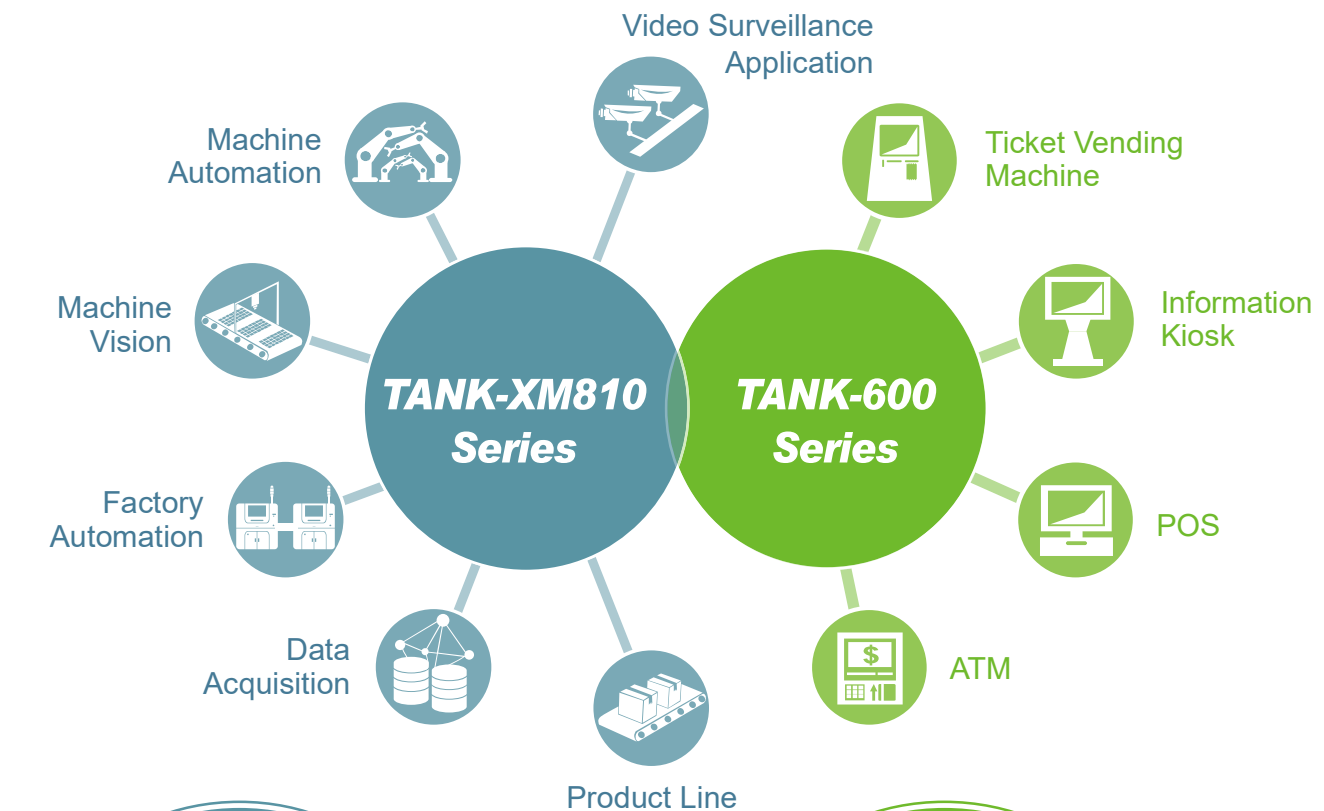


Industrial Automation Solution

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 XM81 Series

Multiple Expansion Slot

- 2 x 2.5GbE ports
- Multiple USB ports and serial ports
- Wide range temperature
- Low power consumption



■ TANK-XM81/600 Series

Multiple Serial Port

- Multiple expansion slot
- Multiple internal expansion boards for flexible selection
- Support multiple types storage device

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.

	Platform	Model
Desktop	Alder Lake-S	TANK-XM811-R680E
	Comet Lake	TANK-XM810-Q470
	Coffee Lake/ Coffee Lake-R	TANK-880-Q370
	Skylake/ Kaby Lake	TANK-870-Q170 TANK-870e-H110 TANK-871-Q170

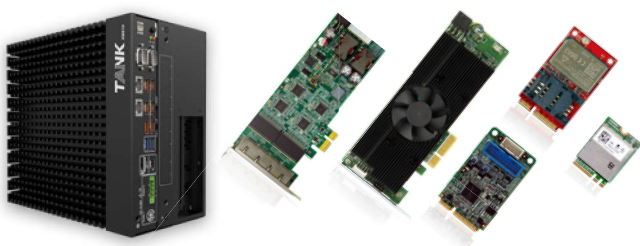
A Variety of Applications

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.



■ Multiple Expansion Slots

The TANK Series integrates 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 card 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.



Key Features

■ Modular Design, Easy to Install

The mainboard is secured to the support bracket to prevent PCB from bending or warping. The three-layer structure consisting of heat spreader, mainboard and baseboard makes it easier to install CPU, memory and HDD, compared with the former TANK series.



■ Flexible Expansion

Different expansion requirements can be met. Dual-slot and four-slot SKUs are provided for selection. Customers can choose the type of expansion slot according to their needs.



■ Support High-performance Graphics Card

With IEI power board, it can support 3060 and other advanced graphics cards.

Maximum length of graphics card supported: 350mm

*Specified power adapter is required.

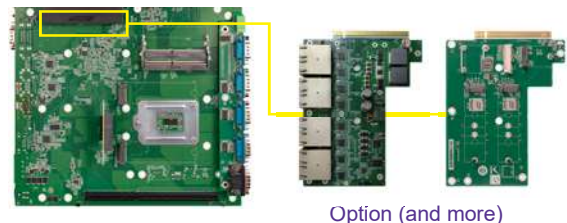
NVIDIA 3060

*Support advanced graphics card



■ Modular Board Design

It supports various optional modules, such as M.2 expansion card, 8-port PoE expansion card, etc.



■ Support 35W & 65W CPU

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.

Operating temperature:	
With 35w CPU: (or 65W CPU PL1 & PL2, default 35W)	-20°C ~ 60°C
With 65w CPU:	-20°C ~ 50°C

