

TANK-700-QM67 | Intel® 2nd Gen Core™ Mobile Processor

High Performance Fanless Embedded System with 2nd Generation Intel® Mobile Core™ i7/i5/i3 or Celeron® Processor

Combo Gigabit LAN (SFP/Fiber/RJ-45)

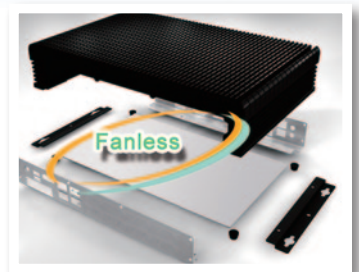


- 2nd Gen Intel® mobile Core™ i7/i5/i3 or Celeron® processor
- Intel® HD graphics supports H.264/AVC-MPEG2/VC1, DirectX 10.1 and OpenGL 3.0
- Built-in 2GB DDR3 memory and one DDR3 SO-DIMM slot (max. 8GB)
- Dual combo (10/100/1000 baseT(X) or 1000 baseSFP slot) Gigabit LAN ports, supporting Intel® AMT 7.0
- Supports 8-channel audio/video capture and dual display by VGA/HDMI
- Supports two USB 3.0 ports, four USB 2.0 ports, one SATA 6Gb/s port, one CAN-bus port and eight COM ports (four with isolation)
- Dual-band 2.4/ 5GHz 802.11a/b/g/n 3T3R MIMO Wi-Fi for high speed wireless transmission
- Redundant dual DC power input (9V~36V)
- CAN-bus interface with isolation
- Extended temperature fanless design supports -20°C ~ 70°C



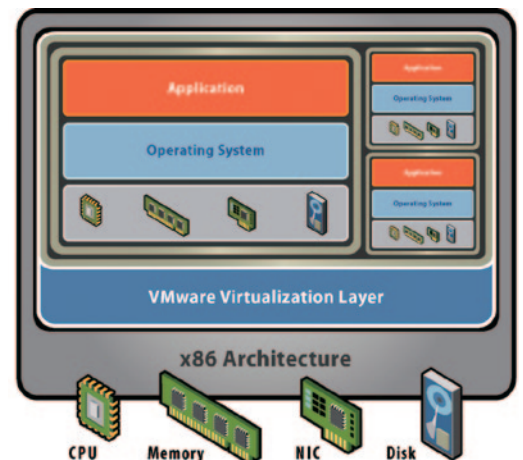
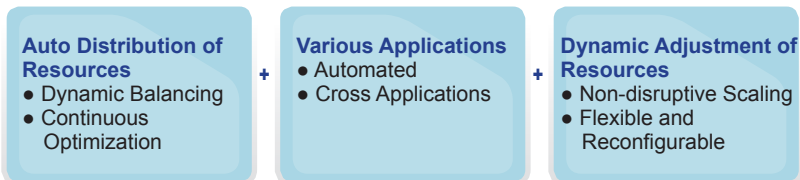
Fanless Solution

TANK-700 focuses on the best components that generate less heat, but maintain high system performance. With the fanless design, TANK-700 reduces the system failure caused by fans and extends the lifetime of the device.



Intel® Virtualization Technology

Intel® Virtualization Technology (Intel® VT) allows multiple, independent operating systems to run simultaneously on a single system. This entire "package" of virtual hardware - CPU, memory, NIC, OS and application are not hardware, is turned into a single software file. therefore can be manipulated with ease of file copy and paste. Intel® VT bring an entirely new level of efficiency and flexibility to the IT environments.





High Performance



Performance Leadership

- Desktop Intel® Core™ i7/i5/i3 + Q67
- Mobile Intel® Core™ i7/i5/i3 + QM67

Graphics and Media

- Integrated 3D graphics performance
- Enhanced graphics engine
- Enhanced media encode/decode
- New AVX instruction set

