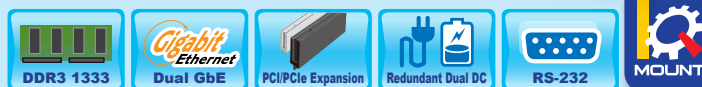


TANK-800-D525 820-H61

- D525 3-Slot Fanless Embedded System
- Sandy Bridge 3-Slot Embedded System

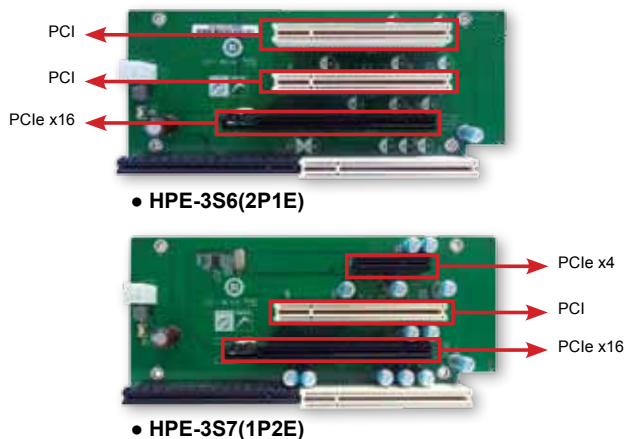
Features

- ◆ Intel® Atom™ D525 1.8GHz dual-core processor for TANK-800
2nd Generation Intel® Core™ low power desktop processors for TANK-820
- ◆ On-board 1GB DDR3 memory and one DDR3 SO-DIMM slot (system max. 3GB) for TANK-800
On-board 2GB DDR3 memory and one DDR3 SO-DIMM slot (system max. 10GB) for TANK-820
- ◆ Redundant dual wide range DC power support (TANK-800-D525: 9 ~36 VDC / TANK-820-H61: 9 ~ 24 VDC)
- ◆ Flexible PCI/PCIe expansion slots satisfy customized requirements
- ◆ Rich I/O functions satisfy various applications
- ◆ Extended temperature fanless design (TANK-800-D525)
- ◆ Dual PCIe GbE LAN for high speed network applications
- ◆ One CompactFlash® socket



Versatile Expansion Interface

The TANK-800/820 series has various kinds of expansion interfaces which allow you to connect additional circuits or expansion boards to the system via IEI riser cards. These expansion options provide flexible function enhancement and simplify system integration.



- The two types of backplane support standard PCI/PCIe cards with maximum dimensions (WxHxD): 195mm x 170mm x 20mm
- The rated voltage and current of the backplane

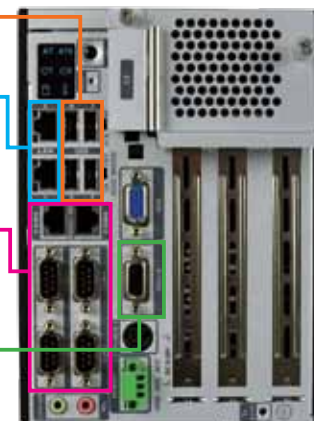
| Voltage | Current |
|---|---------|
| +5V | 7A |
| +12V | 3.75A |
| -12V | 0.1A |
| +3.3V | 8A |
| Max. power supported by the backplane: <45W | |

The system default power is 90 W. **The maximum total power of the backplane to support expansion cards is 45 W.** The power of the selected expansion cards can not exceed the max. power (45 W), otherwise, the system may be unstable.

| Backplane | Slot | TANK-800 | TANK-820 |
|---------------|----------|----------|----------|
| | | Signal | Signal |
| HPE-3S6(2P1E) | PCI | PCI | PCI |
| | PCIe x16 | PCIe x4 | PCIe x8 |
| HPE-3S7(1P2E) | PCI | PCI | PCI |
| | PCIe x4 | PCIe x1 | PCIe x1 |
| | PCIe x16 | PCIe x2 | PCIe x8 |

Rich I/O Function

- **Four USB Ports**
Four USB ports can completely satisfy other USB devices or access requirements.
- **Dual GbE Ethernet Ports**
Dual GbE Ethernet ports offer a diverse range of network communication options, helping users easily create an integrated industrial application that requires Ethernet protocols.
- **Serial Ports**
Serial ports help millions of serial devices connect to the network for industrial applications. Our RS-232/422/485 serial ports provide powerful communication performance for all industrial device connectivity.
- **8-bit Digital I/O, 4-bit input/4-bit output**
The DIO channels are quite useful for remote controlling, such as device power on/off, LEDs on/off, counter and cash drawer control.