Industrial Automation System



Model Name		TANK-XM811	TANK-XM810	TANK-880-Q370
Chassis	Color	Black C	Black C	Black C + Silver
	Dimensions (WxDxH) (mm)	230.6 x 256.04 x 76.2	230.6 x 256.04 x 76.2	169 x 255.2 x 225
	System Fan	Fanless	Fanless	Fanless
	Chassis Construction	Extruded aluminum alloys	Extruded aluminum alloys	Extruded aluminum alloys
Motherboard	CPU	12 th Gen Intel® Core™ CPU 35/65W Intel® Core™ i5-12500TE 1.9 GHz (up to 4.3 GHz, 6-core, 35W TDP) Intel® Core™ i7-12700TE 1.4 GHz (up to 4.6 GHz, 12-core, 35W TDP)	10/11 th Gen Intel® Core™ CPU 35/65W Intel® Core™ i3-10320 3.8 GHz (up to 4.6 GHz, quad-core, 65W TDP) Intel® Core™ i5-10500TE 2.3 GHz (up to 3.7 GHz, 6-core, 35W TDP) Intel® Core™ i7-10700TE 2.0 GHz (up to 4.4 GHz, 8-core, 35W TDP)	8 th Gen Intel® Core™ CPU & Intel® Core™ i7-9700TE 1.8 GHz (up to 3.8 GHz, 8-core, TDP 35W) Intel® Core™ i5-9500TE 2.2 GHz (up to 3.6 GHz, 6-core, TDP 35W)
	Chipset	R680E	Q470/Q470E	Intel® Q370
	System Memory	2 x SO-DIMM DDR4 3200 MHz (8GB pre-installed) (up to 64GB)	2 x SO-DIMM DDR4 2933 MHz (up to 64GB)	2 x SO-DIMM DDR4 2666/ 2400 MHz (8GB pre-installed) (up to 64GB)
IPMI	IRIS Solution	N/A	N/A	N/A
Storage	Hard Drive	1 x 2.5" SATA 6Gb/s HDD/SSD bay	1 x 2.5" SATA 6Gb/s HDD/SSD bay	4 x 2.5" SATA 6Gb/s HDD/SSD bay (RAID 0/1/5/10 support)
I/O Interfaces	USB	8 x USB 3.2 Gen 2 (10Gb/s)	6 x USB 3.2 Gen 2 (10Gb/s) 2 x USB 2.0	6 x USB 3.2 Gen 1
	Ethernet	2 x RJ-45 2 x I225V 2.5GbE (colay I225LM)	2 x RJ-45 2 x I225V 2.5GbE (colay I225LM)	3 x RJ-45: 1 x GbE by Intel® I219 2 x GbE by Intel® I210
	COM Port	2 x RS-232/422/485, 4 x RS-232	2 x RS-232/422/485, 4 x RS-232	3 x RS-232/422/485 with AFC (DB-9 with 2.5kV isolation)
	Digital I/O	12-bit Digital I/O (6-in/6-out) DB15	12-bit Digital I/O (6-in/6-out) DB15	8-bit Digital I/O (4-in/ 4-out)
	Display	1 x DP++ 1 x HDMI	1 x DP++ 1 x HDMI	1 x HDMI (up to 3840x2160@30Hz) 1 x DP (up to 4096x2304@60Hz)
	Audio	N/A	N/A	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	Support Intel® PTT function	Support Intel® PTT function	1 x TPM 2.0 (2 x 10 pin) (optional)
Expansions	PCIe Mini	Optional	Optional	1 x Full-size (PCIe/ USB 2.0/ SATA)
	M.2	1 x 2280 M-key (PCIe x4) 1 x 2230 A-key (USB+PCIe x1, supports vPRO)	2 x 2280 M-key (PCIe x2)	1 x 2230 A-key (PCIe x2/USB 2.0) 2 x 2280 M-key (PCIe x2)
	Backplane	Optional	Optional	1 x PCIe x16 1 x PCIe x1 2 x PCIe x4
Power	Power Input	12 ~ 28V DC	12 ~ 28V DC	DC Jack: 9 ~ 36V DC Terminal Block: 9 ~ 36V DC
	Power Consumption	12V @ 8.8A (Intel® Core™ i9-12900TE with 16GB memory)	12V @ 8A (Intel® Core™ i9-10900TE with 8GB memory)	19V@3.6A (Intel® Core™ i7-8700T with 8GB memory)
	Internal Power Connector	N/A	N/A	12V@10A
Reliability	Mounting	Wall mount	Wall mount	Wall mount
	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
	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 (with SSD)	MIL-STD-810G 514.6C-1 (with SSD)	MIL-STD-810G 514.6C-1 (SSD)
	Weight (Net/Gross)	3.33 kg/3.7 kg	3.2 kg/3.5 kg	5.4 kg/8.45 kg
	Safety/EMC	CE/FCC	CE/FCC	CE/FCC
OS	Supported OS	Windows 10 / Windows 11 IoT Enterprise/ Linux	Windows 10 / Windows 11 IoT Enterprise/ Linux	Microsoft Windows 10 / Windows 11 / Linux

Industrial Automation System



Model Name		TANK-871-Q170	TANK-870-Q170
Chassis	Color	Black C + Silver	Black C + Silver
	Dimensions (WxDxH) (mm)	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
	Chassis Construction	Extruded aluminum alloys	Extruded aluminum alloys
Motherboard	CPU	7 th Gen Intel® Core™ CPU & Intel® Core™ i7-6700TE 2.4 GHz (up to 3.4 GHz, quad-core, TDP 35) Intel® Core™ i5-6500TE 2.3 GHz (up to 3.3 GHz, quad-core, TDP 35)	
	Chipset	Intel® Q170	Intel® Q170
	System Memory	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	1 x iRIS-2400 (optional)	1 x iRIS-2400 (optional)
Storage	Hard Drive	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	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	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	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)
	Display	1 x VGA (up to 1920 x 1200@60Hz) 1 x HDMI/DP (up to 3840x2160@30Hz/4096x2304@60Hz) 1 x iDP (optional)	1 x VGA (up to 1920 x 1200@60Hz) 1 x HDMI/DP (up to 3840x2160@30Hz/4096x2304@60Hz) 1 x iDP (optional)
	Audio	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)
	TPM	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 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	N/A	N/A
	Backplane	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/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	DC Jack: 9 ~ 36V DC Terminal Block: 9 ~ 36V DC
	Power Consumption	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	5V@3A or 12V@3A	5V@3A or 12V@3A
Reliability	Mounting	Wall mount	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	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)
	Operating Vibration	MIL-STD-810G 514.6 C-1 (SSD)	MIL-STD-810G 514.6 C-1 (SSD)
	Weight (Net/Gross)	3.5 kg/4.5 kg	2-slot: 4.2 kg/6.3 kg 4-slot: 4.5 kg/6.5 kg
OS	Safety/EMC	CE/FCC/KC	CE/FCC/KC
	Supported OS	Microsoft® Windows® 8 Embedded, Microsoft® Windows® Embedded Standard 7 E, Microsoft® Windows® 10 IoT Enterprise	

Industrial Automation System



Model Name		TANK-870e-H110	TANK-610-BW
Chassis	Color	Dark silver purple + Silver	Black C + Silver
	Dimensions (WxDxH) (mm)	132.6 x 255.2 x 190	184 x 200.6 x 58.2
	System Fan	Fanless	Fanless
	Chassis Construction	Extruded aluminum alloys	Extruded aluminum alloys
Motherboard	CPU	7 th Gen Intel® Core™ CPU & Intel® Core™ i7-6700TE 2.4 GHz (up to 3.4 GHz, quad-core, TDP 35) Intel® Core™ i5-6500TE 2.3 GHz (up to 3.3 GHz, quad-core, TDP 35)	Intel® Celeron® N3160 1.6 GHz (up to 2.24 GHz, quad-core, TDP 6W)
	Chipset	Intel® H110	SoC
	System Memory	2 x SO-DIMM DDR4 2666 (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
I/O Interfaces	USB	4 x USB 3.2 Gen1	4 x USB 3.2 Gen1
	Ethernet	2 x RJ-45: 2 x GbE by RTL8111G	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 6 x RS-232
	Digital I/O	N/A	N/A
	Display	1 x VGA (up to 1920 x 1200@60Hz) 1 x HDMI (up to 3840 x 2160@30Hz)	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
	Wireless	1 x 802.11a/b/g/n/ac (optional)	1 x 802.11a/b/g/n/ac (optional)
	TPM	N/A	N/A
Expansions	PCIe Mini	1 x Full-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/SATA)
	M.2	N/A	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	N/A
Power	Power Input	DC Jack: 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)	12V@1.49A (Intel® Celeron® N3160 with 4GB DDR3L memory)
Reliability	Mounting	Wall mount & Din Rail	Wall mount, VESA 100
	Operating Temperature	-20°C ~ 50°C with air flow (SSD), 10% ~ 95% non-condensing	-40°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)
	Operating Vibration	MIL-STD-810G 514.6C-1 (SSD)	MIL-STD-810G 514.6C-1 (SSD)
	Weight (Net/Gross)	2.8 kg/4.3 kg	2.2 kg/3 kg
	Safety/EMC	CE/FCC/KC	CE/FCC/KC
OS	Supported OS	Microsoft® Windows® 8 Embedded, Microsoft® Windows® Embedded Standard 7 E, Microsoft® Windows® 10 IoT Enterprise	Microsoft® Windows 8 Embedded, Microsoft® Windows® Embedded Standard 7 E

TANK-XM811

- High-Performance 12th Generation Intel® Core™ Processor
- Fanless Embedded Computer

Preliminary

Features

- Supported CPUs:
Intel® Core™ i5-12500TE 1.9 GHz (up to 4.3 GHz, 6-core, 35W TDP)
Intel® Core™ i7-12700TE 1.4 GHz (up to 4.6 GHz, 12-core, 35W TDP)
- 2 x 2.5G Ethernet ports
- Multiple USB ports and serial ports
- Multiple internal expansion boards for flexible selection
- Various optional backplanes and chassis
- CE/FCC compliant

