-core, TDP 10W)
	Chipset	SoC
	System Memory	1 x SO-DIMM DDR3L 1066 (2GB pre-installed)
IPMI	iRIS Solution	1 x iRIS-2400 (optional)
Storage	Hard Drive	1 x 2.5" SATA 3Gb/s HDD/SSD bay
I/O Interfaces	USB	2 x USB 3.2 Gen1 2 x USB 2.0
	Ethernet	2 x RJ-45: 1 x GbE by Intel® I211 1 x GbE by Intel® I210
	COM Port	2 x RS232/422/485 with AFC (DB9 with 3kV isolation*) 2 x RS232 (DB9 with 3kV isolation*)
	Digital I/O	8-bit Digital I/O (4-in/ 4-out)
	Display	1 x HDMI (up to 1920 x 1200@60Hz) 1 x VGA (up to 1920 x 1200@60Hz)
	Wireless	1 x 802.11a/b/g/n/ac (optional)
	Other	1 x Power Button, 1 x Reset Button, 1 x AT/ATX Switch
Expansions	PCIe Mini	1 x Half-size (PCIe) 1 x Full-size (PCIe/USB 2.0/SATA)
Power	Power Input	Terminal block: 9 ~ 30V DC
	Power Consumption	12V @ 2.1A (Intel® Atom™ E3845 with 2GB memory)
Reliability	Mounting	DIN-Rail
	Operating Temperature	-20°C ~ 60°C with air flow (SSD), 10% ~ 95% non-condensing
	Storage Temperature	-40°C ~ 85°C with air flow (SSD), 10% ~ 95% non-condensing
	Operating Shock	Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)
	Operating Vibration	MIL-STD-810G 514.6C-1 (SSD)
	Weight (Net/ Gross)	1.4KG/ 2.5KG
	Safety/EMC	CE/ FCC
	Watchdog Timer	Programmable 1 ~ 255 sec/min
OS	Supported OS	Microsoft® 8, Microsoft® Windows® Embedded Standard 7 E

*COM port isolation: 3kV for 1 sec, 2.5kV for 1 minute

Ordering Information

Part No.	Description
DRPC-120-BTi-E5-OLED/2G-R11	Fanless embedded system, Intel® Bay-Trail E3845 1.91 GHz, TDP 10W, 2GB DDR3L pre-installed memory, one VGA, one HDMI, 8 CH DIO, iRIS-2400 optional, 9 V ~ 28 V DC, OLED indicators, R11, RoHs
DRPC-120-BTi-E5-LED/2G-R11	Fanless embedded system, Intel® Bay-Trail E3845 1.91 GHz, TDP 10W, 2GB DDR3L pre-installed memory, one VGA, one HDMI, 8 CH DIO, iRIS-2400 optional, 9 V ~ 28 V DC, LED indicators, R11, RoHs

Dimensions (Unit: mm)



DRPC-120-BT

Options

Item	Part No.	Description
Adapter*	63040-010036-210-RS	Adapter Power;FSP;FSP060-DHAN3;9NA0608010;Vin:90~264VAC;60W;Dim:62.0*110*31.5mm;Plug=7.5mm;Cable=1200mm;Erp (NO LOAD 0.21W);Vout:12VDC;Φ2.5/Φ5.5/lock;CCL;RoHS
Power Cable*	32102-026500-100-RS	WIRE CABLE;POWER CABLE;;2;200MM;18AWG;(A)DC JACK 5.5X2.5, NUT+WASHER ;(B)TERMINAL BLOCK:3P P=3.5;SHANGHAI YING YU;RoHS
Power Cord	32702-000400-200-RS	European power cord
Wireless Kit	EMB-WIFI-KIT01-R20	1T1R Wi-Fi module kit for embedded system, IEEE802.11a/b/g/n/ac Wi-Fi with Bluetooth 4.0/3.0+HS, 1 x Wi-Fi module, 2 x 250mm RF cable, 2 x Antenna, RoHS
DIN-Rail Mounting Kit	DK-DRPC-R10	Rugged DIN-rail mounting kit for DPRC series only
OS: Windows Embedded 7	DRPC-120-WES7E-R10 (CD-ROM)	OS Image with Windows® Embedded Standard 7 E for DRPC-120 Series, CDROM, RoHS

*It is required to order Power Cable together with Adapter for power usage

Packing List

1 x Screw kit	1 x Mounting bracket
1 x SATA cable & SATA power cable	

Compact Size Embedded System

Fanless

New

Model Name		ITG-100AI	ITG-100-AL	uIBX-250-BW
Chassis	Color	Blue & Silver	Blue & Silver	Black
	Dimensions (WxDxH) (mm)	137 x 102.8 x 49.4	Single layer: 137 x 102.8 x 36.2 Dual layer: 137 x 102.8 x 56.2	137 x 102.8 x 52
	System Fan	Fanless	Fanless	Fanless
	Chassis Construction	Extruded aluminum alloy	Extruded aluminum alloy	Extruded aluminum alloy
Motherboard	CPU	Intel® Atom™ x5-E3930 1.3 GHz (up to 1.8 GHz, dual-core, TDP 6.5W)	Intel® Atom™ x5-E3930 1.3 GHz (up to 1.8 GHz, dual-core, TDP 6.5W)	Intel® Celeron® N3160 1.6 GHz (up to 2.24 GHz, quad-core, TDP 6W)
	Chipset	SoC	SoC	SoC
	System Memory	1 x SO-DIMM DDR3L 1600/1867 (8GB pre-installed)	1 x SO-DIMM DDR3L 1600/1867 (2GB pre-installed)(up to 8GB)	1 x SO-DIMM DDR3L 1600 (2GB pre-installed)(up to 8GB)
Storage	Hard Drive	N/A	1 x 2.5" SATA 6Gb/s HDD/SSD bay	1 x 2.5" SATA 6Gb/s HDD/SSD bay
	SATADOM	1 x 128GB pre-installed	N/A	N/A
	eMMC	1 x eMMC5.0 (up to 32GB)(optional)	1 x eMMC5.0 (up to 32GB)(optional)	N/A
	Micro SD	1 x Micro SD slot	1 x Micro SD slot (optional)	N/A
I/O Interfaces	USB	2 x USB 3.2 Gen1	2 x USB 3.2 Gen1 2 x USB 2.0 (optional)	4 x USB 3.2 Gen1
	Ethernet	2 x RJ-45: 2 x GbE by Intel® I211	2 x RJ-45: 2 x GbE by Intel® I211	2 x RJ-45: 2 x GbE by Intel® I211
	COM Port	2 x RS232/422/485 with AFC (DB9/RJ-45)	2 x RS232/422/485 with AFC (DB9/RJ-45) 2 x RS232 (optional)	2 x RS232/422/485 with AFC (RJ-45)
	Digital I/O	N/A	8-bit Digital I/O (4-in/ 4-out)(optional)	N/A
	Display	1 x VGA (up to 1920 x 1080@60Hz)	1 x VGA (up to 1920 x 1080@60Hz)	1 x HDMI (up to 3840 x 2160@30Hz) 1 x VGA (up to 1920 x 1080@60Hz)
	Audio	N/A	N/A	1 x Line-out, 1 x Line-in
	Wireless	1 x 802.11a/b/g/n/ac (optional)	1 x 802.11a/b/g/n/ac (optional)	1 x 802.11a/b/g/n/ac (optional)
	Other	1 x Power Button, 1 x Reset Button, 1 x AT/ATX Switch, 1 x LED for Power (Green), 1 x LED for HDD (Yellow)	1 x Power Button, 1 x Reset Button, 1 x AT/ATX Switch, 1 x LED for Power (Green), 1 x LED for HDD (Yellow)	1 x Power Button, 1 x Reset Button, 1 x AT/ATX Switch, 1 x LED for HDD (Green)
Expansions	PCIe Mini	Pre-installed Mustang-MPCIE-MX2 AI accelerator card	1 x Full-size (PCIe/USB 2.0/SATA)	1 x Full-size (PCIe/USB 2.0/SATA)
	M.2	1 x 2230 A-key (PCIe x 1/USB 2.0)	1 x 2230 A-key (PCIe x 1/USB 2.0)	N/A
Power	Power Input	Terminal block: 9 ~ 36V DC	Terminal block: 12 V DC	DC Jack: 12V DC
	Power Consumption	12V @ 1.2A (Intel® Atom™ E3930 with 8GB memory)	12V @ 1A (Intel® Atom™ E3930 with 2GB memory)	12V @ 2A (Intel® Celeron® N3160 with 2GB memory)
Reliability	Mounting	DIN-Rail	DIN-Rail/ Wall-mount	Wall-mount/ VESA 75
	Operating Temperature	-20°C ~ 50°C with air flow, 10% ~ 95% non-condensing	-20°C ~ 60°C with air flow (SSD), 10% ~ 95% noncondensing	-20°C ~ 60°C with air flow (SSD), 10% ~ 95% non-condensing
	Storage Temperature	-20°C ~ 70°C with air flow, 10% ~ 90% non-condensing	-30°C ~ 70°C with air flow (SSD), 10% ~ 90% non-condensing	-20°C ~ 80°C with air flow (SSD), 10% ~ 90% non-condensing
	Operating Shock	Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)	Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)	Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)
	Operating Vibration	MIL-STD-810G 514.6C-1 (SSD)	MIL-STD-810G 514.6C-1 (SSD)	MIL-STD-810G 514.6C-1 (SSD)
	Weight (Net/ Gross)	895g/ 1.7kg	Single layer: 0.67g/ 1.03kg Dual layer: 0.86g/ 1.22kg	470g/ 1.4kg
	Safety/EMC	CE/ FCC	CE/ FCC	CE/ FCC
	Watchdog Timer	Programmable 1 ~ 255 sec/min	Programmable 1 ~ 255 sec/min	Programmable 1 ~ 255 sec/min
OS	Supported OS	Microsoft® Windows 10, Linux Ubuntu 16.04 LTS	Microsoft® Windows 10, Linux	Microsoft® Windows 8, Microsoft® Embedded Standard 7 E