Advanced Technologies and I/O

- USB data lock
- PCI Express Gen2 speed

Scalability & Power Efficiency

- Less power consumption for improved thermal management

Super Speed USB 3.0 & SATA 3.0



USB 3.0

USB 3.0

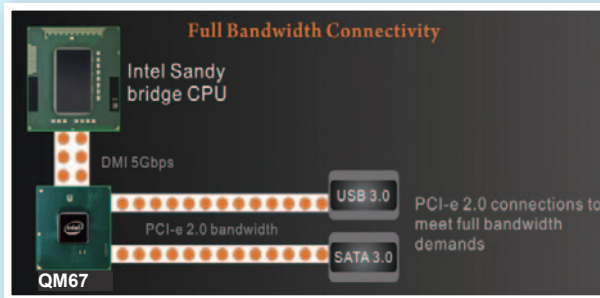
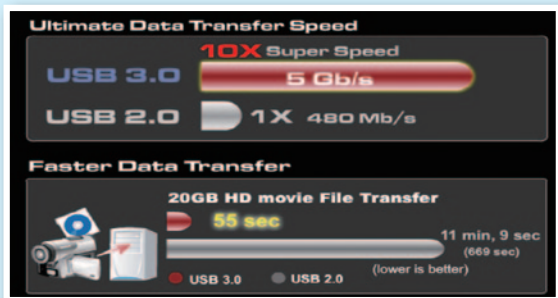
- The SuperSpeed USB 3.0 supports a data transfer rate that is up to 10 times faster than USB 2.0 with optimized power efficiency.
- USB 3.0 is backwards compatible with the USB 2.0 components.



SATA 6Gb/s

SATA 3.0

- SATA 6Gb/s is suitable for tasks that require high performance to memory capability, such as video editing.
- SATA 6Gb/s provides an easy upgrade path for high-bandwidth applications, such as RAID.



Fast Network Communication

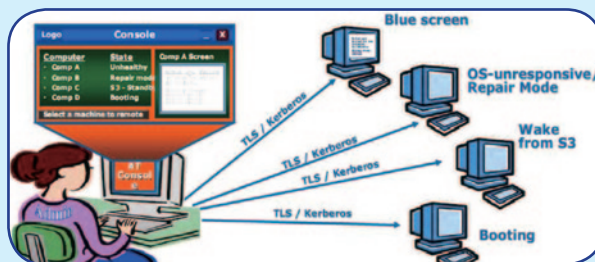
Dual Combo (SFP Fiber/RJ-45) Gigabit LAN

TANK-700 adopts dual combo (SFP Fiber/RJ-45) Gigabit LAN designed for long-distance network. It is applied in actual longer distance network environment that the Ethernet cable can not be covered.



Intel® 82579 PHY with Intel® iAMT 7.0 supported

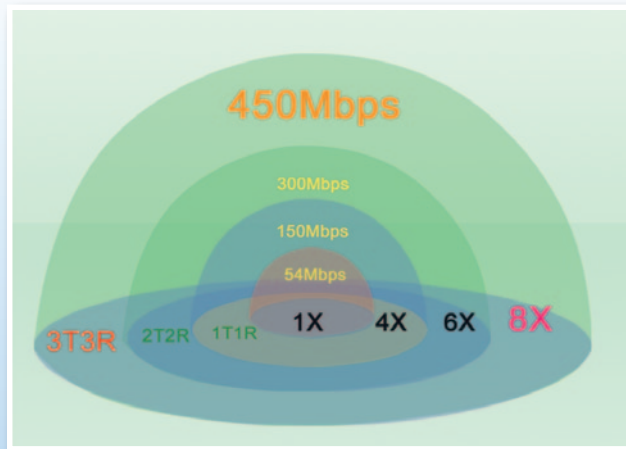
Basing on the Intel® Core™ i7/i5/i3 hardware architecture, Intel® 82579 PHY Gigabit chipset and Intel® Active Management Technology 7.0 (iAMT 7.0), IEI develops the iEZman program, allowing user to remotely control devices and perform administrative tasks, such as wake on LAN, access, diagnostic and power on/off.





Dual-Band 2.4/ 5 GHz Wi-Fi 802.11 a/b/g/n 3T3R MIMO Design

TANK-700 is equipped with a Wi-Fi module supporting dual-band 2.4/5GHz 802.11a/b/g/n 3T3R MIMO technology which ensures an uninterrupted wireless connection and provides up to 450Mbps wide bandwidth operation.