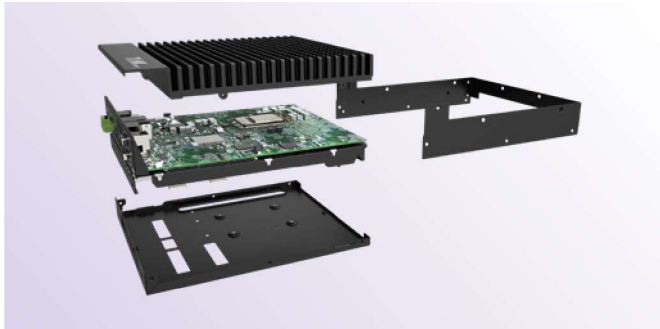


Specifications

Model Name		TANK-XM811
Chassis	Color	Black C
	Dimensions (WxDxH) (mm)	230.6 x 256.04 x 76.2
	System Fan	Fanless
	Chassis Construction	Extruded aluminum alloys
Motherboard	CPU	12 th Gen Intel® Core™ CPU 35/65W TDP Intel® Core™ i5-12500TE 1.9 GHz (up to 4.3 GHz, 6-core, 35W TDP) Intel® Core™ i7-12700TE 1.4 GHz (up to 4.6 GHz, 12-core, 35W TDP)
	Chipset	R680E
	Memory	2 x SO-DIMM DDR4 3200 (8GB pre-installed) (up to 64GB)
Storage	HDD Bay	1 x 2.5" SATA 6Gb/s HDD/SSD bay
I/O Interfaces	Ethernet	2 x RJ-45, 2 x I225V 2.5GbE (colay I225LM)
	USB 3.2 Gen 2 (10Gb/s)	8
	COM	2 x RS-232/422/485, 4 x RS-232
	Digital I/O	12-bit (6-in/6-out) DB15
	Display Interface	1 x DP++, 1 x HDMI
Internal Expansions	M.2	1 x 2280 M-key (PCIe x4) 1 x 2230 A-key (USB+PCIe x1, supports vPRO)
	Expansion Backplane	Optional
Power	Power Input	12 ~ 28V DC
	Remote Power	1 x 2-pin
	Power Consumption	12V @ 8.8A (Intel® Core™ i9-12900TE with 16GB memory)
Reliability	Mounting	Wall mount
	Operating Temperature	-20°C ~ 60°C with air flow (CPU TDP35W & SSD) -20°C ~ 50°C with air flow (CPU TDP65W & SSD), 10% ~ 95% non-condensing
	Storage Temperature	-40°C ~ 85°C, 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 (with SSD)
	Weight (Net/Gross)	3.33/3.7 kg
	Safety / EMC	CE/FCC
	Watchdog Timer	Programmable 1 ~ 255 sec/min
OS	Supported OS	Windows® 10/11 IoT Enterprise/ Linux

Modular Design, Easy to Install

The mainboard is secured to the support bracket to prevent PCB from bending or warping. The three-layer structure consisting of heat spreader, mainboard and baseboard makes it easier to install CPU, memory and HDD, compared with the former TANK series.



Support High-performance Graphics Card

With IEI power board, it can support 3060 and other advanced graphics cards.

Maximum length of graphics card supported: 350mm

*Specified power adapter is required.

NVIDIA 3060

*Support advanced graphics card



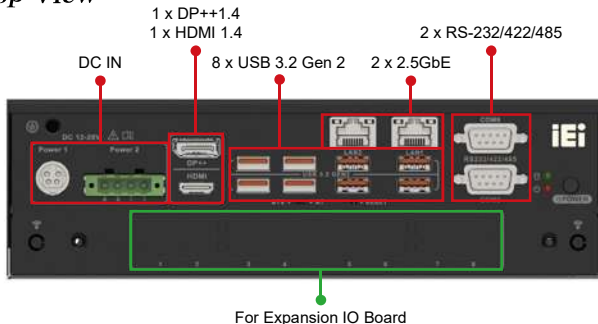
Flexible Expansion

Different expansion requirements can be met. Dual-slot and four-slot SKUs are provided for selection. Customers can choose the type of expansion slot according to their needs.

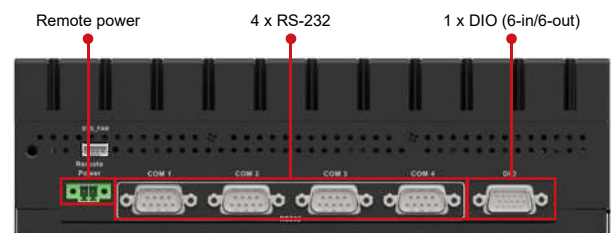


Fully Integrated I/O

Top View

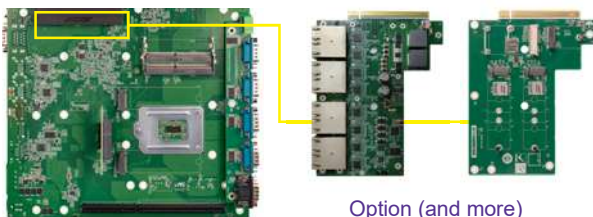


Front View



Modular Board Design

It supports various optional modules, such as M.2 expansion card, 8-port PoE expansion card, etc.



Expansion IO Board

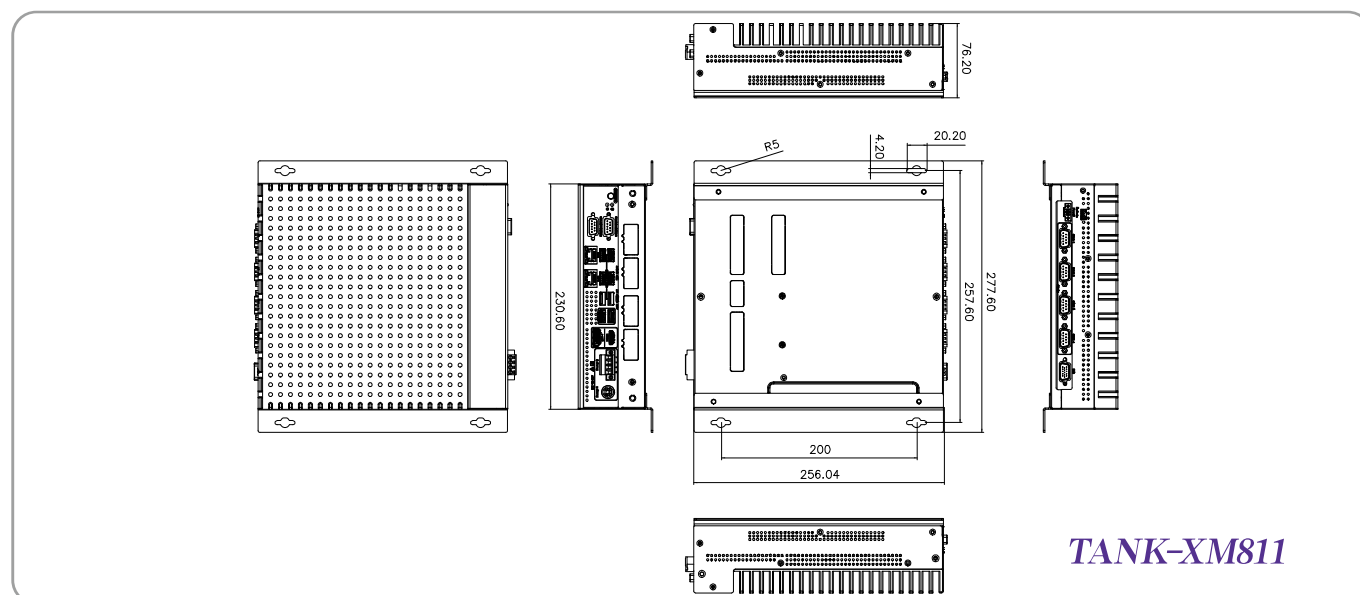
GPOE-XM81-8P-R10	I/O expansion module for TANK 81 series, 8 x 2.5G LAN with PoE
TXIOB-XM81-A-R10	I/O expansion module for TANK 81 series, 2 x M.2 B Key, 1 x M.2 A Key, 1 x PCIe Mini

Support 35W & 65W CPU

Operating temperature:

With 35w CPU (or 65W CPU PL1 & PL2, default 35W):	-20°C ~ 60°C
With 65w CPU:	-20°C ~ 50°C

Dimensions (Unit: mm)



Ordering Information

Model	Description
TANK-XM811-i5AC-R10	Ruggedized Fanless Embedded System with Intel® Core™ i5, 8GB RAM, 1 x HDMI, 1 x DP++, 12~28V DC and RoHS
TANK-XM811-i7AC-R10	Ruggedized Fanless Embedded System with Intel® Core™ i7, 8GB RAM, 1 x HDMI, 1 x DP++, 12~28V DC and RoHS

Options

Part No.	Description
EMB-WIFI-KIT02I3-R10	2T2R M.2 wifi module kit for embedded system, IEEE802.11a/b/g/n/ac/ax, 1 x M.2 AE Key Wireless LAN & Bluetooth 5.2; Intel; AX210; NGWG Module, 2 x RF cable, 2 x Antenna; RoHS
63040-010180-200-RS	Adapter Power; FSP; FSP180-ABAN3; 9NA1804008; Active PFC; Vin: 90~264VAC; 180W; Dim: 75.6*151.3*25.4mm; Plug=6.5mm; Cable=1500mm; Erp(NO LOAD 0.5W); Vout: 19VDC; Din 4Pin/lock; CCL; RoHS
32000-000002-RS	European power cord