ITG-100AI

- *Ultra Compact Size*
- *Fanless DIN-Rail Embedded System*
- *Intel Vision Accelerator Design for AI Deep Learning*

New

Features

- Intel® Atom™ x5-E3930 1.3GHz (up to 1.8 GHz)
- Two GbE LAN ports
- Two RS-232/422/485
- M.2 A-key slot for expansion
- Pre-installed a Mustang-MPCIE-MX2 that has two Intel Myriad X VPUs for AI deep learning workload consolidation

VPU AI Accelerator card | Fanless | SUPERSPEED USB 3.2 Gen 1 | Dual LAN | RS-232 /422/485 | M.2

Application

The ITG-100AI is pre-installed with a Mustang-MPCIE-MX2 AI accelerator card, which includes two Intel® Movidius™ Myriad™ X VPU, to provide a flexible AI inference solution.

VPU is short for vision processing unit. It can run AI faster, and is well suited for low power consumption applications such as surveillance, retail and transportation. With the advantage of power efficiency and high performance to dedicate Deep Neural Networks (DNN) topologies, it is perfect to be implemented in AI edge computing device to reduce total power usage, providing longer duty time for the rechargeable edge computing equipment.

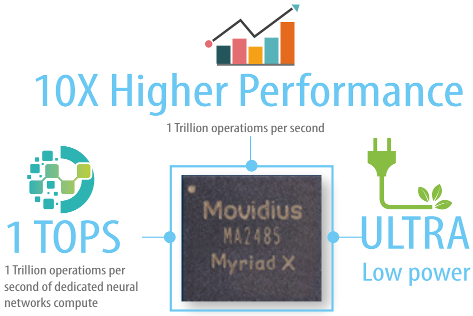
Surveillance

Retail

Transportation

Key Features of Intel® Movidius™ Myriad™ X VPU

- Native FP16 support
- Rapidly port and deploy neural networks in Caffe and Tensorflow formats
- End-to-End acceleration for many common deep neural networks
- Industry-leading Inferences/S/Watt performance



Ultra-compact Size

Space limitation is one of the constraints commonly seen in today's industrial environment. Under tight restrictions, the ITG-100AI not only provides palm-sized design to meet the space requirement, but also comes with adequate basic I/O interfaces for various applications.

Specifications

Model Name		ITG-100AI
AI Accelerator Card	Model Name	Mustang-MPCIE-MX2
	Main Chip	2 x Intel® Movidius™ Myriad™ X MA2485 VPU
	Supported Topology	AlexNet, GoogleNetV1/V2, Mobile_SSD, MobileNetV1/V2, MTCNN, Squeezenet1.0/1.1, Tiny Yolo V1 & V2, Yolo V2, ResNet-18/50/101
Chassis	Color	Blue & Silver
	Dimensions (WxDxH)(mm)	137 x 102.8 x 49.4
	System Fan	Fanless
	Chassis Construction	Extruded aluminum alloy
Motherboard	CPU	Intel® Atom™ x5-E3930 1.3 GHz (up to 1.8 GHz, dual-core, TDP 6.5W)
	Chipset	SoC
	System Memory	1 x SO-DIMM DDR3L 1600/1867 (8GB pre-installed)
Storage	SATADOM	1 x 128GB pre-installed
	eMMC	1 x eMMC5.0 (up to 32GB)(optional)
	Micro SD	1 x Micro SD slot
I/O Interfaces	USB	2 x USB 3.2 Gen1
	Ethernet	2 x RJ-45: 2 x GbE by Intel® I211
	COM Port	2 x RS232/422/485 with AFC (DB9/RJ45)
	Display	1 x VGA (up to 1920 x 1080@60Hz)
	Wireless	1 x 802.11a/b/g/n/ac (optional)
	Other	1 x Power Button, 1 x Reset Button, 1 x AT/ATX Switch, 1 x LED for Power (Green), 1 x LED for HDD (Yellow)
Expansions	M.2	1 x 2230 A-key (PCIe x 1/USB 2.0)
Power	Power Input	Terminal block: 9 ~ 36V DC
	Power Consumption	12V @ 1.2A (Intel® Atom™ E3930 with 8GB memory)
Reliability	Mounting	DIN-Rail
	Operating Temperature	-20°C ~ 50°C with air flow, 10% ~ 95% non-condensing
	Storage Temperature	-20°C ~ 70°C with air flow, 10% ~ 90% non-condensing
	Operating Shock	Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)
	Operating Vibration	MIL-STD-810G 514.6C-1 (SSD)
	Weight (Net/Gross)	895g/ 1.7kg
	Safety/EMC	CE/ FCC
	Watchdog Timer	Programmable 1 ~ 255 sec/min
OS	Supported OS	Microsoft® Windows 10, Linux Ubuntu 16.04 LTS

Ordering Information

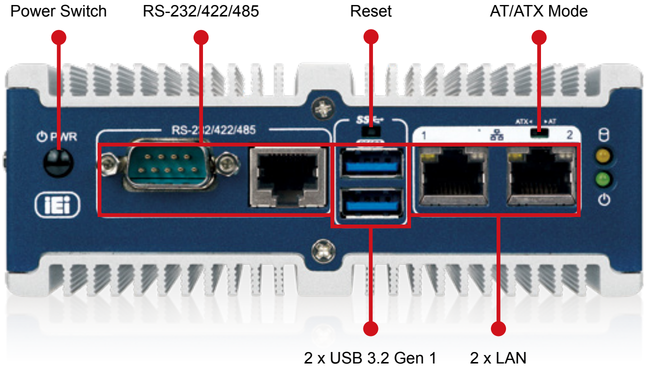
Part No.	Description
ITG-100AI-E1/8GB/S-R10	Fanless embedded system, Intel® Apollo Lake x5-E3930 1.3GHz (up to 1.8GHz, dual core), 8GB DDR3L pre-installed memory, VGA, M.2, COM, 9-36V DC, Mustang-MPCIE-MX2 and RoHS

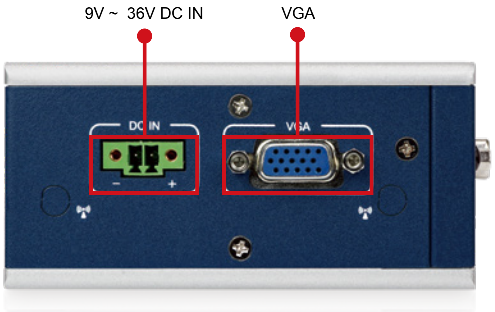
Options

Item	Part No.	Description
Wi-Fi Module	27319-000009-RS*	Wireless Lan Module;Wireless LAN & Bluetooth M.2 Module;Sparklan;R9701810011;IEEE802.11a/b/g/n/ac;2.412GHz~2.4835GHz, 5.15GHz~5.85GHz;M.2 2230;.;3.3V;22*30*2.15mm;QCNFA364A;QC A6174A-5;2x2 MIMO;Dual Band;WCBN808A-Q2;CCL;CCL;RoHS
Antenna	32505-000900-100-RS*	External Antenna;WLAN;RG 178;108MM;TANK-700-QM67-R10;PEAK GAIN 2.0DBI;Exceltek;2.4-2.5GHz/5.15-5.85GHz;REVERSE SMA PLUG;RoHS
RF Cable	32501-004000-100-RS*	RF;RF CABLE;LINE DIAMETER:0.81mm;250MM ;;;50Ω;Sparklan;0-6GHz;VSWR≤1.3;I-PEX MHF-4 Plug;REVERSE SMA JACK;NUT*1;WASHER*1;;RoHS

