

# TANK-700-QM67 720-Q67

- Intel® 2nd Gen Core™ Mobile Processor
- Intel® 2nd Gen Core™ Desktop Processor

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

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



## Features

- 2nd Gen Intel® Core™ i7/i5/i3 or Celeron® mobile processors for TANK-700  
2nd Gen Intel® Core™ i5/i3 Pentium® and Celeron® desktop processors for TANK-720
- Intel® HD graphics supports H.264/AVC-MPEG2/VC1, DirectX 10.1 and OpenGL 3.0
- On-board 2GB DDR3 memory and one DDR3 SO-DIMM slot (system max. 10 GB)
- Dual combo (10/100/1000 BASE-T(X) or 1000 baseSFP slot RJ-45 port) Gigabit LAN ports, supporting Intel® AMT 7.0
- Supports 8-channel audio/video capture and dual display by VGA and HDMI
- Dual-band 2.4/5 GHz 802.11a/b/g/n 3T3R MIMO Wi-Fi for high speed wireless transmission



## 8-Channel Audio/Video Capture Solution

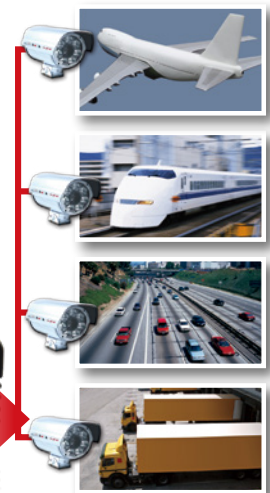
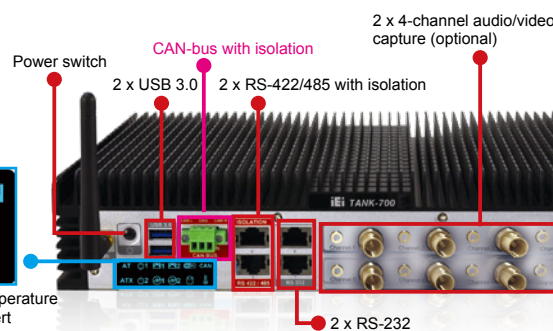
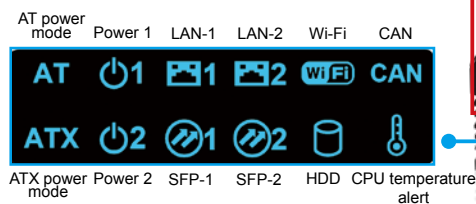
With an H.264 codec, the TANK-700/720 series is capable of compressing and decompressing Full HD (1920x1080) video in real-time without increasing CPU loadings. By supporting real-time recording, previewing, and HD video transmission through surveillance devices, the TANK-700/720 series is suitable as an intelligent monitoring system and transportation intelligent scheduling system solution.

**2 x 4-channel audio/video capture (system model name: IVCS-7008)**

## Fully Integrated I/O

### Power switch and LED

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



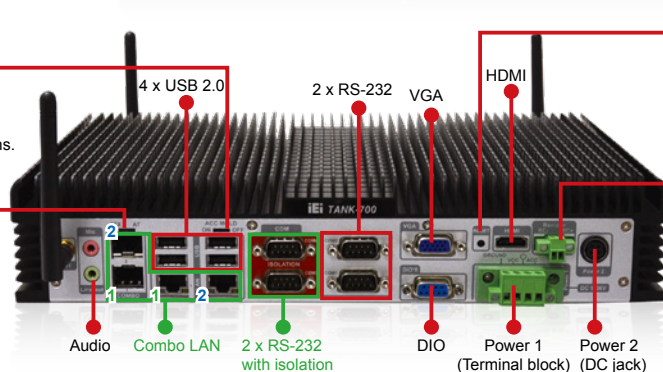
### ACC on/off

ACC on mode is designed for vehicle applications. Use the ACC signal to control power on/off.



### AT/ATX mode

Users can select a suitable mode according to the application.