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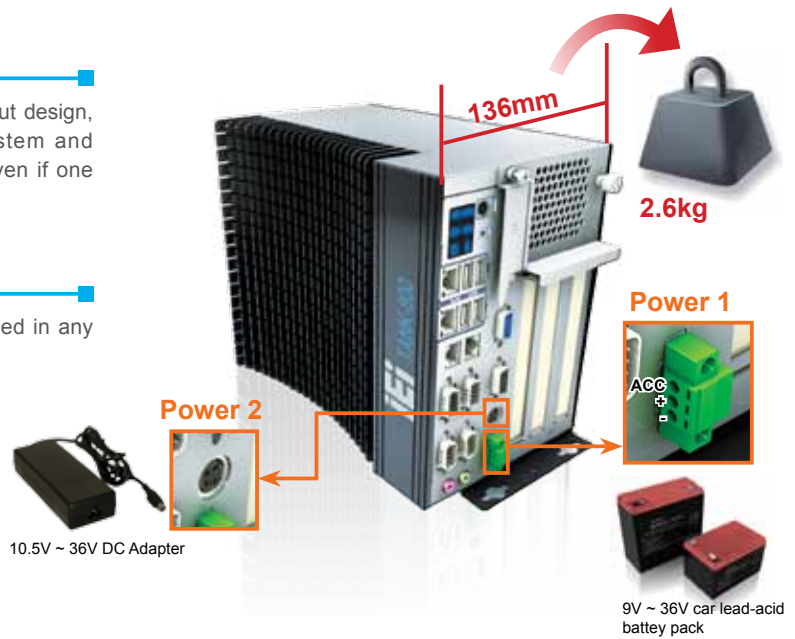
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Redundant Dual DC Power Input

The TANK-800-D525 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.

Compact

Compact solution can sustain strong vibrations and be used in any industrial environments.



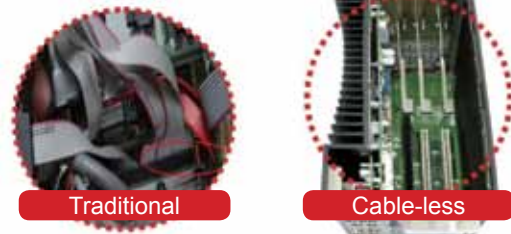
Anti-Vibration and Anti-Shock Design

With the rugged design, the TANK-800/820 series is reliable in industrial environments to resist strong vibrations and can be used as a core computer requiring to be installed on moving objects.



Cable-less

The cable-less concept offers a strong hardware design and promises a reliable combination of embedded components. This design helps ensuring stable system operation and robust hardware design. With all the components firmly attached, the TANK-800/820 series is ideal to be installed on moving objects.



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Wide Range DC Power Input

The TANK-800/820 series accepts wide range DC power input, allowing it to be powered anywhere, no matter if a 12V, 24V DC source or a 19V power adapter is available.



Ingenious Fan Space Design

The TANK-800/820 series reserves an easy-to-install, hot-pluggable fan module space, ensuring the PCI/PCIe expansion cards with high power consumption to operate under high temperature environment.



Fanless

The TANK-800 series provides the best components that generate less heat, but maintain high system performance. With the fanless design, the TANK-800-D525 reduces system failure caused by fans and extends the lifetime of the device.



