TANK-870-Q170

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

Features

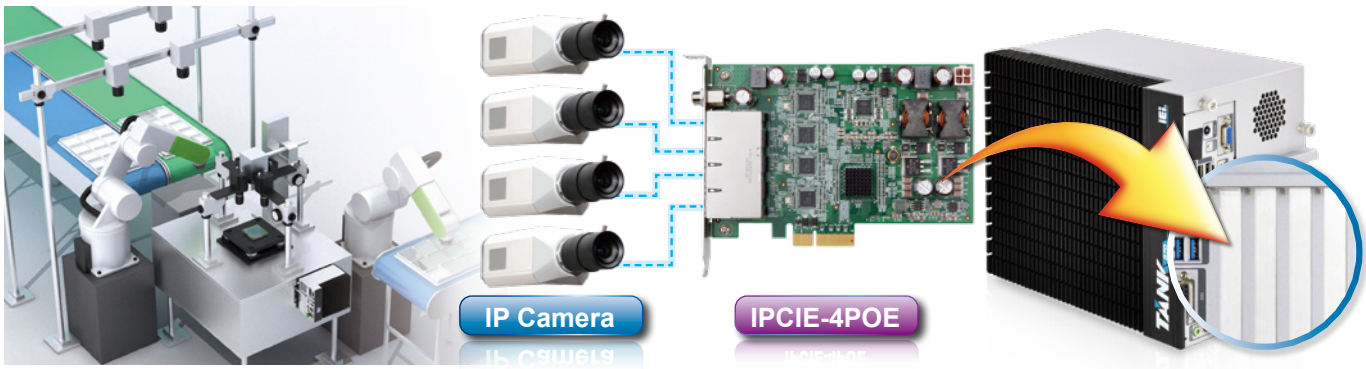
- 6th/7th Gen Intel® Core™ processor platform with Intel® Q170 chipset and DDR4 memory
- Triple independent display with high resolution support
- Rich high-speed I/O interfaces on one side for easy installation
- On-board internal power connector for providing power to add-on cards
- Great flexibility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





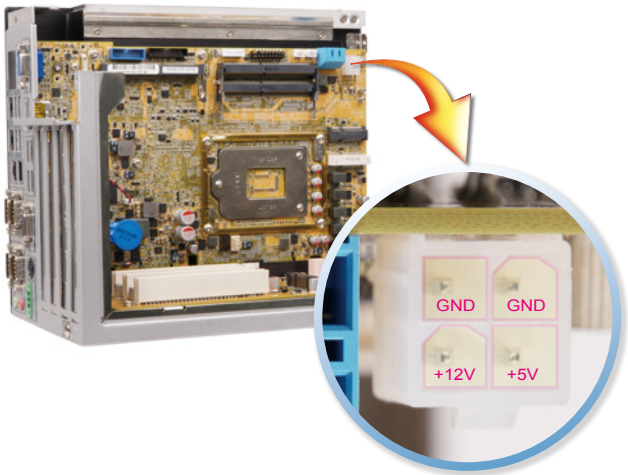
Smart Choice for Surveillance System

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.

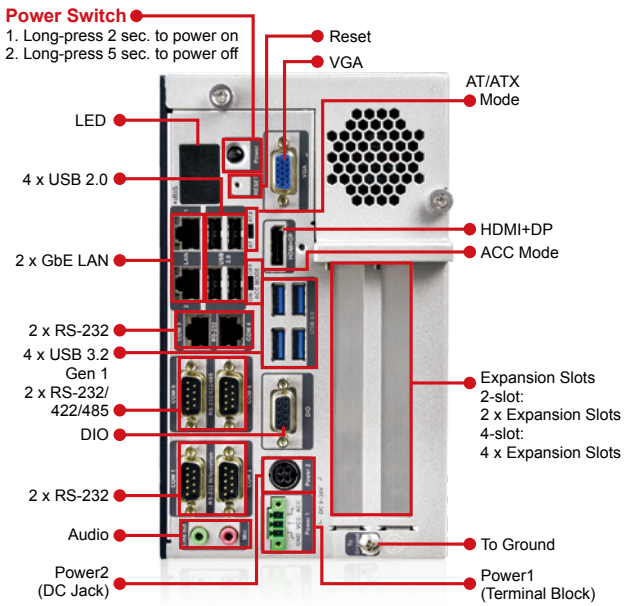


5V@3A or 12V@3A Internal Power Connector

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		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	