### Reset

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



### Remote control

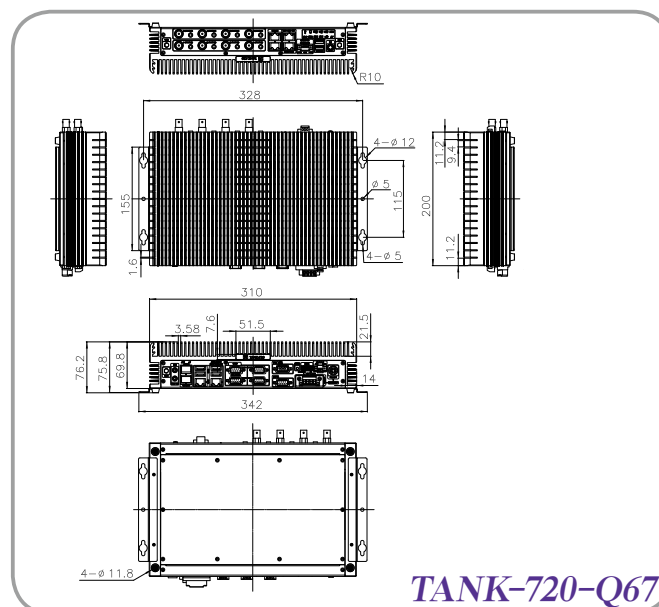
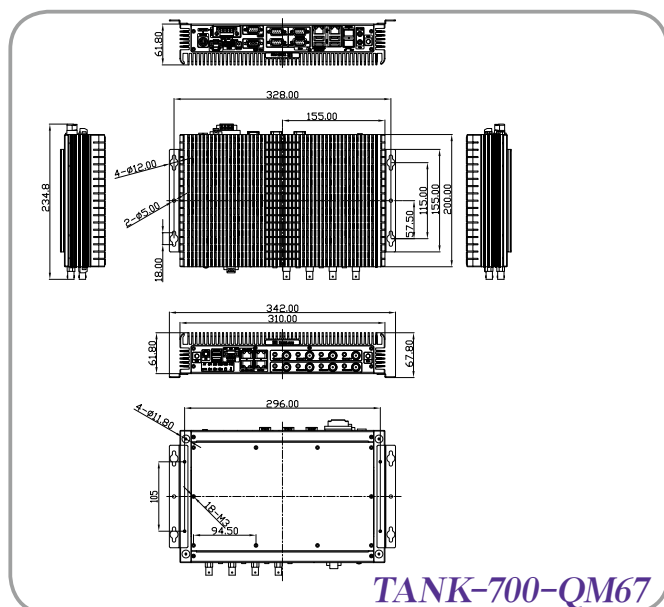
Users can power on/off the system by inputting low or high voltage into the terminal block.

