

# TANK-800-D525 820-H61

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

## Features

- Intel® Atom™ D525 1.8 GHz dual-core processor for TANK-800  
2nd/3rd generation Intel® Core™ low power desktop processors (max TDP. 65W) 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
- Dual wide range DC power support (TANK-800-D525: 9 V~36 V DC/ TANK-820-H61: 9 V~24 V DC)



## Versatile Expansion Interface

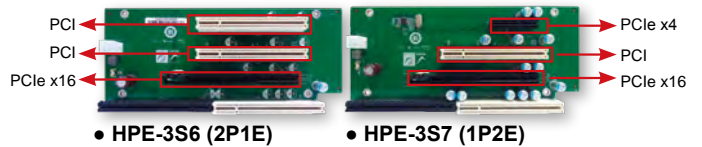
The TANK-800/820 series has various kinds of expansion interfaces which allow you to connect additional circuits or expansion boards to the system via IEI riser cards. These expansion options provide flexible function enhancement and simplify system integration.

- The two types of backplane support standard PCI/PCIe cards with maximum dimensions (111 mm in width x 190 mm in length).
- The rated voltage and current of the backplane

Voltage	Current	Voltage	Current
+5 V	7 A	-12 V	0.1 A
+12 V	3.75 A	+3.3 V	8 A

Max. power supported by the backplane: <45W

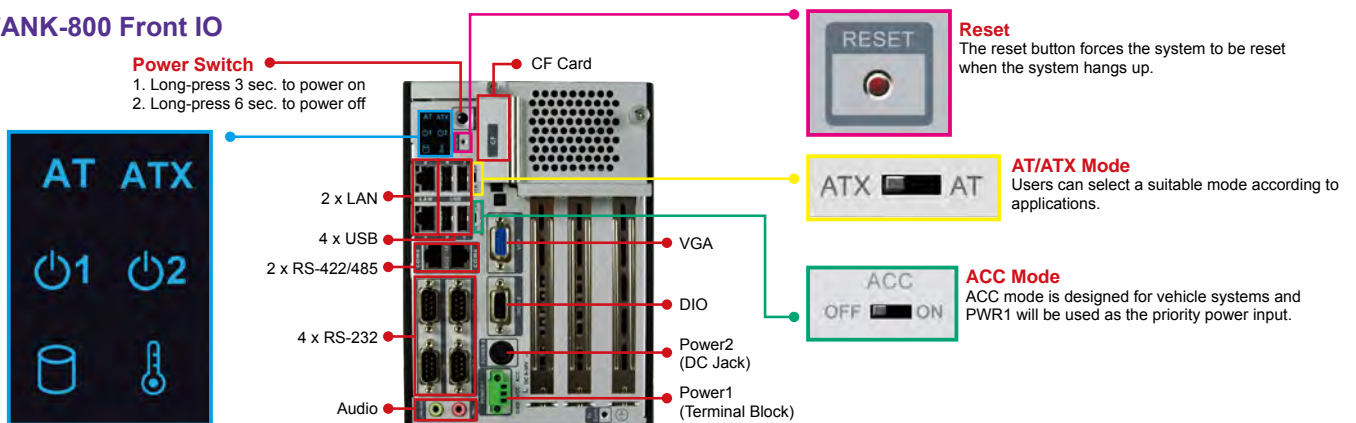
The system default power is 90 W. **The maximum total power of the backplane to support expansion cards is 45 W.** The power of the selected expansion cards can not exceed the max. power (45 W), otherwise, the system may be unstable.



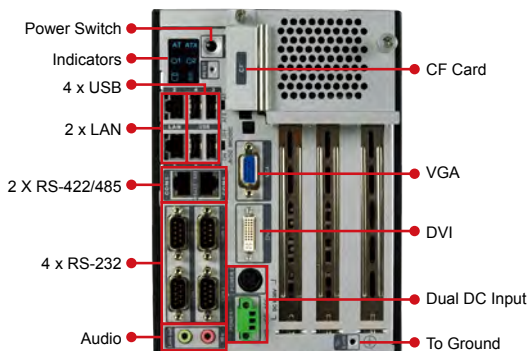
Backplane	Slot	TANK-800	TANK-820
		Signal	Signal
HPE-3S6 (2P1E)	PCI	PCI	PCI
	PCIe x16	PCIe x4	PCIe x8
HPE-3S7 (1P2E)	PCI	PCI	PCI
	PCIe x4	PCIe x1	PCIe x1
	PCIe x16	PCIe x2	PCIe x8