Optional Expansion Backplane

Part No.	Description
TXCBP-XM81-2A-R10	Expansion backplane module for TANK 81 Series, 2 slot, 1 x PCIe x16 & 1 x PCIe x4
TXCBP-XM81-2B-R10	Expansion backplane module for TANK 81 Series, 2 slot, 2 x PCIe x8
TXCBP-XM81-4A-R10	Expansion backplane module for TANK 81 Series, 4 slot, 1 x PCIe x16 & 2 x PCIe x4 & 1 x PCIe x1 w/ external power supply
TXCBP-XM81-4B-R10	Expansion backplane module for TANK 81 Series, 4 slot, 2 x PCIe x8 & 2 x PCIe x4 w/ external power supply
TXCBP-XM81-4C-R10	Expansion backplane module for TANK 81 Series, 4 slot, 1 x PCIe x16 & 2 x PCIe x4 & 1 x PCIe x4
TXCBP-XM81-G1-PW-R10	Expansion backplane module for TANK 81 Series, 4 slot, 1 x PCIe x16 & 1 x PCIe x4 w/ external power supply
TXCBP-XM81-G2-PW-R10	Expansion backplane module for TANK 81 Series, 6 slot, 2 x PCIe x8 & 2 x PCIe x4 w/ external power supply
IDD-X1228150-R10*	Extended Power Board for TANK-XM81 Series, 150W DC/DC 12~28V input 12V output

* For expansion cards (graphics cards, accelerator cards) that require independent power supply to provide independent power supply, it must be equipped with a Backplane with W/external power supply function.

Optional Expansion Chassis

Part No.	Description
TXC-XM81-3S-R10	3-slot expansion chassis for TANK 81 Series
TXC-XM81-4S-R10	4-slot expansion chassis for TANK 81 Series
TXC-XM81-G1-R10	One GPU expansion chassis for TANK 81 Series
TXC-XM81-G2-R10	Dual GPU expansion chassis for TANK 81 Series

Optional Internal Expansion Boards

Part No.	Description
GPOE-XM81-8P-R10	I/O expansion module for TANK 81 Series, 8 x 2.5G LAN with PoE
TXIOB-XM81-A-R10	I/O expansion module for TANK 81 Series, 2 x M.2 B Key, 1 x M.2 A Key, 1 x PCIe Mini

Packing List

1 x Screw pack	1 x Power cable	1 x Mounting bracket
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TANK-XM810

- High-Performance 10th /11th Generation Intel® Core™ Processor
- Fanless Embedded Computer

New

Features

- Supported CPUs:
Intel® Core™ i3-10320 3.8 GHz (up to 4.6 GHz, quad-core, 65W TDP)
Intel® Core™ i5-10500TE 2.3 GHz (up to 3.7 GHz, 6-core, 35W TDP)
Intel® Core™ i7-10700TE 2.0 GHz (up to 4.4 GHz, 8-core, 35W TDP)
- 2 x 2.5GbE ports
- Multiple USB ports and serial ports
- Multiple internal expansion boards for flexible selection
- Various optional backplanes and chassis
- CE/FCC compliant

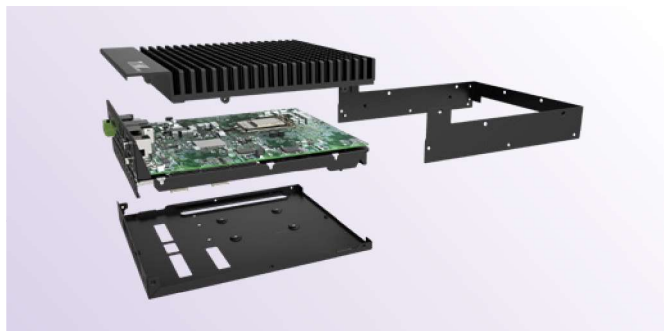


Specifications

Model Name		TANK-XM810
Chassis	Color	Black C
	Dimensions (WxDxH) (mm)	230.6 x 256.04 x 76.2
	System Fan	Fanless
	Chassis Construction	Extruded aluminum alloys
Motherboard	CPU	10/11 th Gen Intel® Core™ CPU TDP 35/65W Intel® Core™ i3-10320 3.8 GHz (up to 4.6 GHz, quad-core, 65W TDP) Intel® Core™ i5-10500TE 2.3 GHz (up to 3.7 GHz, 6-core, 35W TDP) Intel® Core™ i7-10700TE 2.0 GHz (up to 4.4 GHz, 8-core, 35W TDP)
	Chipset	Q470/Q470E
	Memory	2 x SO-DIMM DDR4 2933 MHz (up to 64GB)
Storage	HDD Bay	1 x 2.5" SATA 6Gb/s HDD/SSD bay
I/O Interfaces	Ethernet	2 x RJ-45, 2 x I225V 2.5GbE (colay I225LM)
	USB 2.0	2
	USB 3.2 Gen 2 (10Gb/s)	6
	COM	2 x RS-232/422/485, 4 x RS-232
	Digital I/O	12-bit (6-in/6-out) DB15
	Display Interface	1 x DP++, 1 x HDMI
Internal Expansions	M.2	2 x 2280 M-key (PCIe x2)
	Expansion Backplane	Optional
Power	Power Input	12 ~ 28V DC
	Remote Power	1 x 2-pin
	Power Consumption	12V @ 8A (Intel® Core™ i9-10900TE with 8GB memory)
Reliability	Mounting	Wall mount
	Operating Temperature	-20°C ~ 60°C with air flow (CPU TDP35W & SSD) -20°C ~ 50°C with air flow (CPU TDP65W & SSD), 10% ~ 95% non-condensing
	Storage Temperature	-40°C ~ 85°C, 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 (with SSD)
	Weight (Net/Gross)	3.2/3.5 kg
	Safety / EMC	CE/FCC
	Watchdog Timer	Programmable 1 ~ 255 sec/min
OS	Supported OS	Windows® 10/11 IoT Enterprise/ Linux

Modular Design, Easy to Install

The mainboard is secured to the support bracket to prevent PCB from bending or warping. The three-layer structure consisting of heat spreader, mainboard and baseboard makes it easier to install CPU, memory and HDD, compared with the former TANK series.



Support High-performance Graphics Card

With IEI power board, it can support 3060 and other advanced graphics cards.

Maximum length of graphics card supported: 350mm

*Specified power adapter is required.

NVIDIA 3060

*Support advanced graphics card



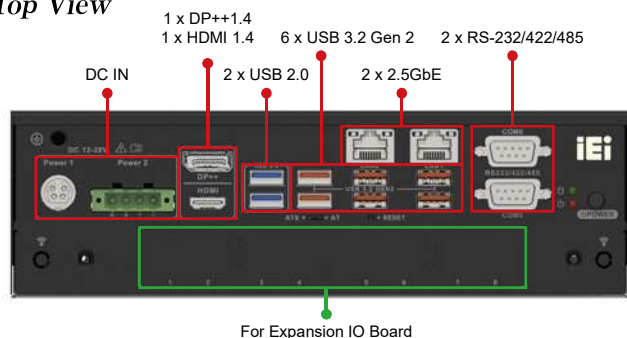
Flexible Expansion

Different expansion requirements can be met. Dual-slot and four-slot SKUs are provided for selection. Customers can choose the type of expansion slot according to their needs.

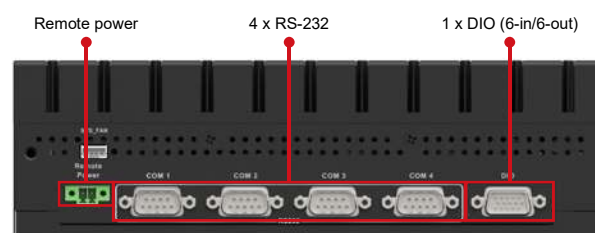


Fully Integrated I/O

Top View

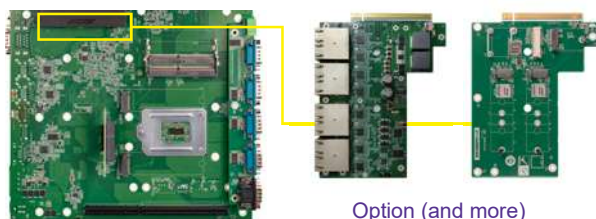


Front View



Modular Board Design

It supports various optional modules, such as M.2 expansion card, 8-port PoE expansion card, etc.