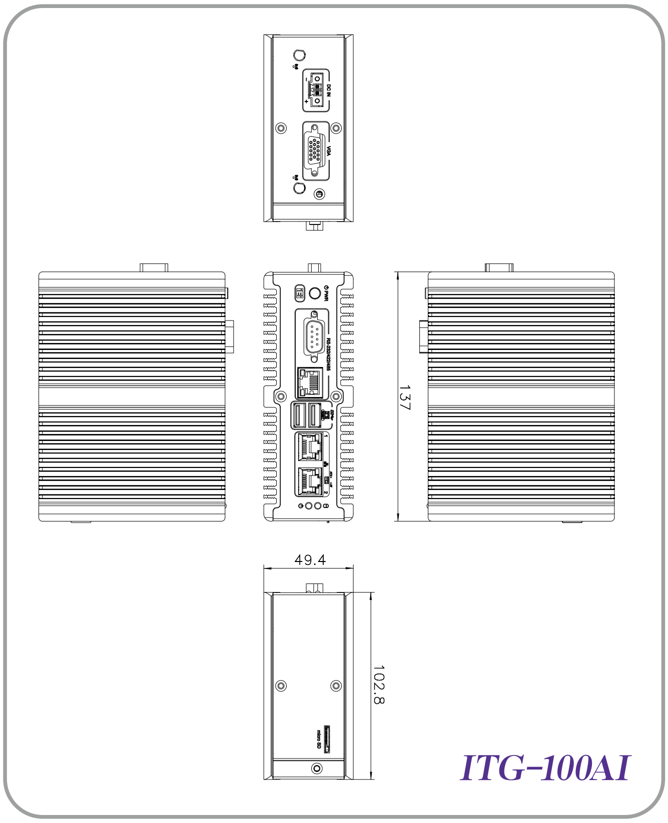
* Each Wi-Fi module needs two antennas and two RF cables to fully support Wi-Fi function.

Fully Integrated I/O





Dimensions (Unit: mm)



Packing List

1 x Screw kit	1 x 36W power adapter
1 x Din-rail mounting bracket	1 x Power cable
1 x RJ-45 to DB-9 COM port cable	1 x Power Cord

ITG-100-AL

- *Ultra Compact Size*
- *Fanless DIN-Rail Embedded System*
- *Intel® Atom™ x5-E3930 1.3GHz (up to 1.8GHz) Solution*

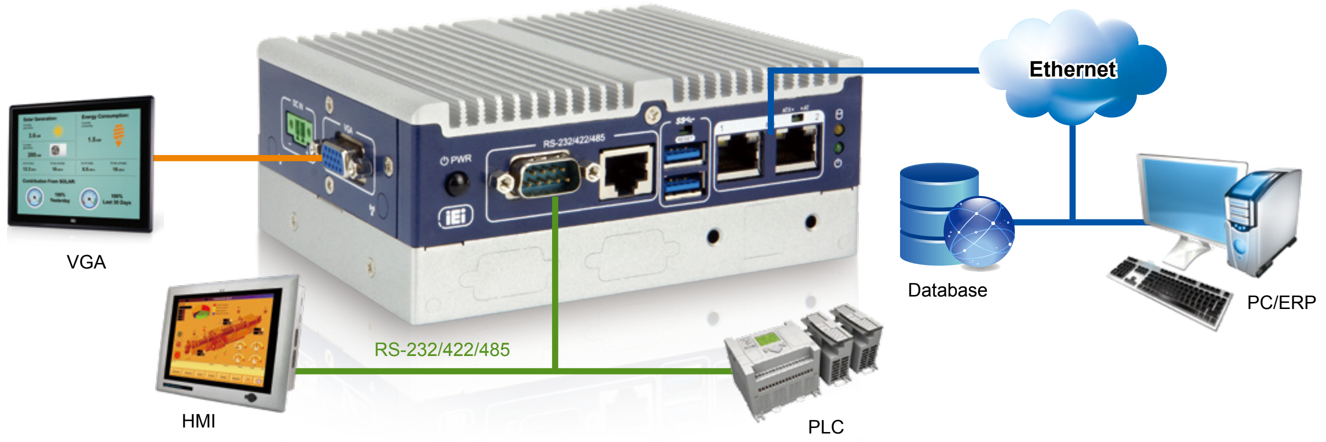
Features

- Intel® Atom™ x5-E3930 1.3GHz (up to 1.8 GHz)
- Two GbE LAN ports
- Two RS-232/422/485
- Full-size PCIe Mini slot and M.2 A-key slot for expansion

Fanless | **USB 3.2 Gen 1** | **Dual LAN** | **RS-232 /422/485** | **M.2** | **PCIe Mini Expansion**

Intelligent Gateway

The ITG-100-AL equips with basic I/O ports and supports a wide range of operating temperature, making it suitable for acting the role as a data collection gateway in smart factory environments.



A Wide Range of Applications

Given its practical features, the ITG-100-AL can be applied to a variety of application fields, such as military, industrial automation, and traffic control.

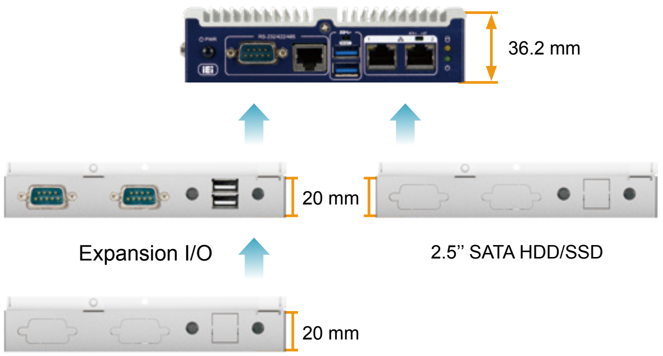
Military

Industrial Automation

Traffic control

Multi-layer Feature

Additional block layers can be assembled to achieve I/O interface expansion and data storage requirement. With choices of adding a 2.5" SATA HDD/SSD bay, a knockout-hole layer with selectable I/O interface, or both of above-mentioned options, the ITG-100-AL could be modularized to what best fit users' preferences and still remaining its compact size.



Functionality Expansions

In order to respond the demand of adding more functions to the system, the ITG-100-AL is designed with a full-size PCIe Mini slot reserved for 3G/4G and a M.2 A-key slot reserved for Wi-Fi to provide function expansions with easy access.

Ultra-compact Size

Space limitation is one of the constraints commonly seen in today's industrial environment. Under tight restrictions, the ITG-100-AL not only provides palm-sized design to meet the space requirement, but also comes with adequate basic I/O interfaces for various applications.