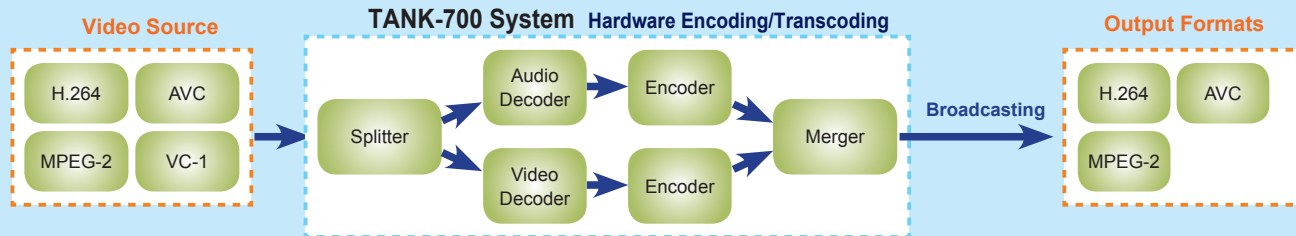


Strong Video Capability

Intel® Sandy Bridge CPU with integrated GPU

With the DirectX 10.1/OpenGL 3.0/Full MPEG-2/WMV (VC-1)/H.264 (AVC) Hardware Encoding/Transcoding Technology, the TANK-700 makes the media transcoding process more efficient and allows for easier broadcasting.

Transcoding Progress Flow



Dual Display Connection via VGA/HDMI

Allows second display connection to extend or duplicate your content.

- VGA supports resolution up to 2048×1536@75Hz, 32 bit
- HDMI supports resolution up to 1920×1200@60Hz.



8-Channel Audio/Video Capture Solution



With an H.264 codec, the TANK-700 is capable of compressing and decompressing full HD (1920x1080) video in real-time without increasing the CPU loadings. By supporting real-time recording, previewing, and HD video transmission through surveillance devices, the TANK-700 is suitable for intelligent monitoring system and transportation intelligent scheduling system solutions.



2 x 4-channel audio/video capture (Optional)

Except the audio/video capture cards, TANK-700 can also be extended with other PCIe Mini cards by demands, such as 3G and GPS.

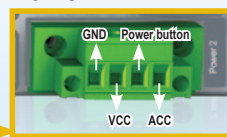




Redundant Dual DC Power Input

TANK-700 adopts redundant dual DC power input design, which ensures uninterrupted power supply to the system and eliminates the risk of sudden shutdown and data loss, even if one power is unavailable or low voltage capacity is present.

Power1



- System power can switch between Power 2 and Power 1 automatically when a 12 V power adapter is being connected to Power 2 and the power input of Power 1 is from 9 V to 16 V. If Power 2 is unplugged and the power input of Power 1 is over 16 V, system power will switch to Power 1 automatically. However, the system remains using the power source from Power 1 even if Power 2 is re-plugged.

- System power can switch between Power 2 and Power 1 automatically when a 19 V power adapter is being connected to Power 2 and the power input of Power 1 is from 9 V to 26 V. If Power 2 is unplugged and the power input of Power 1 is over 26 V, system power will switch to Power 1 automatically. However, the system remains using the power source from Power 1 even if Power 2 is re-plugged.

Power2



10.5V~36V DC Adapter

Isolation Protection

4 COM Ports with Isolation

COM with isolation

1. Isolated protection voltage 2500V/min DC protection
2. Common-mode transient immunity >25 kV/μs ESD protection



CAN-bus interface with Isolation

Controller–area network (CAN or CAN-bus) is a vehicle bus standard designed to communicate or detect errors with each other within a vehicle, industrial automation and medical equipment. This drastically reduces the chance of data loss and ensures system reliability and is suitable for intelligent networking I/O devices such as sensors or actuator of machines or plants.