Option (and more)

Expansion IO Board

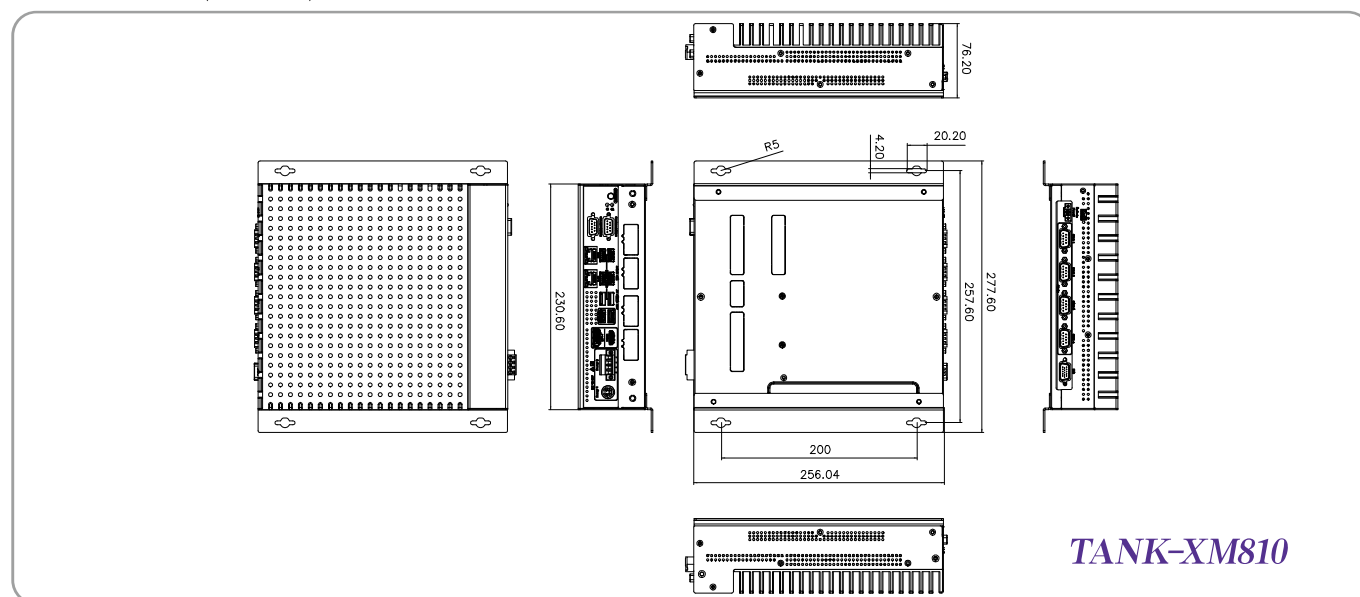
GPOE-XM81-8P-R10	I/O expansion module for TANK 81 series, 8 x 2.5G LAN with PoE
TXIOB-XM81-A-R10	I/O expansion module for TANK 81 series, 2 x M.2 B Key, 1 x M.2 A Key, 1 x PCIe Mini

Support 35W & 65W CPU

Operating temperature:

With 35w CPU (or 65W CPU PL1 & PL2, default 35W):	-20°C ~ 60°C
With 65w CPU:	-20°C ~ 50°C

Dimensions (Unit: mm)



Ordering Information

Part No.	Description
TANK-XM810-i3BC-R10	Ruggedized Fanless Embedded System with Intel® Core™ i3-10320 3.8 GHz, (up to 4.6 GHz, 4-core, TDP 65W), 8GB DDR4 pre-installed memory, 1xHDMI, 1xDP++, 12~28V DC and RoHS
TANK-XM810-i5AC-R10	Ruggedized Fanless Embedded System with Intel® Core™ i5-10500TE 2.3 GHz, (up to 3.7 GHz, 6-core, TDP 35W), 8GB DDR4 pre-installed memory, 1xHDMI, 1xDP++, 12~28V DC and RoHS
TANK-XM810-i7AC-R10	Ruggedized Fanless Embedded System with Intel® Core™ i7-10700TE 2.0 GHz, (up to 4.4 GHz, 8-core, TDP 35W), 8GB DDR4 pre-installed memory, 1xHDMI, 1xDP++, 12~28V DC and RoHS

Options

Part No.	Description
EMB-WIFI-KIT02I3-R10	2T2R M.2 wifi module kit for embedded system, IEEE802.11a/b/g/n/ac/ax, 1 x M.2 AE Key Wireless LAN & Bluetooth 5.2; Intel; AX210; NGWG Module, 2 x RF cable, 2 x Antenna; RoHS
63040-010180-200-RS	Adapter Power; FSP; FSP180-ABAN3; 9NA1804008; Active PFC; Vin: 90~264VAC; 180W; Dim: 75.6*151.3*25.4mm; Plug=6.5mm; Cable=1500mm; Erp(NO LOAD 0.5W); Vout: 19VDC; Din 4Pin/lock; CCL; RoHS
32000-000002-RS	European power cord

Optional Expansion Backplane

Part No.	Description
TXCBP-XM81-2A-R10	Expansion backplane module for TANK 81 Series, 2 slot, 1 x PCIe x16 & 1 x PCIe x4
TXCBP-XM81-2B-R10	Expansion backplane module for TANK 81 Series, 2 slot, 2 x PCIe x8
TXCBP-XM81-4A-R10	Expansion backplane module for TANK 81 Series, 4 slot, 1 x PCIe x16 & 2 x PCIe x4 & 1 x PCIe x1 w/ external power supply
TXCBP-XM81-4B-R10	Expansion backplane module for TANK 81 Series, 4 slot, 2 x PCIe x8 & 2 x PCIe x4 w/ external power supply
TXCBP-XM81-4C-R10	Expansion backplane module for TANK 81 Series, 4 slot, 1 x PCIe x16 & 2 x PCIe x4 & 1 x PCIe x4
TXCBP-XM81-G1-PW-R10	Expansion backplane module for TANK 81 Series, 4 slot, 1 x PCIe x16 & 1 x PCIe x4 w/ external power supply
TXCBP-XM81-G2-PW-R10	Expansion backplane module for TANK 81 Series, 6 slot, 2 x PCIe x8 & 2 x PCIe x4 w/ external power supply
IDD-X1228150-R10*	Extended Power Board for TANK-XM81 Series, 150W DC/DC 12-28V input 12V output

* For expansion cards (graphics cards, accelerator cards) that require independent power supply to provide independent power supply, it must be equipped with a Backplane with W/external power supply function.

Optional Expansion Chassis

Part No.	Description
TXC-XM81-3S-R10	3-slot expansion chassis for TANK 81 Series
TXC-XM81-4S-R10	4-slot expansion chassis for TANK 81 Series
TXC-XM81-G1-R10	One GPU expansion chassis for TANK 81 Series
TXC-XM81-G2-R10	Dual GPU expansion chassis for TANK 81 Series

Optional Internal Expansion Boards

Part No.	Description
GPOE-XM81-8P-R10	I/O expansion module for TANK 81 Series, 8 x 2.5G LAN with PoE
TXIOB-XM81-A-R10	I/O expansion module for TANK 81 Series, 2 x M.2 B Key, 1 x M.2 A Key, 1 x PCIe Mini

Packing List

1 x Screw pack	1 x Power cable
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TANK-880-Q370