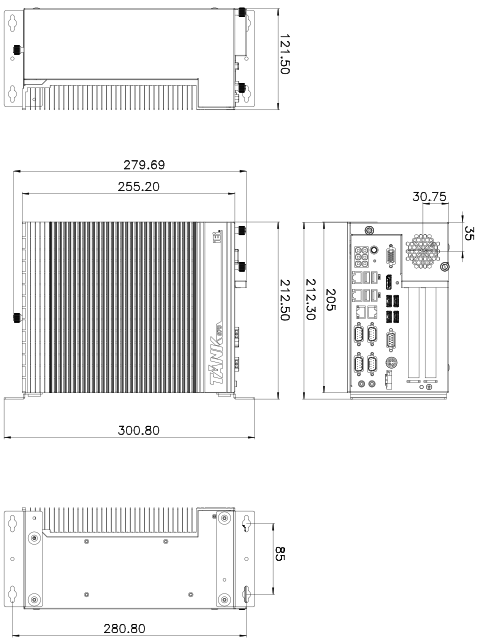
* The expansions described above are provided by the backplanes

Specifications

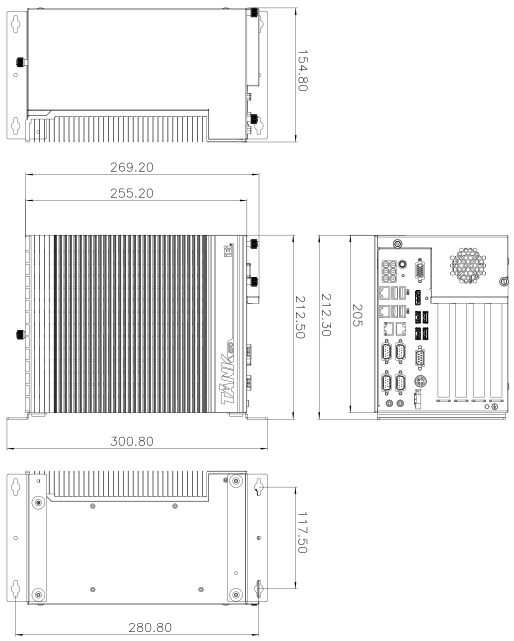
Model Name		TANK-870-Q170
Chassis	Color	Black C + Silver
	Dimensions (WxDxH) (mm)	2-slot: 121.5 x 255.2 x 205 4-slot: 154.8 x 255.2 x 205
	System Fan	Fanless
	Chassis Construction	Extruded aluminum alloys
Motherboard	CPU	7th Gen Intel® Core™ CPU & Intel® Core™ i7-6700TE (2.4 GHz, quad-core, TDP=35W) Intel® Core™ i5-6500TE (2.3 GHz, quad-core, TDP=35W)
	Chipset	Intel® Q170
	System Memory	2 x 260-pin DDR4 SO-DIMM, one 4 GB pre-installed (system max: 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 3.2 Gen 1 (5Gb/s)	4
	USB 2.0	4
	Ethernet	2 x RJ-45 LAN1: Intel® I219LM PCIe controller LAN2 (iRIS): Intel® I210 PCIe controller
	COM Port	4 x RS-232 (2 x RJ-45, 2 x DB-9 w/2.5kV isolation protection) 2 x RS-232/422/485 (DB-9)
	Digital I/O	8-bit digital I/O, 4-bit input / 4-bit output
	Display	1 x VGA 1 x HDMI/DP 1 x iDP (optional)
	Resolution	1 x VGA (Up to 1920 x 1200@60Hz) 1 x HDMI/DP (Up to 3840x2160@30Hz / 4096×2304@60Hz)
	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	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)
	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 V ~ 36 V DC Terminal Block: 9 V ~ 36 V DC
	Power Consumption	19 V@3.68 A (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
	Operating Vibration	MIL-STD-810G 514.6 C-1 (with 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