## Fully Integrated I/O

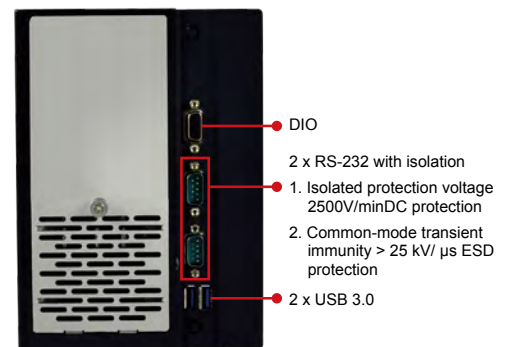
### TANK-800 Front IO



### TANK-820 Front IO



### Rear I/O



# Specifications

Model Name		TANK-820-H61	TANK-800-D525
Chassis	Color	Black C + Silver	Black C + Silver
	Dimensions (WxDxH) (mm)	133 x 269 x 208	136 x 219 x 188
	System Fan	Fanless	Fanless
	Chassis Construction	Extruded aluminum alloys	Extruded aluminum alloys
Motherboard	CPU	Intel® Core™ i5-2xxT (above 2.7 GHz) Intel® Core™ i3-2xxT (above 2.5 GHz) Intel® Pentium® G6xxT (above 2.2 GHz)	Intel® Atom™ D525 1.8 GHz
	Chipset	Intel® H61	Intel® ICH8M
	System Memory	On-board DDR3 2 GB memory 1 x 204-pin DDR3 SO-DIMM (system max: 10 GB)	On-board DDR3 1 GB memory 1 x 204-pin DDR3 SDRAM SO-DIMM (system max: 3 GB)
Storage	Hard Drive	1 x 2.5" SATA 3Gb/s HDD/SSD bay	1 x 2.5" SATA 3Gb/s HDD/SSD bay
	CF Card/CFast	1 x CF Type II	1 x CF Type II
I/O Interfaces	USB 3.0	2	N/A
	USB 2.0	4	4
	Ethernet	2 x RJ-45 PCIe GbE by Realtek 8111E controller	2 x RJ-45 PCIe GbE by Realtek 8111E controller
	COM Port	6 x RS-232 (DB-9, two with isolation) 2 x RS-422/485 (RJ-45)	4 x RS-232 (DB-9) 2 x RS-422/485 (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 DVI-I	1 x VGA
	Resolution	VGA: Up to 2048 x 1536@75Hz DVI-I: Up to 1920 x 1080@60Hz	VGA: Up to 2048 x 1536@75Hz
	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 x8 (physical PCIe x16 slot) 1P2E: One PCIe x1 (physical x4 slot), One PCIe x8 (physical x16 slot)	2P1E: One PCIe x4 (physical PCIe x16 slot) 1P2E: One PCIe x1 (physical x4 slot), One PCIe x2 (physical x16 slot)
Power	Power Input	DC Jack: 9 V~24 V DC Terminal Block: 9 V~24 V DC	DC Jack: 10.5 V~36 V DC Terminal Block: 9 V~36 V DC
	Power Consumption	19 V@3.5 A (Intel® Core™ i3-2100 with 6 GB DDR3 memory) w/o add-on card	19 V@1.73 A (Intel® Atom™ D525 with 1 GB DDR3 Memory)
Reliability	Mounting	Wall mount	Wall mount
	Operating Temperature	-20°C ~ 60°C with air flow (SSD), 5% ~ 95%, non-condensing	-20°C ~ 70°C with air flow (SSD), 5% ~ 95%, non-condensing
	Storage Temperature	-20°C ~ 70°C	-20°C ~ 70°C
	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)	4.2 kg/6.3 kg	2.6 kg/4.1 kg
	Safety/EMC	CE/FCC	CE/FCC
OS	Supported OS	Microsoft® Windows® Embedded Standard 7 E, Microsoft® Windows® XP Embedded	Microsoft® Windows® Embedded Standard 7 E, Microsoft® Windows® XP Embedded