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

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

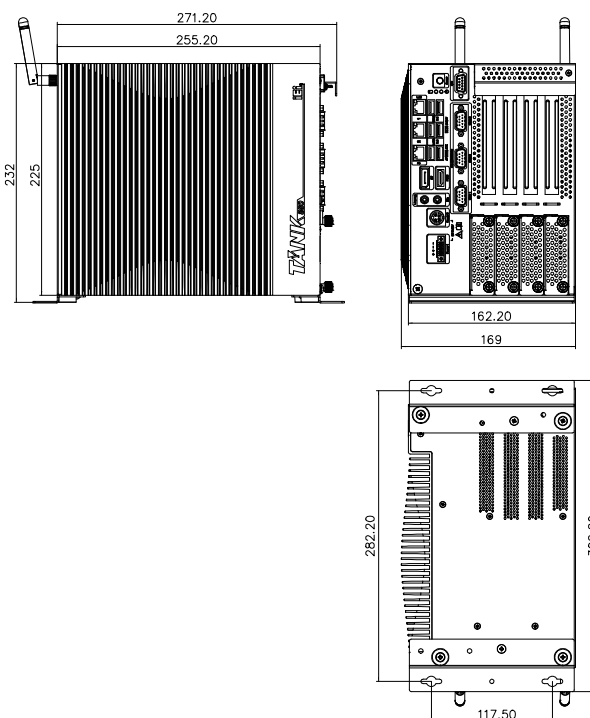
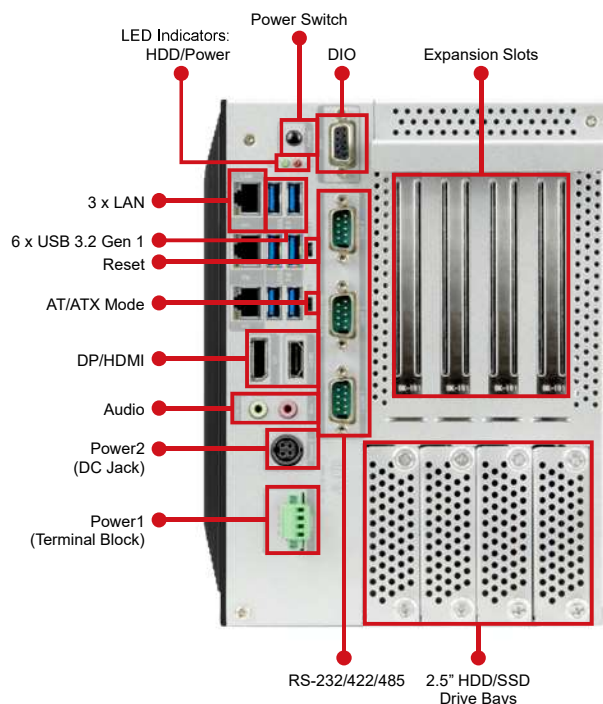


Specifications

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	8 th Gen Intel® Core™ CPU & Intel® Core™ i7-9700TE 1.8 GHz (up to 3.8 GHz, 8-core, TDP 35W) Intel® Core™ i5-9500TE 2.2 GHz (up to 3.6 GHz, 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 Gen 1
	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)
	PCIe Mini	1 x Full-size (PCIe/ USB 2.0/ SATA)
Expansions	M.2	1 x 2230 A-key (PCIe x2/USB 2.0) 2 x 2280 M-key (PCIe x2)
	Backplane	1 x PCIe by 16, 1 x PCIe by 1, 2 x PCIe by 4
	Power Input	DC Jack: 9 ~ 36V DC Terminal Block: 9 ~ 36V DC
Power	Power Consumption	19V @ 5.4A (Intel® Core™ i7-9700TE with 8GB memory)
	Internal Power Output	12V @ up to 10A
	Mounting	Wall mount
Reliability	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
	Supported OS	Microsoft Windows 10 / Windows 11, 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 1.8 GHz, (up to 3.8 GHz, 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 2.2 GHz, (up to 3.6 GHz, 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; 2.412 GHz~2.4835 GHz, 5.15 GHz~5.85 GHz; 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; 2.4-2.5 GHz/5.15-5.85 GHz; REVERSE SMA PLUG; RoHS
RF Cable	32501-004000-100-RS* RF; RF CABLE; LINE DIAMETER: 0.81mm; 250MM; 50Ω; Sparklan; 0-6 GHz; 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 management 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; F129025BUAFW30 aR; AXIAL FAN; WITH FRAME; 73.29CFM; 11.4~12.6V; 44dB; 70000hr; 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
- IEL iRIS-2400 solution

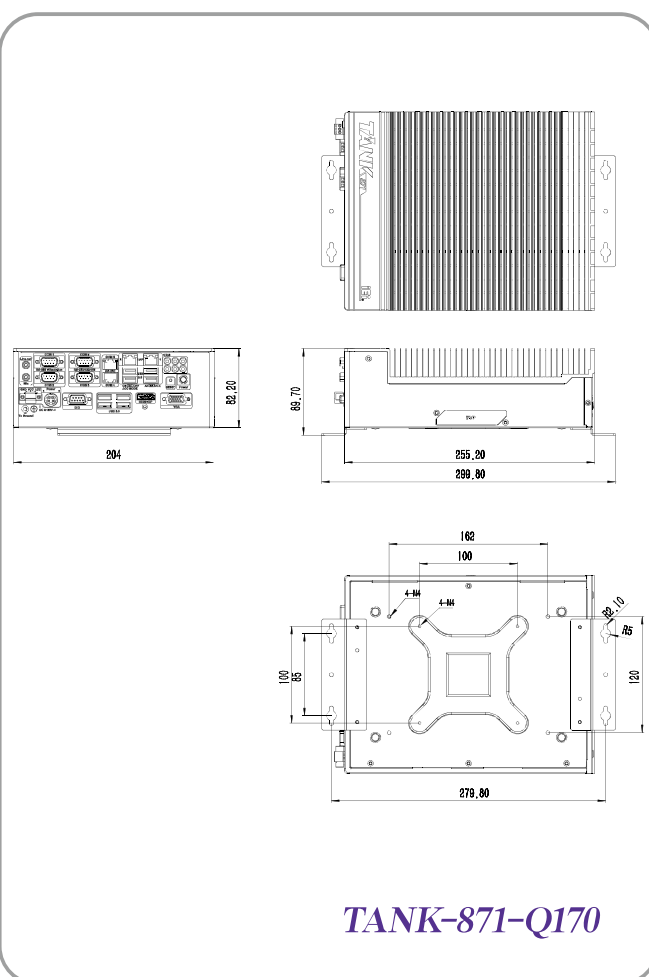
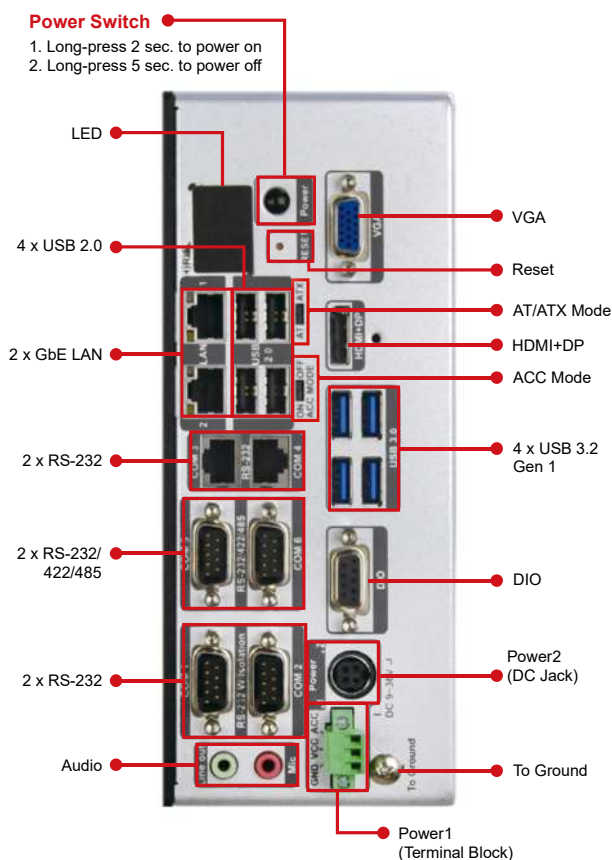


Specifications

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	7 th Gen Intel® Core™ CPU & Intel® Core™ i7-6700TE 2.4 GHz (up to 3.4 GHz, quad-core, TDP 35) Intel® Core™ i5-6500TE 2.3 GHz (up to 3.3 GHz, quad-core, TDP 35)
	Chipset	Intel® Q170
	System Memory	2 x SO-DIMM DDR4 2133 (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)
	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)
Power	Power Input	DC Jack: 9 ~ 36V DC Terminal Block: 9 ~ 36V DC
	Power Consumption	19W@3.68A (Intel® Core™ i7-6700TE with 8GB memory)
Reliability	Mounting	Wall mount
	Operating Temperature/Humidity	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/Humidity	-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 514.6 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)



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 x Antenna, 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