High (2 V~5 V): Power off  
Low (< 0.4 V): Power on

## Specifications

| Model Name     |                         | TANK-700-QM67                                                                                                        | TANK-720-Q67                                                                                                          |
|----------------|-------------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| Chassis        | Color                   | Black C + Silver                                                                                                     | Blue C + Silver                                                                                                       |
|                | Dimensions (WxDxH) (mm) | 310 x 200 x 62                                                                                                       | 310 x 200 x 70                                                                                                        |
|                | System Fan              | Fanless                                                                                                              | Fanless                                                                                                               |
|                | Chassis Construction    | Extruded aluminum alloys                                                                                             | Extruded aluminum alloys                                                                                              |
| Motherboard    | CPU                     | Intel® Core™ i5-2xxE (above 2.5 GHz)<br>Intel® Core™ i3-2xxE (above 2.2 GHz)<br>Intel® Celeron® B8xx (above 1.6 GHz) | Intel® Core™ i5-2xxT (above 2.7 GHz)<br>Intel® Core™ i3-2xxT (above 2.5 GHz)<br>Intel® Pentium® G6xxT (above 2.2 GHz) |
|                | Chipset                 | Intel® QM67                                                                                                          | Intel® Q67                                                                                                            |
|                | System Memory           | On-board DDR3 2 GB memory<br>1 x 204-pin DDR3 SO-DIMM (system max: 10 GB)                                            | On-board DDR3 2 GB memory<br>1 x 204-pin DDR3 SO-DIMM (system max: 10 GB)                                             |
| Storage        | Hard Drive              | 2 x 2.5" SATA 3Gb/s HDD/SSD bay                                                                                      | 1 x SATA 3Gb/s with 2.5" HDD/SSD support<br>1 x SATA 6Gb/s with 2.5" HDD/SSD support                                  |
| I/O Interfaces | USB 3.0                 | 2                                                                                                                    | 2                                                                                                                     |
|                | USB 2.0                 | 4                                                                                                                    | 4                                                                                                                     |
|                | Ethernet                | 2 x Combo (SFP Fiber/RJ-45)<br>1 x PCIe GbE by Intel® 82579<br>1 x PCIe GbE by Intel® 82583V                         | 4 x RS-232 (DB-9, 2 x w/ isolation)<br>2 x RS-232 (RJ-45, with isolation)<br>1 x PCIe GbE by Intel® 82583V            |
|                | Fiber                   | 2 x Combo (SFP Fiber/RJ-45)                                                                                          | 2 x Combo (SFP Fiber/RJ-45)                                                                                           |
|                | COM Port                | 4 x RS-232 (DB-9, 2 x w/ isolation)<br>2 x RS-232 (RJ-45, w/ isolation)<br>2 x RS-422/485 (RJ-45, with isolation)    | 4 x RS-232 (DB-9)<br>2 x RS-232 (RJ-45, with isolation)<br>2 x RS-422/485 (RJ-45, with isolation)                     |
|                | Digital I/O             | 8-bit digital I/O, 4-bit input/4-bit output                                                                          | 8-bit digital I/O, 4-bit input/4-bit output                                                                           |
|                | CAN-bus                 | 1 x Phoenix terminal block                                                                                           | 1 x Phoenix terminal block                                                                                            |
|                | Display                 | 1 x VGA, 1 x HDMI                                                                                                    | 1 x VGA, 1 x HDMI                                                                                                     |
|                | Resolution              | VGA: Up to 2048 x 1536@75Hz<br>HDMI: Up to 1920 x 1200@60Hz                                                          | VGA: Up to 2048 x 1536@75Hz<br>HDMI: Up to 1920 x 1200@60Hz                                                           |
|                | 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 3T3R (optional)                                                                                    | 1 x 802.11a/b/g/n 3T3R (optional)                                                                                     |
|                | Other                   | Optional 4-channel audio/video input PCIe Mini Card                                                                  | Optional 4-channel audio/video input PCIe Mini Card                                                                   |
| Expansions     | PCIe Mini               | 3 x Full-size PCIe Mini                                                                                              |                                                                                                                       |
| Power          | Power Input             | DC Jack: 10.5 V~36 V DC<br>Terminal Block: 9 V~36 V DC                                                               | DC Jack: 10.5 V~36 V DC<br>Terminal Block: 9 V~36 V DC                                                                |
|                | Power Consumption       | 19 V@3.3 A<br>(Intel® Core™ i5-2540M with 4 GB DDR3 Memory)                                                          | 19 V@3.1 A<br>(Intel® Core™ i3-2100T with 4 GB DDR3 Memory)                                                           |
| Reliability    | Mounting                | Wall mount                                                                                                           | Wall mount                                                                                                            |
|                | Operating Temperature   | -20°C ~70°C with air flow (SSD), 5% ~ 95%, non-condensing                                                            | -20°C ~50°C with air flow (SSD), 5% ~ 95%, non-condensing                                                             |
|                | Operating Shock         | Half-sine wave shock 5G, 11ms, 3 shocks per axis                                                                     | Half-sine wave shock 5G, 11ms, 3 shocks per axis                                                                      |
|                | Operating Vibration     | MIL-STD-810F 514.5C-2 (with SSD)                                                                                     | MIL-STD-810F 514.5C-2 (with SSD)                                                                                      |
|                | Weight (Net/Gross)      | 3.8 kg/6.5 kg                                                                                                        | 4.2 kg/6.9 kg                                                                                                         |
|                | Safety/EMC              | CE/FCC                                                                                                               | CE/FCC                                                                                                                |
| OS             | Supported OS            | Microsoft® Windows® Embedded Standard 7 E,<br>Microsoft® Windows® XP Embedded                                        | Microsoft® Windows® Embedded Standard 7 E,<br>Microsoft® Windows® XP Embedded                                         |

### Dimensions (Unit: mm)



## Ordering Information

### TANK-700 series

| Part No.                | Description                                                                                                                                                                                                                          |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TANK-700-QM67-I5/2G-R22 | Embedded System Active Fanless embedded system, Core™ i5 Dual Core 2xxE CPU (Above 2.5 GHz), TDP 35W, 2GB DDR3 on board memory, VGA/HDMI, USB 3.0, 2 x SATA 3.0, SFP Fiber, Isolated CAN, Audio, 9 V-36 V DC input, -20°C~70°C, RoHS |
| TANK-700-QM67-I3/2G-R22 | Embedded System Active Fanless embedded system, Core™ i3 Dual Core 2xxE CPU (Above 2.2 GHz), TDP 35W, 2GB DDR3 on board memory, VGA/HDMI, USB 3.0, 2 x SATA 3.0, SFP Fiber, Isolated CAN, Audio, 9 V-36 V DC input, -20°C~70°C, RoHS |
| TANK-700-QM67-C/2G-R22  | Embedded System Active Fanless embedded system, Celeron® Dual Core B8xx CPU (Above 1.6 GHz), TDP 35W, 2GB DDR3 on board memory, VGA/HDMI, USB 3.0, 2 x SATA 3.0, SFP Fiber, Isolated CAN, Audio, 9 V-36 V DC input, -20°C~70°C, RoHS |