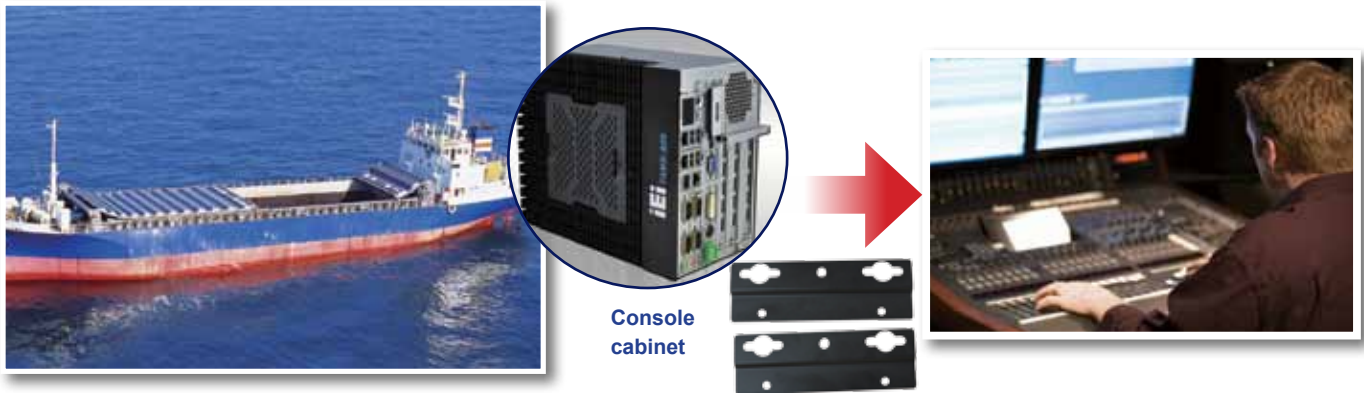
Wide Range Temperature

The TANK-800/820 series is designed to withstand wide range of temperatures. With this design, the TANK-800/820 series can even be installed in a high-temperature roadside cabinet.



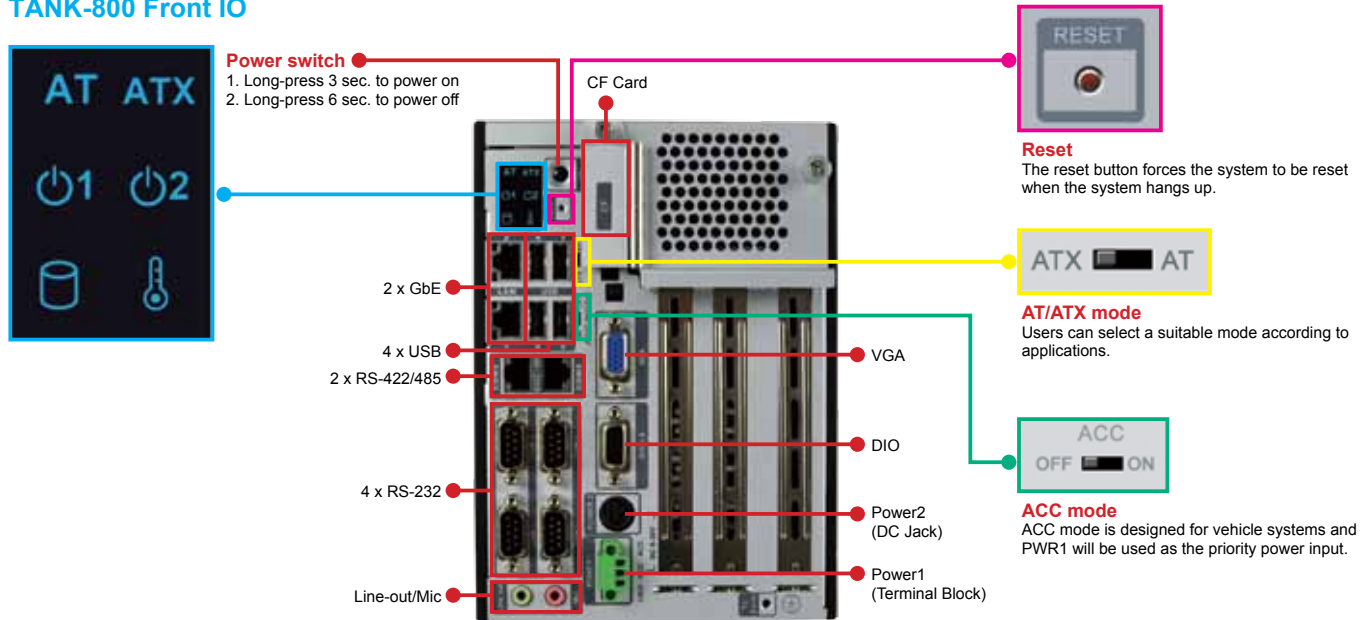
Mounting Method

Mount the embedded system onto a wall or other surfaces using the two mounting brackets.