Packing List

1 x Chassis Screw

1 x Mounting Bracket

TANK-870-Q170

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

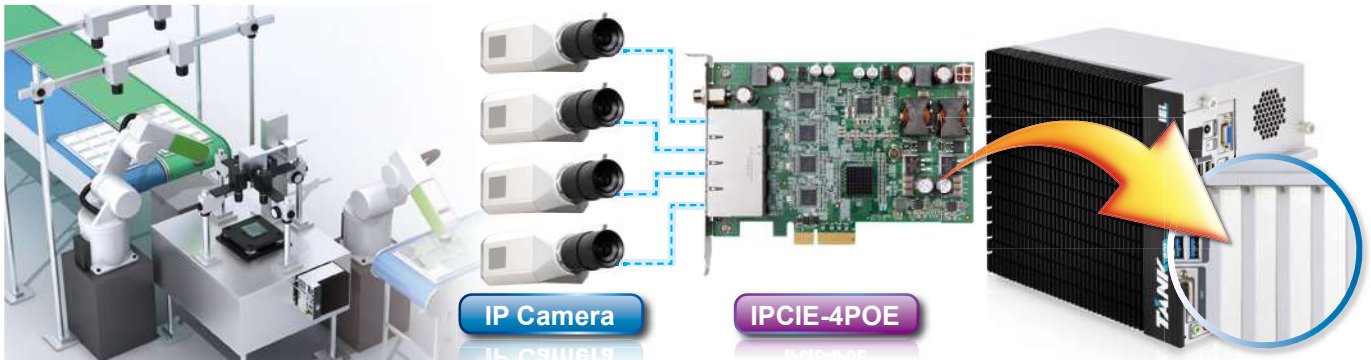
Features

- 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



Smart Choice for Surveillance System

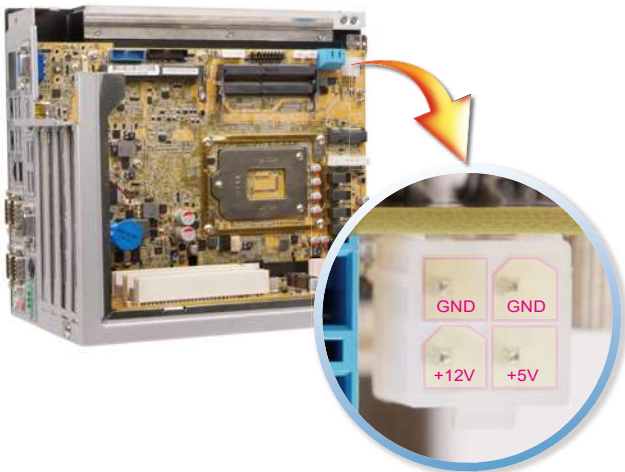
The TANK-870-Q170 integrated with IEI PoE Ethernet port expansion card can be used as a surveillance system for factory and public security. IEI PoE expansion card can support up to four PoE IEEE802.3af ports (max. 15.4 W per port) by PCIe x4.



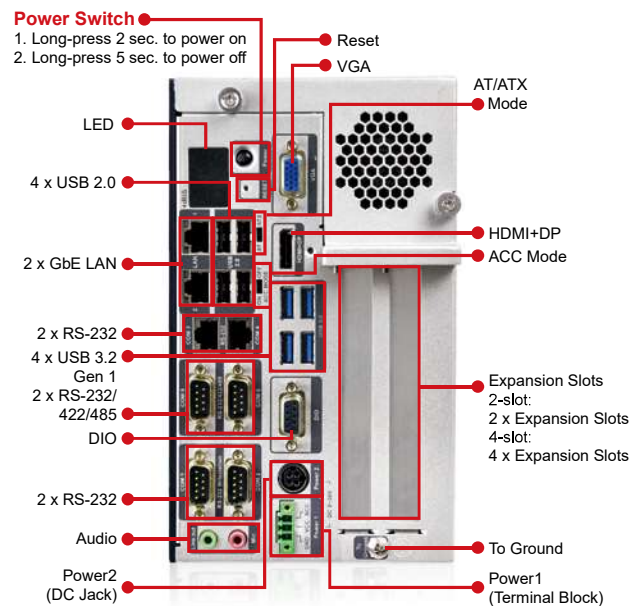
5V@3A or 12V@3A

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	
Slot Type	PCIe x16	PCIe x16	PCIe x16	PCIe x16
Signal	PCIe x8	PCIe x16	PCIe x8	PCIe x8
Slot Type	PCIe x16	PCI	PCI	PCI
Signal	PCIe x8	PCI	PCI	PCI
PCIe Mini	N/A	N/A	1	

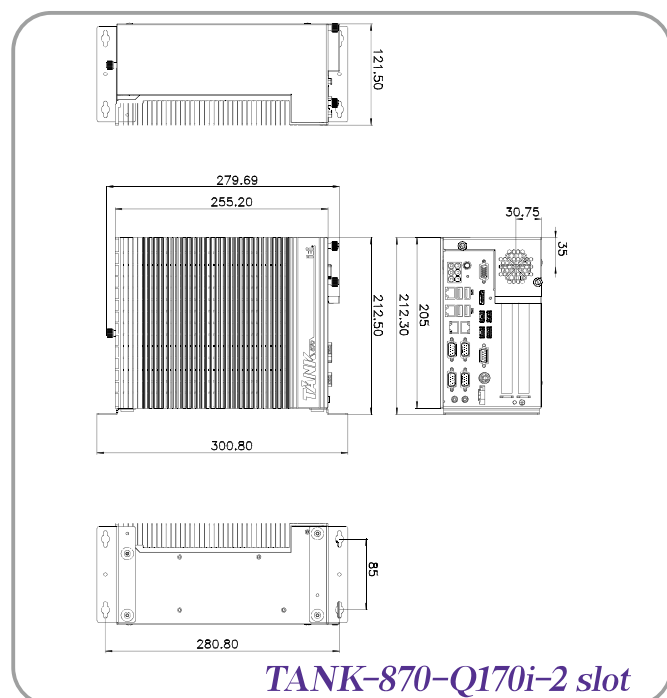
* The expansions described above are provided by the backplanes

Specifications

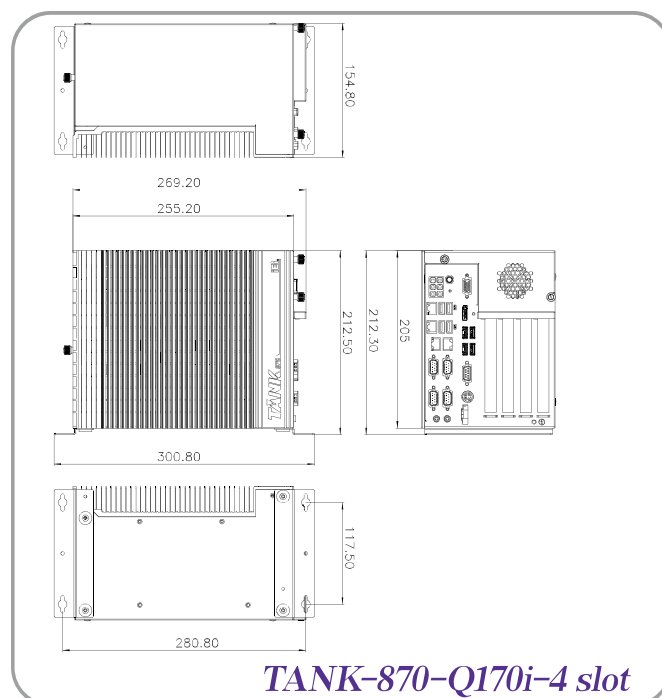
Model Name		TANK-870-Q170
Chassis	Color	Black C + Silver
	Dimensions (WxDxH) (mm)	2-slot: 121.5 x 255.2 x 205 4-slot: 154.8 x 255.2 x 205
	System Fan	Fanless
	Chassis Construction	Extruded aluminum alloys
Motherboard	CPU	7 th Gen Intel® Core™ CPU & Intel® Core™ i7-6700TE 2.4 GHz (up to 3.4 GHz, quad-core, TDP 35) Intel® Core™ i5-6500TE 2.3 GHz (up to 3.3 GHz, quad-core, TDP 35)
	Chipset	Intel® Q170
	System Memory	2 x SO-DIMM DDR4 2133 (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)
Power	Power Input	DC Jack: 9 ~ 36V DC Terminal Block: 9 ~ 36V DC
	Power Consumption	19W@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-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

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=1500m m;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=1500m m;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 RJ-45 to COM Port Cable
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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