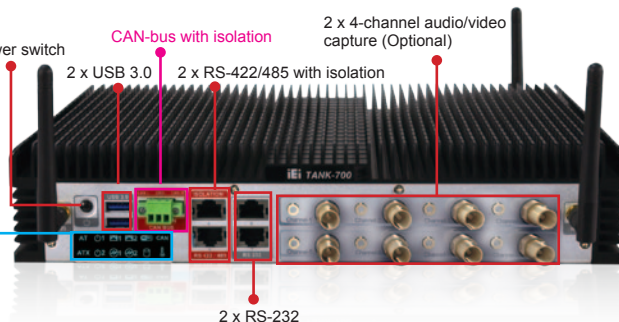
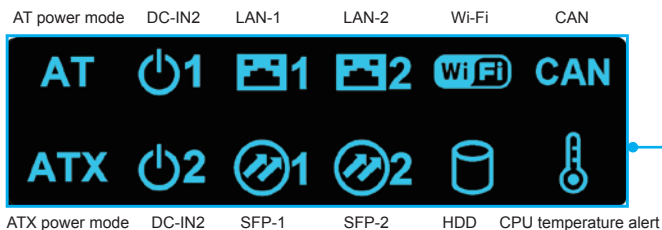
CAN-bus with isolation

1. Isolated protection voltage 2500V/min DC protection
2. Typical transient immunity 50 kV/ms ESD protection

Fully Integrated I/O

Power switch and LED

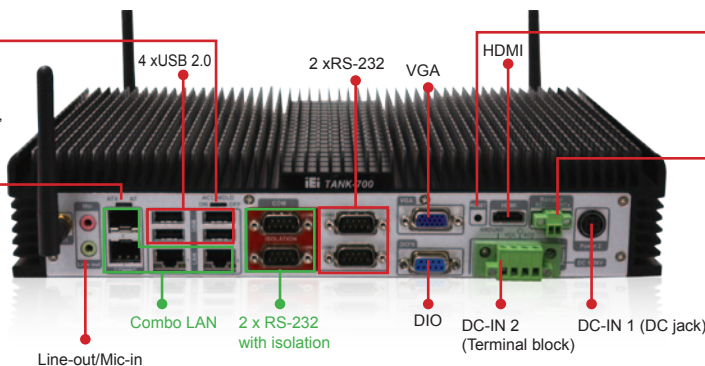
1. Long-press 3 sec. to power on
2. Long-press 6 sec. to power off



ACC on/off
ACC on mode is designed for vehicle application, Use ACC signal to control power on/off



AT/ATX mode
Users can select suitable mode according to application



Reset
The reset button forces the system to be reset when system hangs up.



Remote control
Users can power on/off the system by inputting low or high voltage into the terminal block
High (2V~5V): Power off
Low (<0.4V): Power on