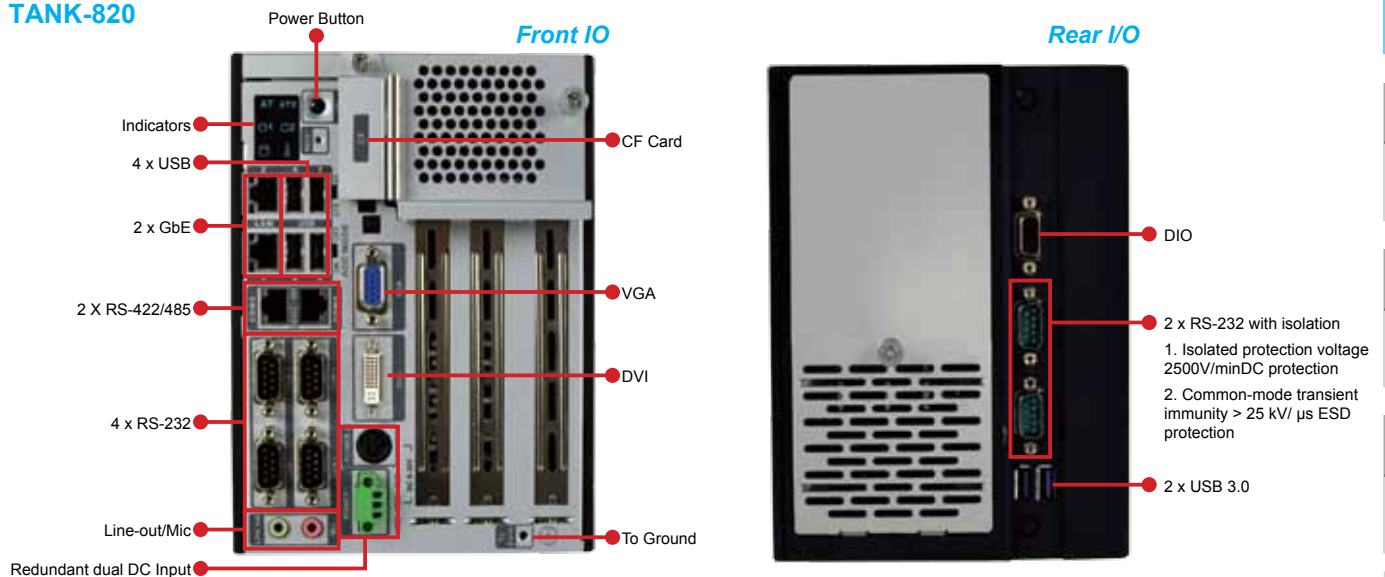


Fully Integrated I/O

TANK-800 Front IO



TANK-820



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Specifications

| Model Name | | TANK-800-D525 | TANK-820-H61 New |
|----------------|-----------------------|--|---|
| Chassis | Color | Black C + Silver | Black C + Silver |
| | Dimensions(W x D x H) | 136 x 219 x 188 mm | 133 x 269 x 208 mm |
| | System Fan | Fanless | 60 x 60 mm |
| | Chassis Construction | Extruded Aluminum Alloy | Extruded Aluminum Alloy |
| Motherboard | CPU | Intel® Dual Core D525 1.8 GHz processor | 2nd Generation Intel® -Core i5 Dual Core 2xxT (Above 2.7GHz), 35W -Core i3 Dual Core 2xxT (Above 2.5GHz), 35W -Pentium Dual Core G6xxT (Above 2.2GHz), 35W |
| | Chipset | Intel® ICH8M | Intel® H61 |
| | System Memory | On-board DDR3 1GB memory 1 x 204-pin DDR3 SDRAM SO-DIMM (System Max : 3GB) | On-board DDR3 2GB memory 1 x 204-pin DDR3 SDRAM SO-DIMM (System Max : 10GB) |
| Storage | Hard Drive | 1 x 2.5" SATA HDD Bay | 1 x 2.5" SATA HDD Bay |
| | CompactFlash® | 1 x CF Type II | 1 x CF Type II |
| I/O interfaces | USB 3.0 | N/A | 2 |
| | USB 2.0 | 4 | 4 |
| | Ethernet | 2 x RJ-45 Realtek 8111E GbE LAN support ASF 2.0 | 2 x RJ-45 Realtek 8111E GbE LAN support ASF 2.0 |
| | RS-232 | 4 x DB-9 | 4 x DB-9 2 x DB-9 w/isolation |
| | RS-422/485 | 2 x RJ-45 | 2 x RJ-45 |
| | 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 |
| | Display | 1 x VGA | 1 x VGA, 1 x DVI-I |
| | Resolution | 2048 x 1536 @ 75Hz | VGA : Up to 2048 x 1536 @ 75Hz DVI-I : Up to 1920 x 1080 @ 60Hz |
| | Audio | 1 x Line-out, 1 x Mic-in | 1 x Line-out, 1 x Mic-in |
| Expansions | PCI | 2P1E : 2 x PCI, 1P2E : 1 x PCI | 2P1E : 2 x PCI, 1P2E : 1 x PCI |
| | PCIe | 2P1E : One PCIe x 4 (physical PCIe x 16 slot) 1P2E : One PCIe x 1 (physical x 4 slot), One PCIe x 2 (physical x 16 slot) | 2P1E : One PCIe x 8 (physical PCIe x 16 slot) 1P2E : One PCIe x 1 (physical x 4 slot), One PCIe x 8 (physical x 16 slot) |
| Power | Power Input | Redundant dual DC input Terminal Block : 9V(+/-0.3V) ~ 36V DC Jack : 10.5V(+/-0.3V) ~ 36V | Redundant dual DC input Terminal Block : 9~24V DC Jack : 9~24V |
| | Power Consumption | 19V@1.73A (with 4GB DDR3 Memory) | 19V@3.5A (Intel® Core i3-2100 with 6GB DDR3 memory) w/o add-on card |
| Reliability | Mounting | Wall mount | Wall mount |