Full-size PCIe Mini

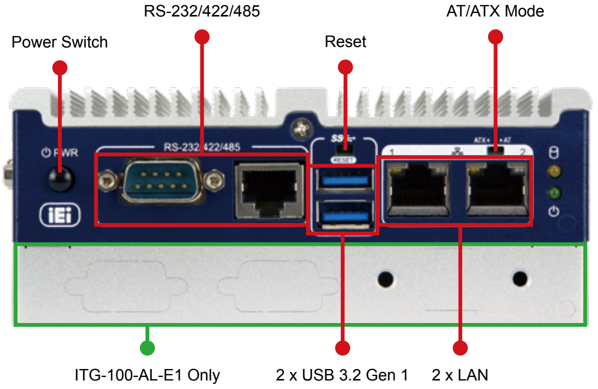
M.2 A key

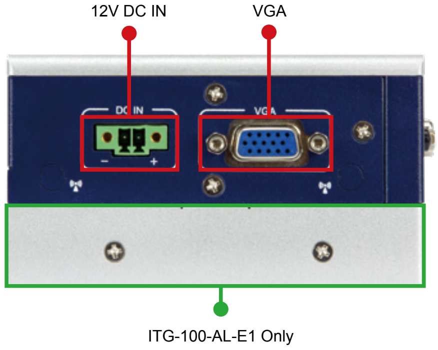
Specifications

Model Name		ITG-100-AL
Chassis	**Color**	Blue & Silver
	Dimensions (WxDxH) (mm)	Single layer: 137 x 102.8 x 36.2 Dual layer: 137 x 102.8 x 56.2
	System Fan	Fanless
	Chassis Construction	Extruded aluminum alloy
Motherboard	**CPU**	Intel® Atom™ x5-E3930 1.3 GHz (up to 1.8 GHz, dual-core, TDP 6.5W)
	Chipset	SoC
	System Memory	1 x SO-DIMM DDR3L 1600/1867 (2GB pre-installed)(up to 8GB)
Storage	**Hard Drive**	1 x 2.5" SATA 6Gb/s HDD/SSD bay
	eMMC	1 x eMMC5.0 (up to 32GB)(optional)
	Micro SD	1 x Micro SD slot (optional)
I/O Interfaces	**USB**	2 x USB 3.2 Gen1 2 x USB 2.0 (optional)
	Ethernet	2 x RJ-45: 2 x GbE by Intel® I211
	COM Port	2 x RS232/422/485 with AFC (DB9/RJ-45) 2 x RS232 (optional)
	Digital I/O	8-bit Digital I/O (4-in/ 4-out)(optional)
	Display	1 x VGA (up to 1920 x 1080@60Hz)
	Wireless	1 x 802.11a/b/g/n/ac (optional)
	Other	1 x Power Button, 1 x Reset Button, 1 x AT/ATX Switch, 1 x LED for Power (Green), 1 x LED for HDD (Yellow)
Expansions	**PCIe Mini**	1 x Full-size (PCIe/USB 2.0/SATA)
	M.2	1 x 2230 A-key (PCIe x 1/USB 2.0)
Power	**Power Input**	Terminal block: 12 V DC (9 ~ 36V DC BOM optional)[1]
	Power Consumption	12V @ 1A (Intel® Atom™ E3930 with 2GB memory)
Reliability	**Mounting**	DIN-Rail/ Wall-mount
	Operating Temperature	-20°C ~ 60°C with air flow (SSD), 10% ~ 95% non-condensing
	Storage Temperature	-30°C ~ 70°C with air flow (SSD), 10% ~ 90% non-condensing
	Operating Shock	Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)
	Operating Vibration	MIL-STD-810G 514.6C-1 (SSD)
	Weight (Net/Gross)	Single layer: 0.67g/ 1.03kg Dual layer: 0.86g/ 1.22kg
	Safety/EMC	CE/ FCC
	Watchdog Timer	Programmable 1 ~ 255 sec/min
OS	**Supported OS**	Microsoft® Windows 10, Linux

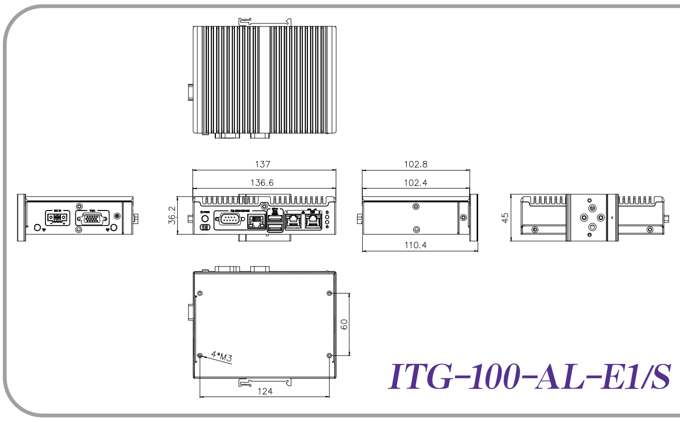
1. By order production, MOQ:100

Fully Integrated I/O

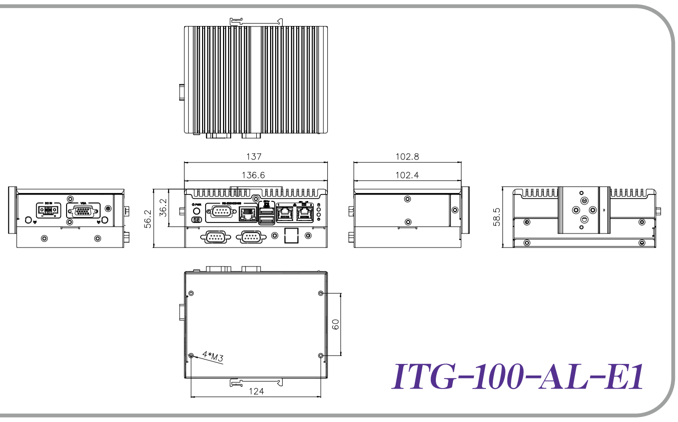




Dimensions (Unit: mm)



ITG-100-AL-E1/S



ITG-100-AL-E1

Ordering Information

Part No.	Description
ITG-100-AL-E1/S-R10	Fanless embedded system, Intel® Apollo Lake x5-E3930 1.3GHz (up to 1.8GHz, dual core), VGA, M.2, COM, 12V DC and RoHS
ITG-100-AL-E1/2GB/S-R10	Fanless embedded system, Intel® Apollo Lake x5-E3930 1.3GHz (up to 1.8GHz, dual core), 2GB DDR3L pre-installed memory, VGA, M.2, COM, 12V DC and RoHS
ITG-100-AL-E1-R10	Fanless embedded system, Intel® Apollo Lake x5-E3930 1.3GHz (up to 1.8GHz, dual core), VGA, M.2, COM, 12V DC, flexible I/O expansion and RoHS
ITG-100-AL-E1/2GB-R10	Fanless embedded system, Intel® Apollo Lake x5-E3930 1.3GHz (up to 1.8GHz, dual core), 2GB DDR3L pre-installed memory, VGA, M.2, COM, 12V DC, flexible I/O expansion and RoHS

Options

Item	Part No.	Description
4GB Memory	**79B00-G004-XXX-RS***	DDR3L (204 PIN);4GB;1.35V;0º ~ 85º;RoHS
8GB Memory	**79B00-G008-XXX-RS***	DDR3L (204 PIN);8GB;1.35V;0º ~ 85º;RoHS
Wi-Fi Module	**27319-000009-RS****	Wireless Lan Module;Wireless LAN & Bluetooth M.2 Module;Sparklan;R9701810011;IEEE802.11a/b/g/n/ac;2.412GHz~2.4835GHz, 5.15GHz~5.85GHz;M.2 2230;.;3.3V;22*30*2.15mm;QCNFA364A;QCA6174A-5;2x2 MIMO;Dual Band;WCBN808A-Q2;CCL;CCL;RoHS
Antenna	**32505-000900-100-RS****	External Antenna;WLAN;RG 178;108MM;TANK-700-QM67-R10;PEAK GAIN 2.0DBI;Exceltek;2.4-2.5GHz/5.15-5.85GHz;REVERSE SMA PLUG;RoHS
RF Cable	**32501-004000-100-RS****	RF;RF CABLE;LINE DIAMETER:0.81mm;250MM;;;50Ω;Sparklan;0-6GHz;VSWR≤1.3;I-PEX MHF-4 Plug;REVERSE SMA JACK;NUT*1;WASHER*1;;RoHS
DIO Cable	**32231-000300-100-RS**	FLAT CABLE;DIO CABLE;;2;50MM;28AWG;(A)D-SUB 9P FEMALE;(B)DU PONT 2*5P P=2.0 FEMALE, RoHS
COM Cable	**32205-007500-200-RS**	FLAT CABLE;RS-232/422/485;COM CABLE;2;50mm;28AWG;(A)D-SUB 9P MALE;(B)DU PONT 2*5P P=2.0 FEMALE, RoHS
USB Cable	**32001-000800-300-RS*****	ROUND CABLE;USB CABLE;;2;150MM;28AWG;(A)DOUBLE LAYER USB A TYPE FEMALE(WITH EAR);(B)DU PONT 2*4P P=2.0 FEMALE, RoHS
HDD Drive Bay	**ITG-HB-R10*****	HDD Bay for ITG-100 only
Exp. Chassis	**ITG-EXP-R10**	Expansion Chassis for ITG-100 only
Adapter	**63040-010036-210-RS******	Adapter Power;FSP;FSP036-RHBN3;9NA0362707;;Vin:90 ~ 264VAC;36W;Dim:37.8*89.8*27.0mm;Plug=7.5mm;Cable=1500mm;Erp(NO LOAD 0.075W);Vout:12VDC;Φ2.5/Φ5.5/lock;CCL;RoHS
Power Cable	**32102-045700-100-RS ********	WIRE CABLE;POWER CABLE;;2;200mm;18AWG;(A)DC JACK 5.5*2.5;(B)TERMINAL BLOCK 2P P=3.5 180°, RoHS
Power Cord	**32702-000400-200-RS**	European power cord
OS:Windows Embedded 10	**ITG-100-W10E64-E-R10**	OS Image with Windows® 10 IoT Enterprise Entry 64-bit for ITG-100-AL Series, with DVD-ROM, RoHS

* It is just a general P/N. Please contact your sales representatives to assist you in ordering.
** Each Wi-Fi module needs two antennas and two RF cables to fully support Wi-Fi function.
*** This USB cable cannot be used at the layer where the HDD drive bay is located.
**** It is required to order Power Cable together with Adapter for power usage.

