

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



IP Camera

IPCIE-4POE

Power Switch

- Long-press 2 sec. to power on
- Long-press 5 sec. to power off

- LED
- 4 x USB 2.0
- 2 x GbE LAN
- 2 x RS-232
- 4 x USB 3.0
- 2 x RS-232/422/485
- DIO
- 2 x RS-232
- Audio
- Power2 (DC Jack)
- Reset
- VGA
- AT/ATX Mode
- HDMI+DP
- ACC Mode
- Expansion Slots
2-slot:
2 x Expansion Slots
4-slot:
4 x Expansion Slots
- To Ground
- Power1 (Terminal Block)

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	Intel® Core™ i7-6700TE (2.4 GHz, quad-core, TDP=35) Intel® Core™ i5-6500TE (2.3 GHz, quad-core, TDP=35)
	Chipset	Intel® Q170
	System Memory	2 x 260-pin DDR4 SO-DIMM, one 4 GB pre-installed (system max: 64GB)
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 3.0	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	VGA: Up to 1920 x 1200@60Hz HDMI/DP: Up to 4096x2304@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 pin header (2 x 10 pin)
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 Mni 4-slot model: 1 x PCIe x16, 3 x PCI, 1 x Full-size PCIe Mni
	PCIe Mini	1 x Half-size PCIe Mini slot 1 x Full-size PCIe Mini slot (supports mSATA, colay with 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
OS	Supported OS	Microsoft® Windows® 8 Embedded, Microsoft® Windows® Embedded Standard 7 E, Microsoft® Windows® 10 IoT Enterprise

1

Industrial
Computing
Solutions

2

Video
Capture
Solutions

3

Industrial
System

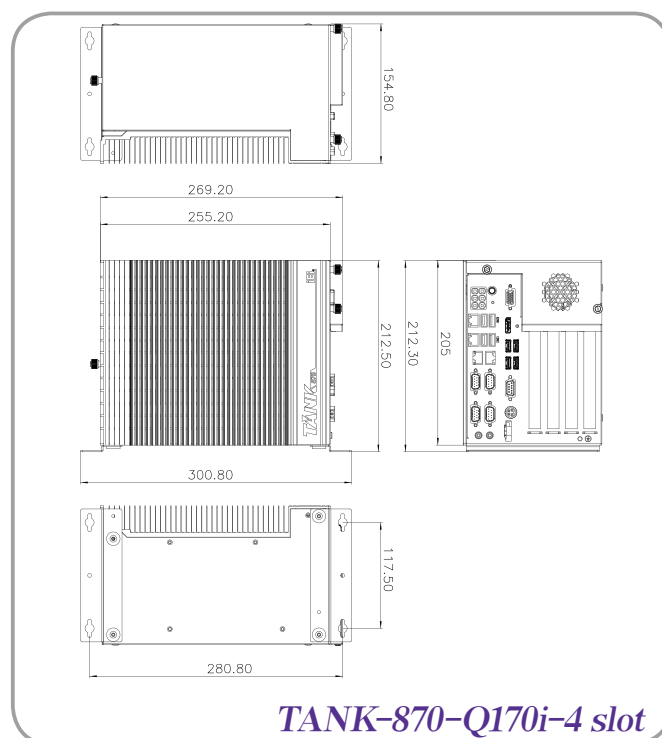
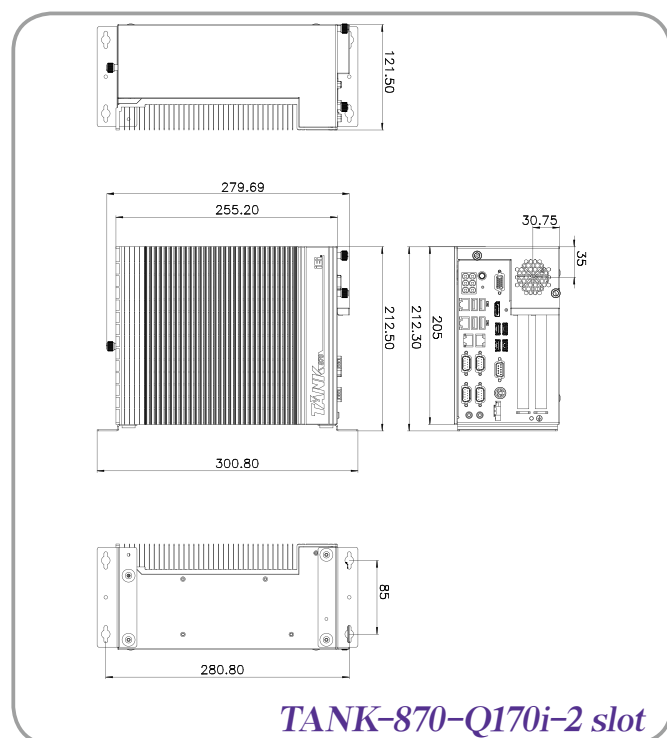
4

Industrial
Computer
Chassis

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Power Supply/
Peripherals

Dimensions (Unit: mm)



Ordering Information

Part No.	Description
TANK-870-Q170i-i5/4G/2A-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, 2 x PCIe by 8 expansion, VGA/HDMI+DP/iDP, iRIS-2400 optional, 9~36V DC, RoHS
TANK-870-Q170i-i5/4G/2B-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, 1 x PCIe by 16 & 1 x PCI expansion, VGA/HDMI+DP/iDP, iRIS-2400 optional, 9~36V DC, RoHS
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TANK-870-Q170i-i7/4G/2A-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, 2 x PCIe by 8 expansion, VGA/HDMI+DP/iDP, iRIS-2400 optional, 9~36V DC, RoHS
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TANK-870-Q170i-i7/4G/4A-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, 2 x PCIe by 8 & 2 x PCI expansion, VGA/HDMI+DP/iDP, iRIS-2400 optional, 9~36V DC, RoHS
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Options

Part No.	Description
32702-000400-200-RS	European power cord
63040-010120-210-RS	Power adapter, FSP120-ABN2, 9NA1205302, Active PFC, Vin:90~264VAC, 120W, plug=6.5mm, cable=1500mm, Erp (no load 0.15W), Vout:19VDC, 4-pin DIN with lock, CCL, RoHS
19Z00-000605-00-RS	Fan, +12V DC, 4-pin, 40 mm x 40 mm x10 mm, 6500RPM, RoHS
iRIS-2400-R10	IPMI 2.0 adapter card with AST2400 BMC chip for DDR3 SO-DIMM socket interface
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
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)
IPCI-E4POE-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

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

Packing List

1 x Utility CD	1 x Chassis Screw	1 x One Key Recovery CD	1 x Mounting Bracket
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Industrial
Computing
Solutions

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Video
Capture
Solutions

3

Industrial
System

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Industrial
Computer
Chassis

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Power Supply/
Peripherals