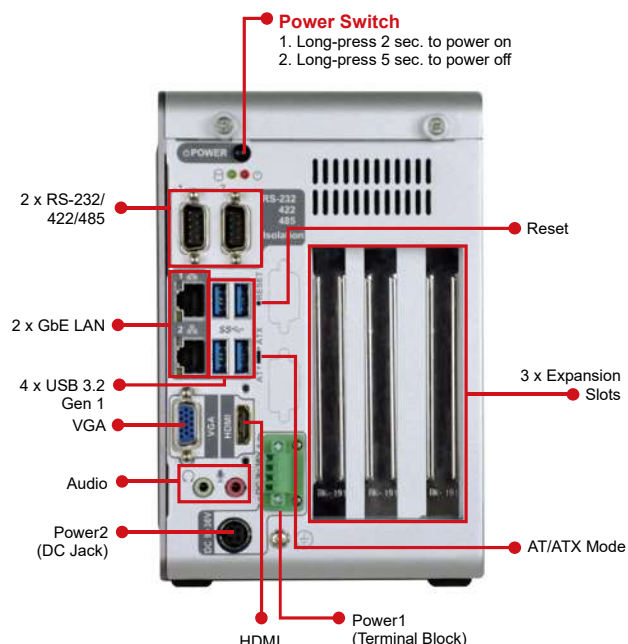
Specifications

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	7 th Gen Intel® Core™ CPU & Intel® Core™ i5-6500TE 2.3 GHz (up to 3.3 GHz, quad-core, TDP 35)
	Chipset	Intel® H110
	System Memory	2 x SO-DIMM DDR4 2133 (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 Gen 1
	Ethernet	2 x RJ-45: 2 x GbE by RTL8119I
	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
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	i5-6500TE -20°C ~ 60°C with air flow (SSD), 10% ~ 95% non-condensing
	Storage Temperature	-40°C ~ 85°C 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

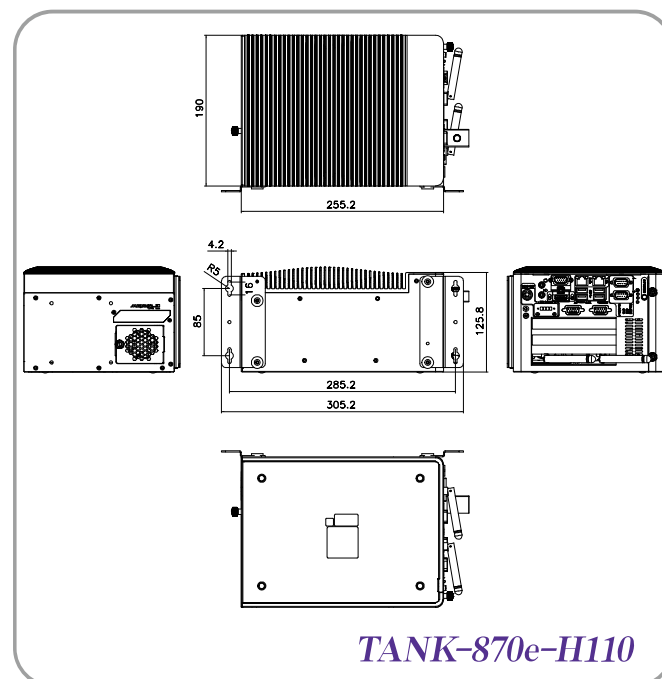
Versatile Expansion Interface

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

Fully Integrated I/O



Dimensions (Unit: mm)



Ordering Information

Part No.	Description
TANK-870e-H110-i5/4G/3A-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 & 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 2.3 GHz, (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

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
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-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-610-BW

Fanless 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



Specifications

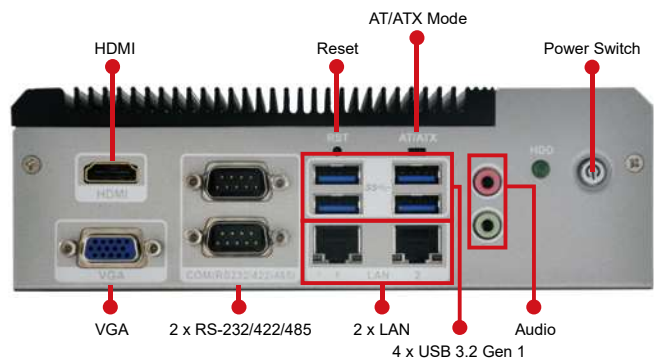
Model Name		TANK-610-BW
Chassis	Color	Black C + Silver
	Dimensions (WxDxH) (mm)	184 x 200.6 x 58.2
	System Fan	Fanless
	Chassis Construction	Extruded aluminum alloy
Motherboard	CPU	Intel® Celeron® N3160 1.6 GHz (up to 2.24 GHz, quad-core, TDP 6W)
	Chipset	SoC
	System Memory	2 x DDR3L SO-DIMM (2GB pre-installed)(up 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

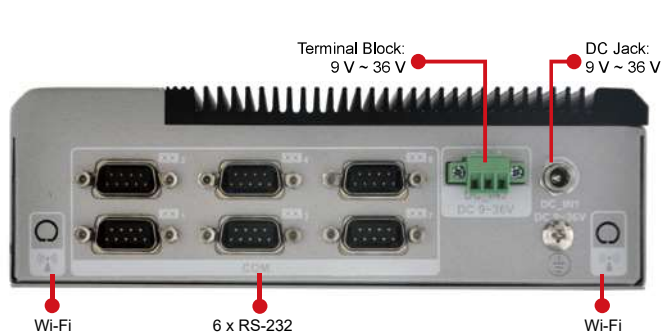


Fully Integrated I/O

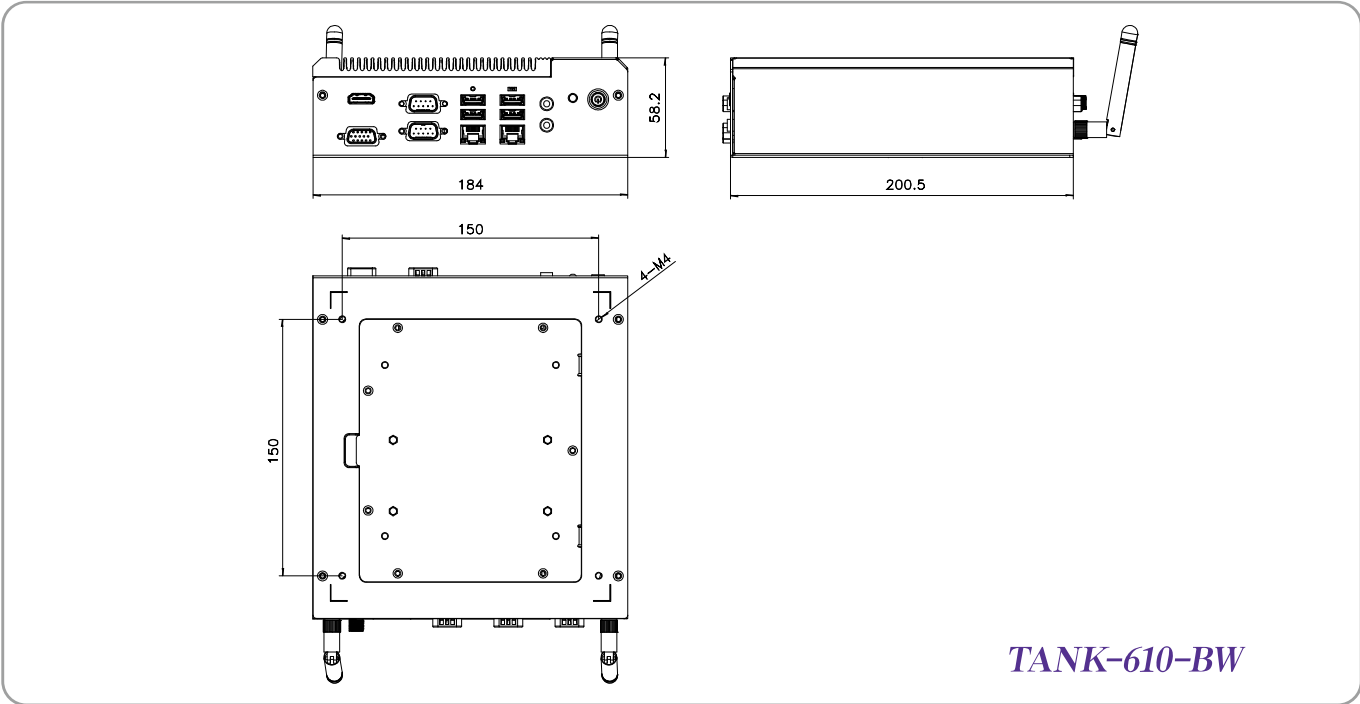
Front View



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 1.6 GHz, (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	