Packing List

1 x SATA cable & SATA power cable (for ITG-100-AL-E1 only)	1 x Screw kit	1 x Mounting bracket	1 x RJ-45 to DB-9 COM port cable

uIBX-250-BW

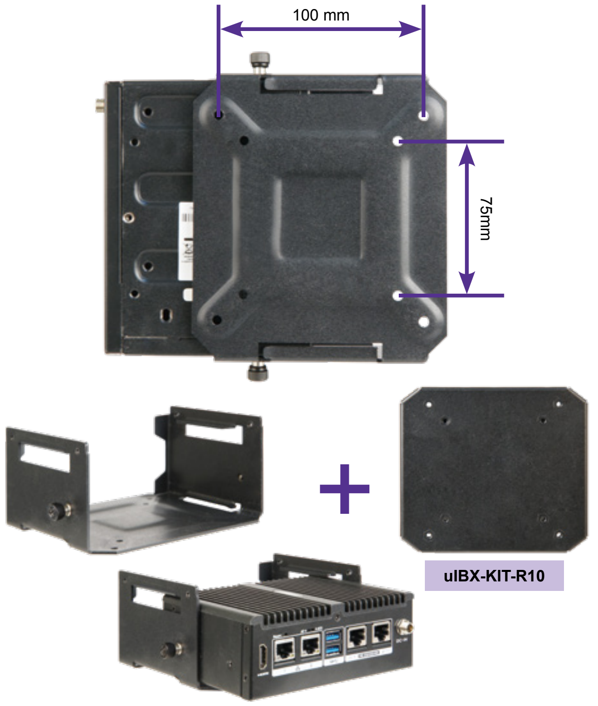
Ultra Compact Size

Features

- Fanless system with Intel® Celeron® N3160 processor
- Dual display
- Two RS-232/422/485
- Full-size PCIe Mini slot for expansion
- Four USB 3.2 Gen 1 (5Gb/s) ports
- Two GbE LAN ports

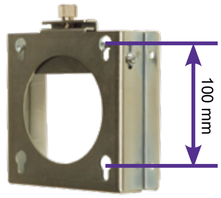
Fanless | Dual Display | HDMI | PCIe Mini Expansion | GbE | USB 3.2 Gen 1

Smart Mounting Design

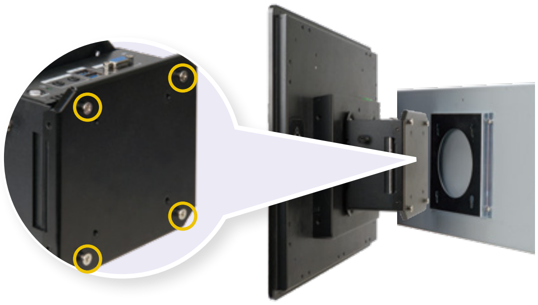


A. Wall mount

Assemble the uIBX-250 with the uIBX-KIT-R10 on the back of monitor.



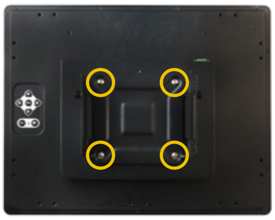
AFLWK-12/AFLWK-19



The monitor with the uIBX-250 can be mounted on the wall easily and support VESA 75/100.

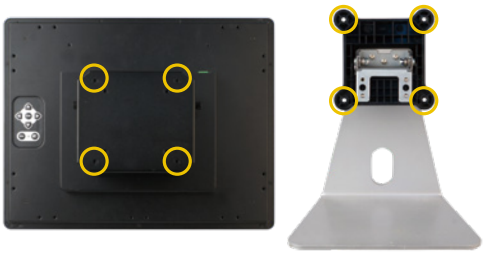
B. VESA mount 75/100

Step.1



Install the uIBX-KIT-R10 which supports VESA 75/100 on the back of the monitor.

Step.2



Assemble the uIBX-250, the stand and the monitor.

Step.3

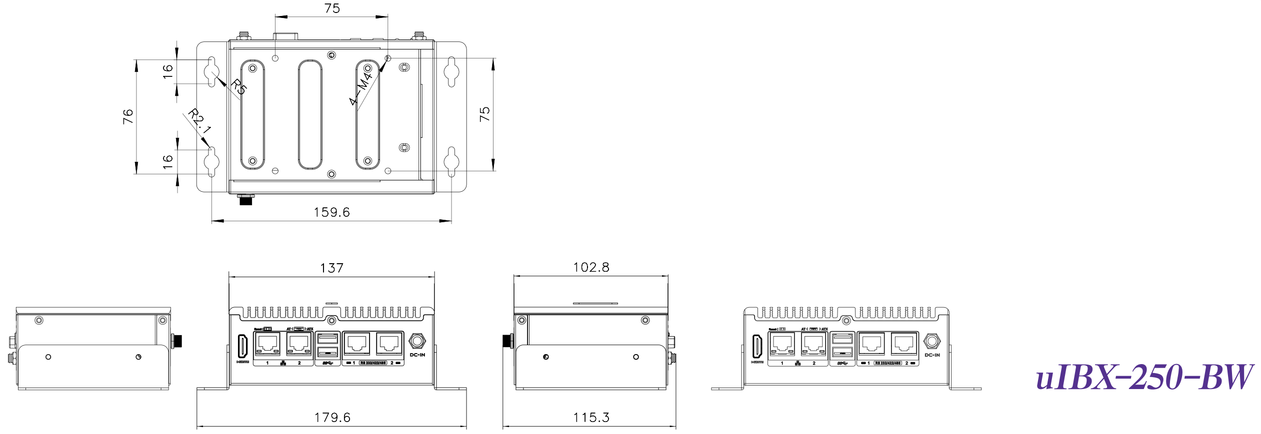
Fasten screws to secure the uIBX-250

Mount it on the back of monitor to save more space; the location of the uIBX-250 could be adjusted by user for different applications.

Specifications

Model Name		uIBX-250-BW
Chassis	**Color**	Black
	Dimensions (WxDxH) (mm)	137 x 102.8 x 52
	System Fan	Fanless
	Chassis Construction	Extruded aluminum alloy
Motherboard	**CPU**	Intel® Celeron® N3160 1.6 GHz (up to 2.24 GHz, quad-core, TDP 6W)
	Chipset	SoC
	System Memory	
Storage	**Hard Drive**	1 x 2.5" SATA 6Gb/s HDD/SSD bay
I/O Interfaces	**USB**	4 x USB 3.2 Gen1
	Ethernet	2 x RJ-45: 2 x GbE by Intel® I211
	COM Port	2 x RS232/422/485 with AFC (RJ-45)
	Display	1 x HDMI (up to 3840 x 2160@30Hz) 1 x VGA (up to 1920 x 1080@60Hz)
	Audio	1 x Line-out, 1 x Line-in
	Wireless	1 x 802.11a/b/g/n/ac (optional)
	Other	1 x Power Button, 1 x Reset Button, 1 x AT/ATX Switch, 1 x LED for HDD (Green)
Expansions	**PCIe Mini**	1 x Full-size (PCIe/USB 2.0/SATA)
Power	**Power Input**	DC Jack: 12V DC
	Power Consumption	12V @ 2A (Intel® Celeron® N3160 with 2GB memory)
Reliability	**Mounting**	Wall-mount/ VESA 75
	Operating Temperature	-20°C ~ 60°C with air flow (SSD), 10% ~ 95% non-condensing
	Storage Temperature	-20°C ~ 80°C with air flow (SSD), 10% ~ 90% non-condensing
	Operating Shock	Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)
	Operating Vibration	MIL-STD-810G 514.6C-1 (SSD)
	Weight (Net/Gross)	470g/ 1.4kg
	Safety/EMC	CE/ FCC
	Watchdog Timer	Programmable 1 ~ 255 sec/min
OS	**Supported OS**	Microsoft® Windows 8, Microsoft® Embedded Standard 7 E

Dimensions *(Unit: mm)*



Ordering Information

Part No.	Description
uIBX-250-BW-N3/2G-R21	Fanless embedded system with Intel® Celeron® N3160 1.6 GHz (up to 2.24 GHz, quad core, TDP 6 W), 2 GB DDR3L pre-installed memory, 12V DC, with RS-232/422/485, USB 3.2 Gen 1 (5Gb/s), VGA/HDMI, dual Intel® PCIe GbE, RoHS

Options

Part No.	Description
EMB-WIFI-KIT01-R20	1T1R Wi-Fi module kit for embedded system, IEEE802.11a/b/g/n/ac WiFi with Bluetooth 4.0/3.0+HS, 1 x Wi-Fi module, 2 x 250mm RF cable, 2 x Antenna, RoHS
DK-75-R10	VESA 75 to DIN-Rail mounting kit
uIBX-KIT-R10	uIBX smart mounting kit for monitor and stand
uIBX-250-BW-WES7E64-R10	OS image with Windows® Embedded Standard 7 E 64-bit for uIBX-250, DVD-ROM, RoHS

Packing List

1 x Power Adapter	1 x Mounting Bracket	2 x RS-232/422/485 Round Cable

Digital Signage Solution

IDS Series

Multiple screens can be connected to IEI digital signage series to display information like flight information at airports, in-store advertising, restaurant menu or movie showtimes. These digital signage players are in compact size with high resolution, stable and easy to install. They are equipped with multiple HDMI ports for a variety of video display monitors. It's the best choice for you to implement it in digital signage and video wall applications.