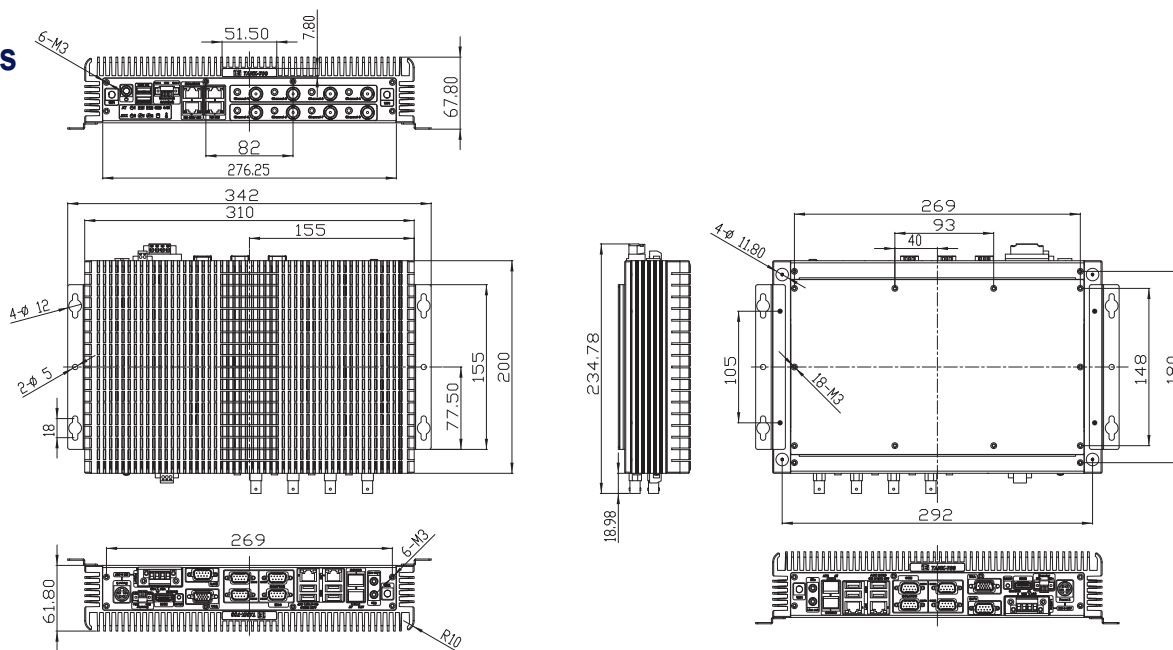


Specifications

Model Name		TANK-700-QM67
Chassis	Color	Black C + Silver C
	Dimensions	310 mm x 200 mm x 62 mm
	Chassis Construction	Extruded aluminum alloy Heavy duty steel sheet
Motherboard	CPU	2nd Generation Intel® mobile Core™ i7/i5/i3 or Celeron® processor
	Chipset	Intel® QM67
	Ethernet	Intel® 82579 PHY with Intel® AMT 7.0 supported Intel® 82583V Ethernet controller
	Memory	1 x 204-pin 1066/1333 MHz dual-channel DDR3 SDRAM DIMM slot (system max. 8GB) On-board 2GB DDR3 memory
Storage	SATA	SATA 6Gb/s with 2.5" HDD/SSD support
System Function	USB	2 x USB 3.0 on front side 4 x USB 2.0 on rear side
	Ethernet	2 x Combo (SFP Fiber / RJ-45) Gigabit LAN
	RS-232	4 x DB-9 on rear side 2 x RJ-45 with isolation on front side
	RS-422/485	2 x RJ-45 with isolation on front side
	Display	1 x VGA 1 x HDMI
	Resolution	Up to 2048 x 1536 @ 75Hz (VGA), 1920 x 1200 @ 60Hz (HDMI)
	Audio	1 x Mic-in, 1 x Line-out
	CAN-bus	1 x Phoenix terminal block on front side
	Audio/Video Capture	Optional 4-channel audio/video input PCIe Mini card (up to two cards)
	Interior Expansions	3 x PCIe Mini slots
Power	Power Adapter	90W power adapter Input: 100VAC~240VAC, 50/60Hz Output: 19V DC
	Power Supply	Redundant dual DC input Power 1: 9V (+/-3%) ~ 36V Power 2: 10.5V (+/-3%) ~ 36V
	Power Consumption	19V@3.3A (Intel® Core™ i5-2540M processor with 4GB DDR3 memory)
Reliability	Mounting	Desktop, wall mount
	Operating Temperature	-20°C ~ 70°C, 5% ~ 95%, non-condensing
	Storage Temperature	-30°C ~ 80°C
	Operating Shock	Half-sine wave shock 5G, 11ms, 3 axis
	Operating Vibration	Meet MIL-STD-810F 514.5C-2 (with SSD)
	Weight (Net/Gross)	3.8Kg / 6.54Kg

Dimensions

(Unit: mm)