| | Operating Temperature | -20°C ~ 70°C with air flow (SSD), 5% ~ 95%, non-condensing | -20°C ~ 60°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) | 2.6Kg / 4.1Kg | 4.2 Kg / 6.3 Kg |
| | Safety & EMC | CE / FCC | CE / FCC |
| OS | Supported OS | Microsoft® WES7E, Microsoft® Windows® XP Embedded | |

Ordering Information

| Part No. | Description | |
|-----------------------------|--|---------------------------|
| TANK-800-D525/1GB/2P1E-R10 | Extended temperature fanless embedded system with one PCIe x 4 and two PCI expansion, Intel® Atom™ D525 1.8GHz dual core processor, dual 9V-36V DC-IN, on-board 1GB DDR3 memory, -20°C ~ 70°C, RoHS | |
| TANK-800-D525/1GB/1P2E-R10 | Extended temperature fanless embedded system with one PCIe x 1, one PCIe x 2 and one PCI expansions, Intel® Atom™ D525 1.8GHz dual core processor, dual 9V-36V DC-IN, on-board 1GB DDR3 memory, -20°C ~ 70°C, RoHS | |
| TANK-820-H61-i5/2G/2P1E-R10 | Extend temperature embedded system with One PCIe x 8 and two PCI expansion, Core i5 Dual Core 2xxT CPU (Above 2.7GHz), TDP 35W, Dual 9-24V DC-IN, 2GB DDR3 Memory on-board, -20°C~60°C, R10 | |
| TANK-820-H61-i5/2G/1P2E-R10 | Extend temperature embedded system with One PCIe x 1 and one PCIe x 8 and one PCI expansion, Core i5 Dual Core 2xxT CPU (Above 2.7GHz), TDP 35W, Dual 9-24V DC-IN, 2GB DDR3 Memory on-board, -20°C~60°C, R10 | |
| TANK-820-H61-i3/2G/2P1E-R10 | Extend temperature embedded system with One PCIe x 8 and two PCI expansion, Core i3 Dual Core 2xxT CPU (Above 2.5GHz), TDP 35W, Dual 9-24V DC-IN, 2GB DDR3 Memory on-board, -20°C~60°C, R10 | |
| TANK-820-H61-i3/2G/1P2E-R10 | Extend temperature embedded system with One PCIe x 1 and one PCIe x 8 and one PCI expansion, Core i3 Dual Core 2xxT CPU (Above 2.5GHz), TDP 35W, Dual 9-24V DC-IN, 2GB DDR3 Memory on-board, -20°C~60°C, R10 | |
| TANK-820-H61-P/2G/2P1E-R10 | Extend temperature embedded system with One PCIe x 8 and two PCI expansion, Pentium Dual Core G6xxT CPU (Above 2.2GHz), TDP 35W, Dual 9-24V DC-IN, 2GB DDR3 Memory on-board, -20°C~60°C, R10 | |
| TANK-820-H61-P/2G/1P2E-R10 | Extend temperature embedded system with One PCIe x 1 and one PCIe x 8 and one PCI expansion, Pentium Dual Core G6xxT CPU (Above 2.2GHz), TDP 35W, Dual 9-24V DC-IN, 2GB DDR3 Memory on-board, -20°C~60°C, R10 | |
| Memory Selection | DDR3-SO-1333-2GB | SO-DIMM DDR3 1333 MHz 2GB |
| | DDR3-SO-1333-4GB | SO-DIMM DDR3 1333 MHz 4GB |