Key Features

■ Ultra HD

Display approaching 4K2K resolution. Best for high-definition screen.
Triple display port:
- 3 x HDMI 3840 x 2160 @30Hz

■ Thin Appearance

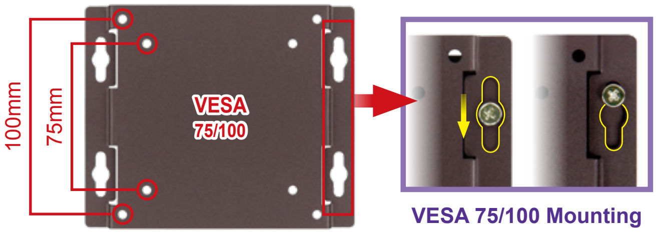
The minimum dimension of IDS-310 is 137 x 102.8 x 38.1 (mm) which can be installed in a limited space and saves more space.

■ Hardware Expansion

The M.2 A-key & PCIe Mini slots are reserved for Wi-Fi, 3G/4G or mSATA modules, and also support SATADOM for storage to achieve flexible application. Users can quickly replace the modules inside by simply opening the bottom panel of the chassis. Such a design can produce huge benefits for those who need quick response and efficient services.

■ Mounting Method

The series has passed shock and vibration test based on the MIL-STD-810G standard.



Digital Signage Embedded System

	Model Name	IDS-310AI	IDS-310-AL-N1	IDS-310-AL-J1
Chassis	Color	Brown & Sliver	Brown & Sliver	Brown & Sliver
	Dimensions (WxDxH)(mm)	137 x 102.8 x 49.2	137 x 102.8 x 38.1	137 x 102.8 x 52.1
	System Fan	Fanless	Fanless	Fanless
	Chassis Construction	Extruded aluminum alloy	Extruded aluminum alloy	Extruded aluminum alloy
Motherboard	CPU	Intel® Celeron® J3455 1.5GHz (up to 2.3GHz, quad-core, TDP 10W)	Intel® Celeron® N3350 1.1GHz (up to 2.4GHz, dual-core, TDP 6W)	Intel® Celeron® J3455 1.5GHz (up to 2.3GHz, quad-core, TDP 10W)
	Chipset	SoC	SoC	SoC
	System Memory	1 x SO-DIMM DDR3L (8GB pre-installed)	1 x SO-DIMM DDR3L (4GB pre-installed)(up to 8GB)	1 x SO-DIMM DDR3L (4GB pre-installed)(up to 8GB)
Storage	Hard Drive	Pre-installed 128GB SATADOM	1 x SATA 6Gb/s connector	1 x SATA 6Gb/s connector
	Micro SD	1 x Micro SD slot	1 x Micro SD slot (optional)	1 x Micro SD slot (optional)
I/O Interfaces	USB	3 x USB 3.2 Gen1	3 x USB 3.2 Gen1	3 x USB 3.2 Gen1
	Ethernet	2 x RJ-45: 2 x GbE by RTL8111	2 x RJ-45: 2 x GbE by RTL8111	2 x RJ-45: 2 x GbE by RTL8111
	RS-232/422/485	1 x RS-232/422/485 with AFC	1 x RS-232/422/485 with AFC	1 x RS-232/422/485 with AFC
	Display	3 x HDMI 1.4b (3840 x 2160@30Hz)	3 x HDMI 1.4b (3840 x 2160@30Hz)	3 x HDMI 1.4b (3840 x 2160@30Hz)
	Audio	1 x Line-out, 1 x Mic-in	1 x Line-out, 1 x Mic-in	1 x Line-out, 1 x Mic-in
	Wireless	1 x 802.11 a/b/g/n/ac (optional)	1 x 802.11 a/b/g/n/ac (optional)	1 x 802.11 a/b/g/n/ac (optional)
	TPM	1 x TPM2.0	Optional	Optional
Expansions	PCIe Mini	Pre-installed Mustang-MPCIE-MX2 AI accelerator card	1 x Full-size with SIM card slot (PCIe/USB2.0/SATA)	1 x Full-size with SIM card slot (PCIe/USB2.0/SATA)
	M.2	1 x 2230 A-key (PCIe x1/USB 2.0)	1 x 2230 A-key (PCIe x1/USB 2.0)	1 x 2230 A-key (PCIe x1/USB 2.0)
Power	Power Input	DC Jack: 12V DC	DC Jack: 12V DC	DC Jack: 12V DC
	Power Consumption	12V @ 2.6A (Intel® Celeron® J3455 with 8GB memory)	12V @ 1.9A (Intel® Celeron® N3350 with 4GB memory)	12V @ 2.2A (Intel® Celeron® J3455 with 4GB memory)
Reliability	Mounting	Wall mount	VESA 75/100/Wall mount (optional)	VESA 75/100/Wall mount (optional)
	Operating Temperature	-20°C ~ 45°C with air flow, 10% ~ 95% non-condensing	-20°C ~ 60°C with air flow (mSATA), 10% ~ 95% non-condensing	-20°C ~ 60°C with air flow (mSATA), 10% ~ 95% non-condensing
	Storage Temperature	-30°C ~ 80°C with air flow, 10% ~ 90% non-condensing	-30°C ~ 80°C with air flow, 10% ~ 90% non-condensing	-30°C ~ 80°C with air flow, 10% ~ 90% non-condensing
	Operating Shock	Half-sine wave shock 5G, 11ms, 100 shocks per axis (SATADOM)	Half-sine wave shock 5G, 11ms, 100 shocks per axis (mSATA)	Half-sine wave shock 5G, 11ms, 100 shocks per axis (mSATA)
	Operation Vibration	MIL-STD-810G 514.6C-1 (SATADOM)	MIL-STD-810G 514.6C-1 (mSATA)	MIL-STD-810G 514.6C-1 (mSATA)
	Weight (Net/ Gross)	910g/1.7 kg	680g/1.4kg	950g/1.7kg
	Safety / EMC	CE/FCC Class A	CE/FCC Class A/BSMI	CE/FCC Class A/BSMI
	Watchdog timer	Programmable 1~255 sec/min	Programmable 1~255 sec/min	Programmable 1~255 sec/min
OS	Supported OS	Microsoft® Windows® 10, Linux	Microsoft® Windows® 10, Linux	Microsoft® Windows® 10, Linux

IDS-310AI

- *Ultra Compact Size*
- *Fanless Digital Signage System*
- *Intel Vision Accelerator Design for AI Deep Learning*

New

Features

- Intel® Celeron® J3455 1.5GHz (up to 2.3 GHz)
- Two GbE LAN ports
- Triple USB 3.2 Gen1
- M.2 A-key slot for expansion
- Pre-installed a Mustang-MPCIE-MX2 that has two Intel Myriad X VPUs for AI deep learning workload consolidation

VPU AI Accelerator card | Fanless | SUPERSPEED USB 3.2 Gen 1 | Dual LAN | RS-232 /422/485 | M.2

Application

The IDS-310AI is pre-installed with a Mustang-MPCIE-MX2 AI accelerator card, which includes two Intel® Movidius™ Myriad™ X VPU, to provide a flexible AI inference solution.

VPU is short for vision processing unit. It can run AI faster, and is well suited for low power consumption applications such as surveillance, retail and transportation. With the advantage of power efficiency and high performance to dedicate Deep Neural Networks (DNN) topologies, it is perfect to be implemented in AI edge computing device to reduce total power usage, providing longer duty time for the rechargeable edge computing equipment.