Ordering Information

Part No.	Description	
TANK-700-QM67C/2G-R10	Fanless embedded system, 2 GB DDR3 memory, 8-channel capture card, VGA/HDMI, USB 3.0, SATA 3.0, SFP Fiber, Isolated CAN, Audio, 9V-36V DC input, -20°C~70°C, R10	
TANK-700-QM67/2G-R10	Fanless embedded system, 2GB DDR3 memory, VGA/HDMI, USB3.0, SATA 3.0, SFP Fiber, Isolated CAN, Audio, 9V-36V DC input, -20°C~70°C, R10	
TANK-700-QM67W/C/2G-R10	Fanless embedded system, 2GB DDR3 memory, 8-channel capture card, VGA/HDMI, USB 3.0, SATA3.0, SFP Fiber, 3T3R 802.11 a/b/g/n wireless, Isolated CAN, Audio, 9V-36V DC input, -20°C~70°C, R10	
TANK-700-QM67W/2G-R10	Fanless embedded system, 2GB DDR3 memory, VGA/HDMI, USB3.0, SATA 3.0, SFP Fiber, 3T3R 802.11 a/b/g/n wireless, Isolated CAN, Audio, 9V-36V DC input, -20°C~70°C, R10	
CPU Selection	CPU-MB-i7-2640M	2nd Generation Intel® Core™ i7 Processor [Mobile], PPGA-988, dual core 2.8GHz, 35W, iAMT
	CPU-MB-i5-2510E	2nd Generation Intel® Core™ i5 Processor [Mobile], PPGA-988, dual core 2.5GHz, 35W, iAMT
	CPU-MB-i3-2310M	2nd Generation Intel® Core™ i3 Processor [Mobile], PPGA-988, dual core 2.1GHz, 35W
	CPU-MB-CM-B840	Intel® Celeron® Mobile Processor, PPGA-988, dual core 1.9GHz,35W
	CPU-MB-CM-B710	Intel® Celeron® Mobile Processor, PPGA-988, single core 1.6GHz,35W
Memory Selection	DDR3-SO-1333-2GB	SO-DIMM DDR3 1333MHz 2GB
	DDR3-SO-1333-4GB	SO-DIMM DDR3 1333MHz 4GB
	DDR3-SO-1333-8GB	SO-DIMM DDR3 1333MHz 8GB

Options

Options	P/N	Description
Gigabit Ethernet SFP Module	SFP1G-SX/-I	1Gbps SFP optical transceiver, multi-mode / 550m, 850nm (0°C ~ 70°C) /industrial grade (-20°C ~ 85°C)
	SFP1G-MLX/-I	1Gbps SFP optical transceiver, multi-mode / 2Km, 1310nm (0°C ~ 70°C) /industrial grade (-40°C ~ 85°C)
	SFP1G-LX10/-I	1Gbps SFP optical transceiver, single-mode / 10Km, 1310nm (0°C ~ 70°C) /industrial grade (-40°C ~ 85°C)
	SFP1G-ZX70/-I	1Gbps SFP optical transceiver, single-mode / 70Km, 1550nm (0°C ~ 70°C) /industrial grade (-40°C ~ 85°C)
Fiber Cord	FPC-LCLC-MM3M	Optical connector LC/LC, multi-mode, diameter 62.5/125 μm, length 3m
Fiber Cord	FPC-LCLC-SS3M	Optical connector LC/LC, single-mode, diameter 9/125 μm, length 3m
OS: Win CE 6.0 (CD-ROM)	TANK-700-QM67-CE060-R10	OS Image with WINCE 6.0, For TANK-700 QM67 Series, with CD-ROM, RoHS
OS: Win XPE (CD-ROM)	TANK-700-QM67-XPE-R10	OS Image with XPE, for TANK-700 QM67 Series, with CD-ROM, RoHS
OS: Linux (CD-ROM)	TANK-700-QM67-LNX-R10	OS Image with Linux for TANK-700 QM67, Debian operation system, Kernel version 2.6.26, with CD-ROM, RoHS
OS: Win 7 Embedded (CD-ROM)	TANK-700-QM67-WES7E-R10	OS Image with Windows Embedded Standard 7 E, for TANK-700 QM67 Series, with CD-ROM, RoHS

Packing List

Item	P/N	Q'ty	Description
Utility CD	7B000-000740-RS	1	drivers and user manual
One Key Recovery CD	7B000-000724-RS	1	
Power Adapter	63040-010090-020-RS	1	
Power Cord	32702-000401-100-RS	1	1500 mm, European Standard
RJ45 to DB9 COM Port Cable	32005-000200-200-RS	4	
Chassis Screw	44013-030041-RS	8	M3*4 chassis screws for backup
Mounting Brackets	41020-0163J4-00-RS	2	
Mounting Brackets Screw	44003-030062-RS	8	M3*6 mounting bracket screws
Wi-Fi Antenna (for Wi-Fi module only)	32505-000900-100-RS	3	External antenna
Pluggable DC-in Terminal Block	33502-000055-RS	1	4-pin
Pluggable CAN-bus Terminal Block	33502-000007-RS	1	3-pin
Pluggable Remote Control Terminal Block	33101-000422-RS	1	2-pin