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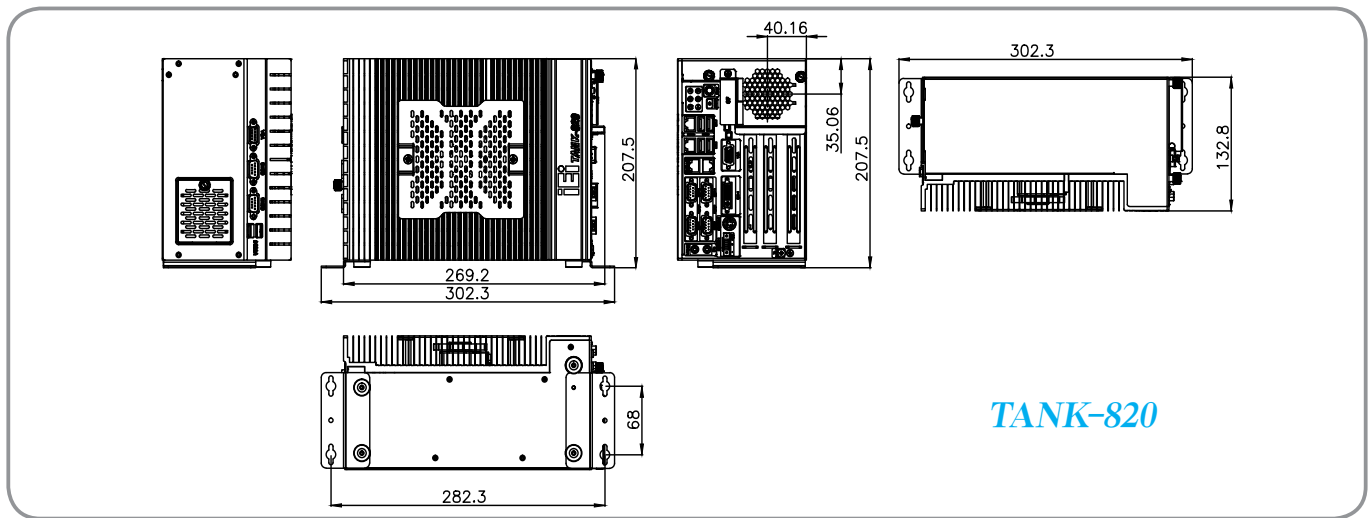
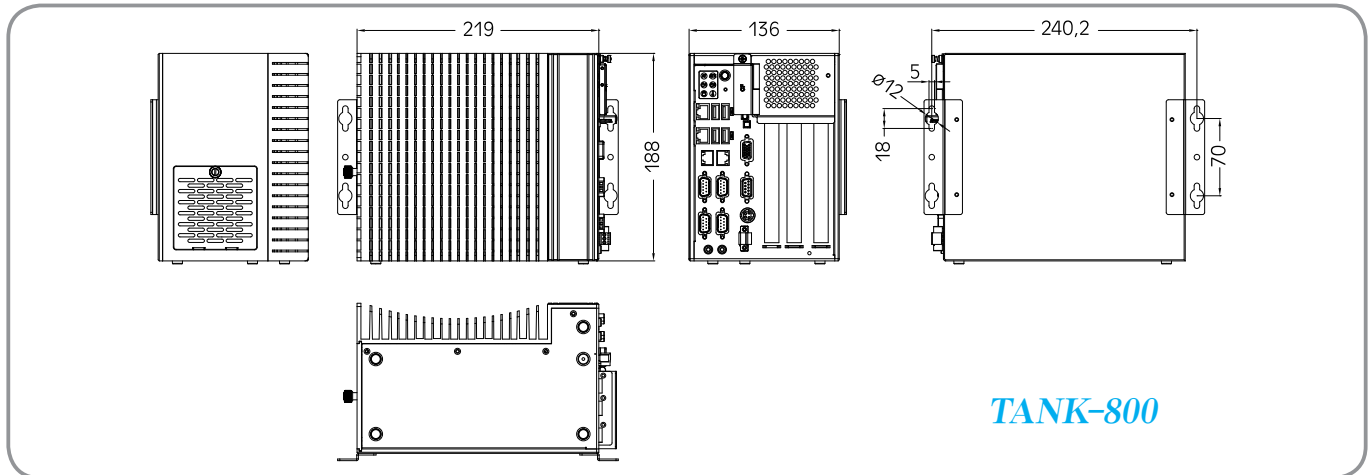
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Dimensions (Unit: mm)