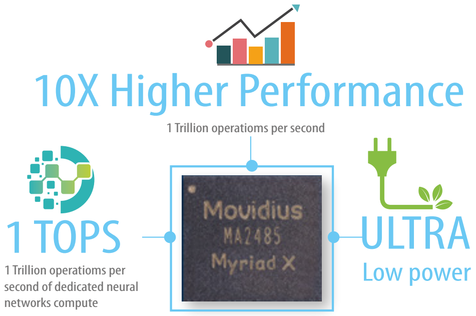
Surveillance

Retail

Transportation

Key Features of Intel® Movidius™ Myriad™ X VPU

- Native FP16 support
- Rapidly port and deploy neural networks in Caffe and Tensorflow formats
- End-to-End acceleration for many common deep neural networks
- Industry-leading Inferences/S/Watt performance



Ultra-compact Size

Space limitation is one of the constraints commonly seen in today's industrial environment. Under tight restrictions, the IDS-310AI not only provides palm-sized design to meet the space requirement, but also comes with adequate basic I/O interfaces for various applications.

Specifications

Model Name		IDS-310AI
AI Accelerator Card	Model Name	Mustang-MPCIE-MX2
	Main Chip	2 x Intel® Movidius™ Myriad™ X MA2485 VPU
	Supported Topology	AlexNet, GoogleNetV1/V2, Mobile_SSD, MobileNetV1/V2, MTCNN, Squeezenet1.0/1.1, Tiny Yolo V1 & V2, Yolo V2, ResNet-18/50/101
Chassis	Color	Brown & Silver
	Dimensions (WxDxH)(mm)	137 x 102.8 x 49.2
	System Fan	Fanless
	Chassis Construction	Extruded aluminum alloy
Motherboard	CPU	Intel® Celeron® J3455 (up to 2.3GHz, quad-core, TDP 10W)
	Chipset	SoC
	System Memory	1 x 204-pin DDR3L SO-DIMM slot, pre-installed with 8 GB memory
Storage	SATADOM	Pre-installed 128GB
	Micro SD	1 x Micro SD Slot
I/O Interfaces	USB 3.2 Gen 1 (5Gb/s)	3
	Ethernet	2 x RJ-45 PCIe GbE by RTL8111 controller
	COM Port	1 x RS-232/422/485 with AFC
	Display	3 x HDMI 1.4b (3840x2160@30Hz)[1, 2]
	Audio	1 x Line-out, 1 x Mic-in
	Wireless	1 x 802.11a/b/g/n/ac (optional)
	TPM	TPM2.0
	Others	1 x Power button, 1 x Reset button, 1 x AT/ATX switch, 1 x LED for HDD (yellow), 1 x LED for power (green)
Expansions	M.2	1 x 2230 A key (PCIe x1/ USB 2.0)
Power	Power Input	DC Jack: 12V DC (9 ~ 36V DC BOM optional)[3]
	Power Consumption	12V @ 2.6A (Intel® Celeron® J3455 with 8GB memory)
Reliability	Mounting	Wall mount
	Operating Temperature	-20°C ~ 45°C with air flow, 10% ~ 95%, non-condensing
	Storage Temperature	-30°C ~ 80°C with air flow, 10% ~ 90%, non-condensing
	Operating Shock	Half-sine wave shock 5G, 11ms, 100 shocks per axis, IEC68-2-27
	Operation Vibration	MIL-STD-810G 514.6C-1
	Weight (Net/Gross)	910 g/ 1.7 kg
	Safety / EMC	CE/FCC
	Watchdog Timer	Programmable 1 ~ 255 sec/min
OS	Supported OS	Win10/Linux

1. Due to chipset limitation, audio is not supported over the HDMI3 connector.
2. Fully support of triple 4K display output may vary in different system environment setting. Contact an IEI sales representative for detailed information.
3. By order production, MOQ:100

Ordering Information

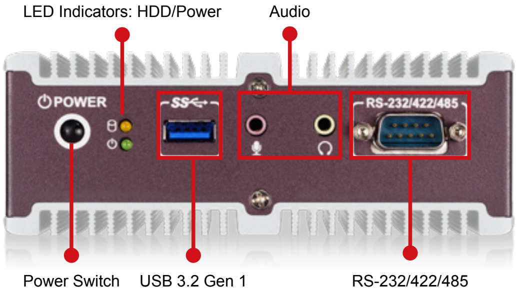
Part No.	Description
IDS-310AI-AL-J1/8GB-R10	Fanless embedded system with Intel® Celeron® J3455 1.5GHz (up to 2.3GHz, quad dore, TDP 10W), pre-installed 8GB DDR3L memory, triple HDMI display, 12V DC, 128G SATADOM, Mustang-MPCIE-MX2 and RoHS

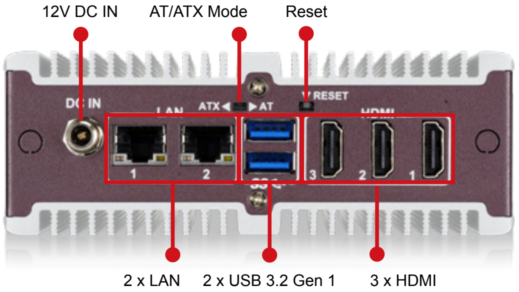
Options

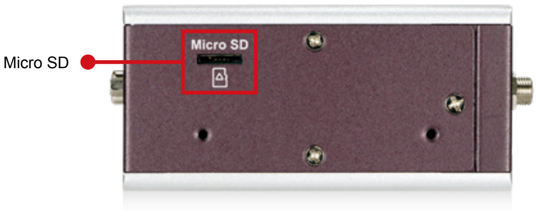
Item	Part No.	Description
Wi-Fi Module	27319-000009-RS*	Wireless Lan Module;Wireless LAN & Bluetooth M.2 Module;Sparklan;R9701810011;IEEE802.11a/b/g/n/ac;2.412GHz~2.4835GHz, 5.15GHz~5.85GHz;M.2 2230;.;3.3V;22*30*2.15mm;QCNFA364A;QC A6174A-5;2x2 MIMO;Dual Band;WCBN808A-Q2;CCL;CCL;RoHS
Antenna	32505-000900-100-RS*	External Antenna;WLAN;RG 178;108MM;TANK-700-QM67-R10;PEAK GAIN 2.0DBI;Exceltek;2.4-2.5GHz/5.15-5.85GHz;REVERSE SMA PLUG;RoHS
RF Cable	32501-004000-100-RS*	RF;RF CABLE;LINE DIAMETER:0.81mm;250MM ;;;50Ω;Sparklan;0-6GHz;VSWR≤1.3;I-PEX MHF-4 Plug;REVERSE SMA JACK;NUT*1;WASHER*1;;RoHS

* Each Wi-Fi module needs two antennas and two RF cables to fully support Wi-Fi function.

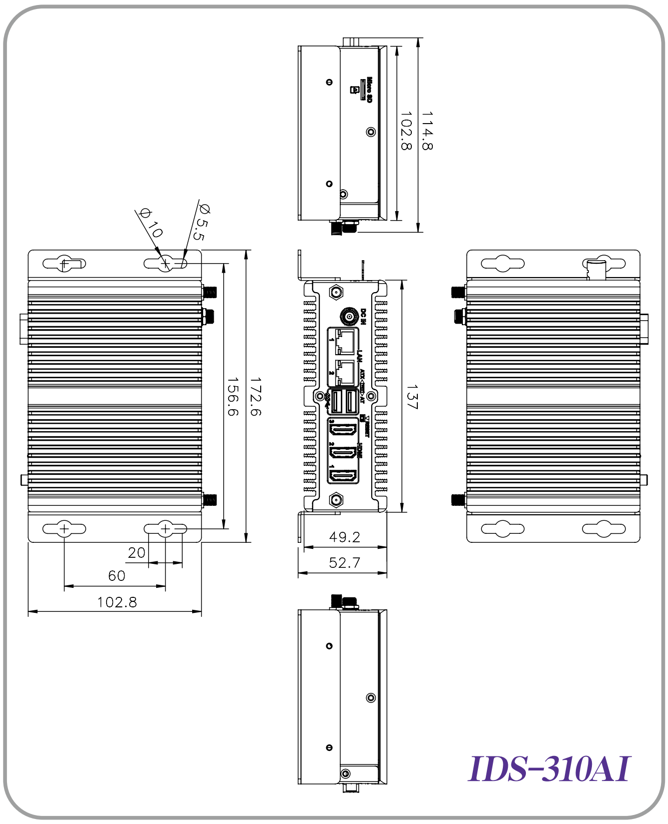
Fully Integrated I/O







Dimensions (Unit: mm)



Packing List

1 x Screw kit	1 x 36W power adapter
1 x Wall mounting bracket	1 x Power Cord

IDS-310-AL

- ■ ***Digital Signage System***
- ■ ***Ultra Compact Size***

Features

- Triple HDMI displays up to 4K resolution
- Two GbE LAN ports
- Full-size PCIe Mini slot and M.2 A-key slot for expansion