### TANK-720 series

| Part No.               | Description                                                                                                                                                                                                                    |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TANK-720-Q67-I5/2G-R21 | Fanless embedded system, Intel® Core™ i5 dual-core 2xxT CPU (above 2.7 GHz, TDP 35 W), 2 GB DDR3 on-board memory, VGA/HDMI, USB 3.0, two SATA 6Gb/s, SFP fiber, isolated CAN, audio, 9 V-36 V DC input, -20°C~50°C, R21, RoHS  |
| TANK-720-Q67-I3/2G-R21 | Fanless embedded system, Intel® Core™ i3 dual-core 2xxT CPU (above 2.5 GHz, TDP 35 W), 2 GB DDR3 on-board memory, VGA/HDMI, USB 3.0, two SATA 6Gb/s, SFP fiber, isolated CAN, audio, 9 V-36 V DC input, -20°C~50°C, R21, RoHS  |
| TANK-720-Q67-P/2G-R21  | Fanless embedded system, Intel® Pentium® dual-core G6xxT CPU (above 2.2 GHz, TDP 35 W), 2 GB DDR3 on-board memory, VGA/HDMI, USB 3.0, two SATA 6Gb/s, SFP fiber, isolated CAN, audio, 9 V-36 V DC input, -20°C~50°C, R21, RoHS |

## Options

| Options                     | Part No.                | 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-XD50-I            | 1Gbps SFP optical transceiver, single-mode/50Km, 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-SCSC-SS3M           | 3m length cable with SC to SC connector (single mode, 9/125μm)                                                   |
| Wi-Fi Kit                   | EMB-WIFI-KIT03-R10      | 3T3R Wi-Fi module kit for embedded system, IEEE 802.11a/b/g/n, 1 x Wi-Fi module, 3 x RF cable, 3 x Antenna, RoHS |
| OS: XP                      | TANK-700-QM67-XPE-R10   | OS Image with XPE, For TANK-700 QM67 Series, with CDROM, RoHS                                                    |
|                             | TANK-720-Q67-XPE-R10    | OS Image with XPE, For TANK-720 Q67 Series, with DVDROM, R10                                                     |
| OS: Windows Embedded 7      | TANK-700-QM67-WES7E-R10 | OS Image with Windows® Embedded Standard 7 E for TANK-700 QM67 Series, CD-ROM, RoHS                              |
|                             | TANK-720-Q67-WES7E-R10  | OS Image with Windows® Embedded Standard 7 E for TANK-720 Q67 Series, DVD-ROM, R10                               |

## Packing List

| Item                                    | Qty | Description                                                                                             |
|-----------------------------------------|-----|---------------------------------------------------------------------------------------------------------|
| Pluggable DC-in Terminal Block          | 1   | 4-pin                                                                                                   |
| Pluggable CAN-bus Terminal Block        | 1   | 3-pin                                                                                                   |
| Pluggable Remote Control Terminal Block | 1   | 2-pin                                                                                                   |
| RJ-45 to DB-9 COM Port Cable            | 4   | Round cable, RS-232/422/485, RS-232 cable, 2, 300mm, 26AWG, (A)D-SUB 9P male, (B)RJ-45 8P8C+SHELL, RoHS |
| Power Cord Convert Cable                | 1   | Convert normal type cord to triangle type cord cable                                                    |
| Power Cord                              | 1   | 1500 mm, European Standard                                                                              |
| Power Adapter                           | 1   | FSP090-DIEBN2, 90 V~264 V AC input, 90 W, 19 V DC output, ErP, 4-pin DIN                                |
| Mounting Bracket                        | 2   |                                                                                                         |
| Mounting Bracket Screws                 | 8   | M3*6 mounting bracket screws                                                                            |
| Chassis Screw                           | 8   | M3*4 chassis screws for backup                                                                          |