Options

| Item | P/N | Description |
|--------------------------------------|--------------------------------|---|
| OS : Linux (2GB CF Card) | TANKCF-800-D525-LNX-2G-R10 | OS Image with Linux for TANK-800 D525, Debian operating system, Kernel version 2.6.26, 2GB CompactFlash® card, RoHS |
| | TANKCF-820-H61-LNX-2G-R10 | OS Image with Linux for TANK-820 H61, Debian operating system, Kernel version 2.6.26, 2GB CompactFlash® card, RoHS |
| OS : Win CE 6.0 (128MB CF Card) | TANKCF-800-D525-CE060-128M-R10 | OS Image with WINCE 6.0, for TANK-800 D525 Series, 128MB CompactFlash® card, RoHS |
| OS : Win XPE (4GB CF Card) | TANKCF-800-D525-XPE-4G-R10 | OS Image with XPE, for TANK-800 D525 Series, 4GB CompactFlash® card, RoHS |
| | TANKCF-820-H61-XPE-4G-R10 | OS Image with XPE, for TANK-820 H61 Series, 4GB CompactFlash® card, RoHS |
| OS : Win 7 Embedded (4GB CF Card) | TANKCF-800-D525-WES7E-4G-R10 | OS Image with Windows Embedded Standard 7 E, for TANK-800 D525 Series, 4GB CompactFlash® card, RoHS |
| | TANKCF-820-H61-WES7E-4G-R10 | OS Image with Windows Embedded Standard 7 E, for TANK-820 H61 Series, 4GB CompactFlash® card, RoHS |

Packing List

| Item | P/N | Q'ty | Description |
|--------------------------------|----------------------|------|---|
| Utility CD | | 1 | Drivers and user manual |
| One Key Recovery CD | 7B000-000724-RS | 1 | |
| Power Adapter | 63040-010090-020-RSS | 1 | FSP090-D2BA1, 90 ~ 264VAC input, 90W, 19VDC output (for TANK-800) |
| | 63000-FSP120AAB-RS | 1 | FSP120-AAB, 90 ~ 264V input, 120W, 19VDC output (for TANK-820) |
| Power Cord | 32702-000401-100-RS | 1 | 1500 mm, European Standard |
| Mounting Bracket | 41020-0308C2-00-RS | 2 | Wall mount bracket, Mount bracket, NCT processing formation, TANK-800, RoHS |
| | 41020-0366E4-00-RS | 2 | Wall mount bracket, Mount bracket, NCT processing formation, TANK-820 RoHS |
| Mounting Bracket Screws | 44033-040062-RS | 4 | |
| HDD Screw | 44043-030051-RS | 4 | M030*05 for securing HDD |
| Rubber Foot Pad Screws | 44005-030061-RS | 8 | M4*6 for securing rubber foot pads (for TANK-800) |
| | 44033-040061-RS | 4 | M4*6 for securing rubber foot pads (for TANK-820) |
| RJ-45 to DB-9 COM Port Cable | 32005-000200-200-RS | 2 | Round cable, RS-232/422/485, RS-232 cable, 2, 300mm, 26AWG, (A)D-SUB 9P male, (B)RJ-45 8P8C+SHELL, RoHS |
| Pluggable DC-in Terminal Block | 33502-000007-RS | 1 | 3-pin terminal block |
| Foot Pads | 46007-001500-RS | 4 | BOTTOM PAD, NF-002, 11.5D*8.7D*7.4H, black rubber, RoHS |
| FAN screws | 44003-030151-RS | 4 | For TANK-820 |

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