Fanless **Triple Display** **HDMI** **PCIe Mini Expansion** **M.2**

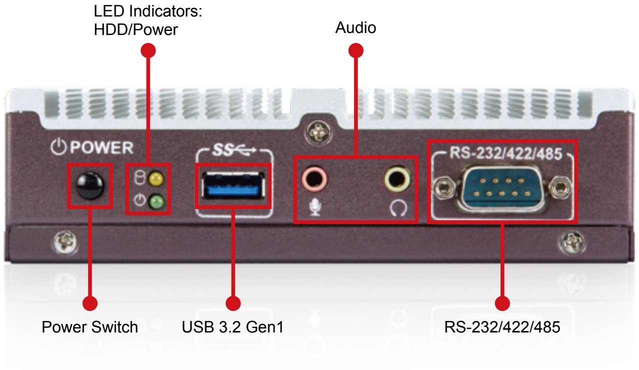
Specifications

Model Name		IDS-310-AL-N1	IDS-310-AL-J1
Chassis	Color	Brown & Silver	
	Dimensions (WxDxH)(mm)	137 x 102.8 x 38.1	137 x 102.8 x 52.1
	System Fan	Fanless	
	Chassis Construction	Extruded aluminum alloys	
Motherboard	CPU	Intel® Celeron® N3350 1.1GHz (up to 2.4GHz, dual-core, TDP 6W)	Intel® Celeron® J3455 1.5GHz (up to 2.3GHz, quad-core, TDP 10W)
	Chipset	SOC	
	System Memory	1 x SO-DIMM DDR3L (4GB pre-installed)(up to 8GB)	
Storage	Hard Drive	1 x SATA 6Gb/s connector	
	Micro SD	1 x Micro SD slot (optional)	
I/O Interfaces	USB	3 x USB 3.2 Gen1	
	Ethernet	2 x RJ-45: 2 x GbE by RTL8111	
	COM Port	1 x RS-232/422/485 with AFC	
	Display	3 x HDMI 1.4b (3840x2160@30Hz)[1, 2]	
	Audio	1 x Line-out, 1 x Mic-in	
	Wireless	1 x 802.11 a/b/g/n/ac (optional)	
	TPM	1 x TPM 2.0 (optional)	
Expansions	PCIe Mini	1 x Full-size with SIM card slot (PCIe/USB 2.0/SATA)	
	M.2	1 x 2230 A-key (PCIe x1/USB 2.0)	
Power	Power Input	DC Jack: 12V DC (9 ~ 36V DC BOM optional)[3]	
	Power Consumption	12V @ 1.9A (Intel® Celeron® N3350 with 4GB memory)	12V @ 2.2A (Intel® Celeron® J3455 with 4GB memory)
Reliability	Mounting	VESA 75/100/Wall mount(optional)	
	Operating Temperature	-20°C ~ 60°C with air flow (mSATA), 10% ~ 95% non-condensing	
	Storage Temperature	-30°C ~ 80°C with air flow (mSATA), 10% ~ 95% non-condensing	
	Operating Shock	Half-sine wave shock 5G, 11ms, 100 shocks per axis (mSATA)	
	Operation Vibration	MIL-STD-810G 514.6C-1 (mSATA)	
	Weight (Net/Gross)	680g/1.4kg	950g/1.7kg
	Safety / EMC	CE/FCC Class A/BSMI	
	Watchdog Timer	Programmable 1 ~ 255 sec/min	
OS	Supported OS	Microsoft® Windows® 10, Linux	

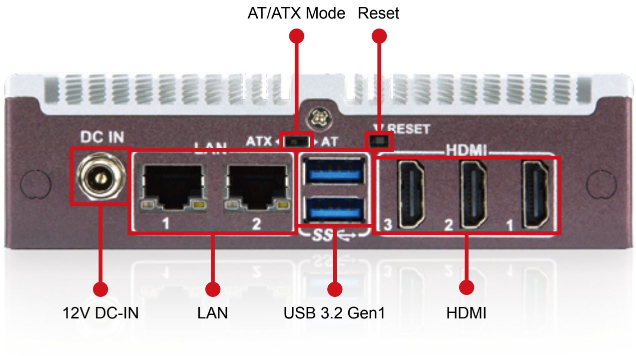
1. Due to chipset limitation, audio is not supported over the HDMI3 connector.
2. Fully support of triple 4K display output may vary in different system environment setting. Contact an IEI sales representative for detailed information.
3. By order production, MOQ:100

Fully Integrated I/O

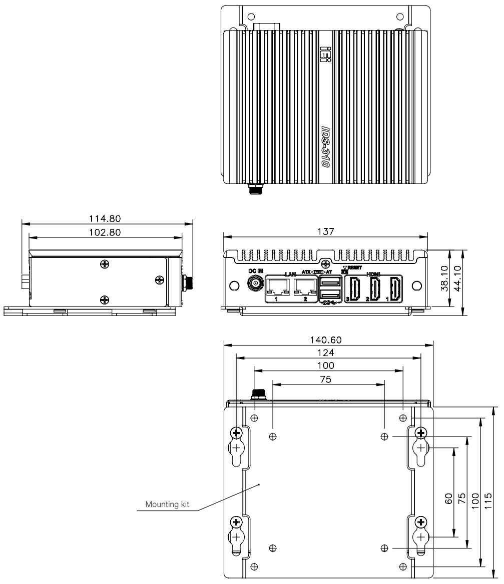
Front View



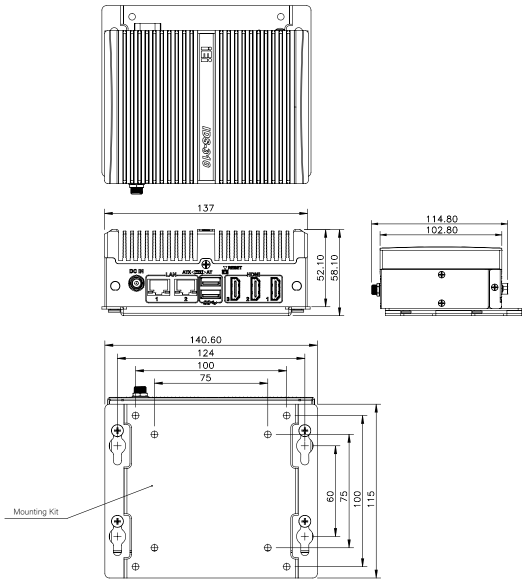
Rear View



Dimensions (Unit: mm)



IDS-310-AL-N1



IDS-310-AL-J1

Ordering Information

Part No.	Description
IDS-310-AL-J1/4GB-R10	Fanless embedded system with Intel® Celeron® J3455 1.5GHz (up to 2.3GHz, quad dore, TDP 10W), pre-installed 4GB DDR3L memory, triple HDMI display, 12V DC and RoHS
IDS-310-AL-N1/4GB-R10	Fanless embedded system with Intel® Celeron® N3350 1.1GHz (up to 2.4GHz, dual dore, TDP 6W), pre-installed 4GB DDR3L memory, triple HDMI display, 12V DC and RoHS

Options

Part No.		Description
Wi-Fi Module	27319-000009-RS*	Wireless Lan Module;Wireless LAN & Bluetooth M.2 Module;Sparklan;R9701810011;IEEE802.11a/b/g/n/ac;2.412GHz~2.4835GHz, 5.15GHz~5.85GHz;M.2 2230;.;3.3V;22*30*2.15mm;QCNFA364A;QCA6174A-5;2x2 MIMO;Dual Band;WCBN808A-Q2;CCL;CCL;RoHS
Antenna	32505-000900-100-RS*	External Antenna;WLAN;RG 178;108MM;TANK-700-QM67-R10;PEAK GAIN 2.0DBI;Exceltek;2.4-2.5GHz/5.15-5.85GHz;REVERSE SMA PLUG;RoHS
RF Cable	32501-004000-100-RS*	RF;RF CABLE;LINE DIAMETER:0.81mm;250MM;;;50Ω;Sparklan;0-6GHz;VSWR≤1.3;I-PEX MHF-4 Plug;REVERSE SMA JACK;NUT x 1;WASHER x 1;;RoHS
OS:Windows Embedded 10	IDS-310-AL-W10E64-E-R10	OS Image with Windows® 10 IoT Enterprise Entry 64-bit 2019 for IDS-310-AL Series, with DVD-ROM, RoHS

* Each Wi-Fi module needs two antennas and two RF cables to fully support Wi-Fi function.

Packing List

1 x VESA 75/100 Mounting Kit	1 x Power Adapter	1x Power Cord