## Ordering Information

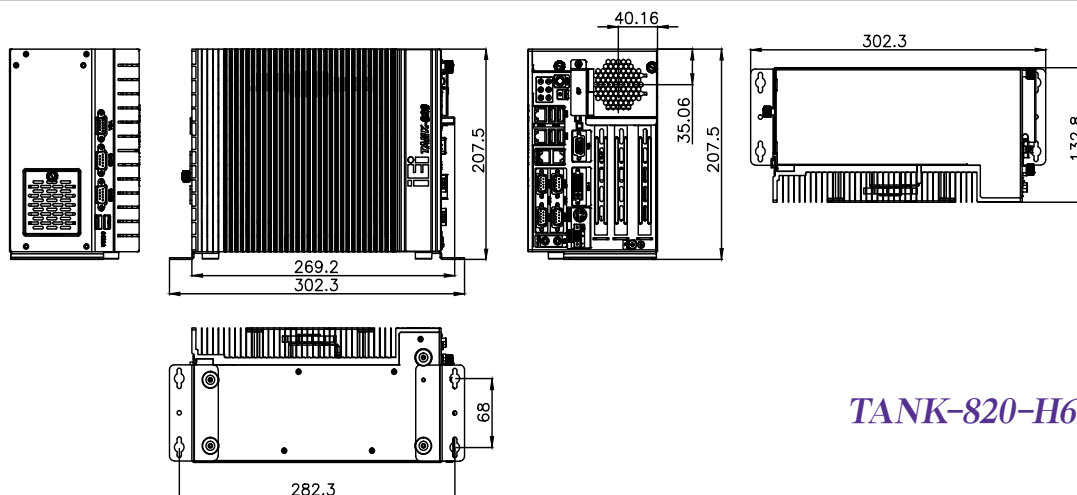
### TANK-820 series

Part No.	Description
TANK-820-H61-I5/2G/2P1E-R22	Fanless wide temperature embedded system with one PCIe x8 and two PCI expansions, Intel® Core™ i5 dual-core 2xxT CPU (above 2.7 GHz, TDP 35 W), dual 9 V-24 V DC-IN, 2 GB DDR3 on-board memory, -20°C ~ 60°C
TANK-820-H61-I5/2G/1P2E-R22	Fanless wide temperature embedded system with one PCIe x1, one PCIe x8 and one PCI expansion, Intel® Core™ i5 dual-core 2xxT CPU (above 2.7 GHz, TDP 35 W), dual 9 V-24 V DC-IN, 2 GB DDR3 on-board memory, -20°C ~ 60°C
TANK-820-H61-I3/2G/2P1E-R22	Fanless wide temperature embedded system with one PCIe x8 and two PCI expansions, Intel® Core™ i3 dual-core 2xxT CPU (above 2.5 GHz, TDP 35 W), dual 9 V-24 V DC-IN, 2 GB DDR3 on-board memory, -20°C ~ 60°C
TANK-820-H61-I3/2G/1P2E-R22	Fanless wide temperature embedded system with one PCIe x1, one PCIe x8 and one PCI expansion, Intel® Core™ i3 dual-core 2xxT CPU (above 2.5 GHz, TDP 35 W), dual 9 V-24 V DC-IN, 2 GB DDR3 on-board memory, -20°C ~ 60°C
TANK-820-H61-P/2G/2P1E-R22	Fanless wide temperature embedded system with one PCIe x8 and two PCI expansions, Intel® Pentium® dual-core G6xxT CPU (above 2.2 GHz, TDP 35 W), dual 9 V-24 V DC-IN, 2 GB DDR3 on-board memory, -20°C ~ 60°C
TANK-820-H61-P/2G/1P2E-R22	Fanless wide temperature embedded system with one PCIe x1, one PCIe x8 and one PCI expansion, Intel® Pentium® dual-core G6xxT CPU (above 2.2 GHz, TDP 35 W), dual 9 V-24 V DC-IN, 2 GB DDR3 on-board memory, -20°C ~ 60°C

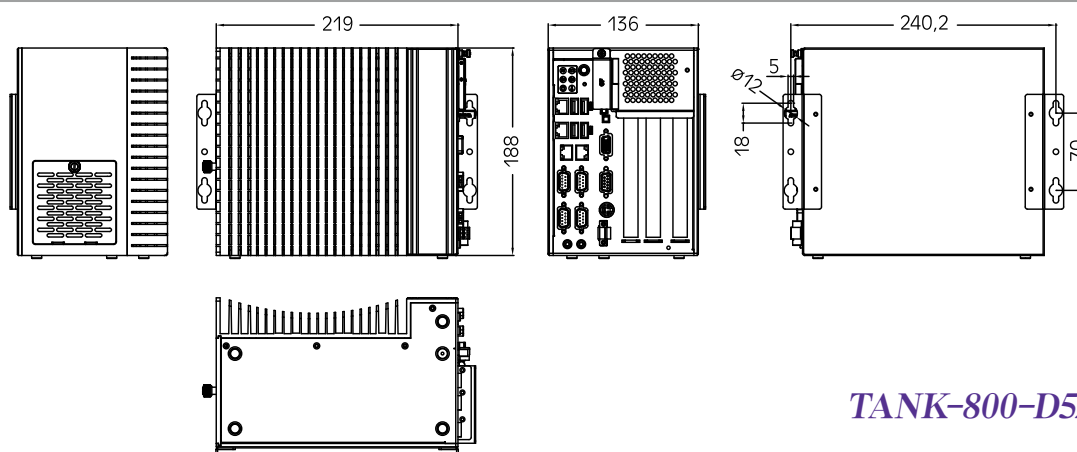
### TANK-800 series

Part No.	Description
TANK-800-D525/1GB/2P1E-R12	Extended temperature fanless embedded system with one PCIe x4 and two PCI expansion, Intel® Atom™ D525 1.8 GHz dual core processor, dual 9 V-36 V DC-IN, on-board 1GB DDR3 memory, -20°C ~ 70°C, RoHS
TANK-800-D525/1GB/1P2E-R12	Extended temperature fanless embedded system with one PCIe x1, one PCIe x2 and one PCI expansions, Intel® Atom™ D525 1.8 GHz dual core processor, dual 9 V-36 V DC-IN, on-board 1GB DDR3 memory, -20°C ~ 70°C, RoHS

## Dimensions (Unit: mm)



**TANK-820-H61**



**TANK-800-D525**

## Options

### TANK-820 series

Item	Part No.	Description
OS: XP	TANKCF-800-D525-XPE-4G-R10	OS Image with XPE, For TANK-800 D525 Series, W/Compact Flash Memory Card 4GB, R10
OS: Windows Embedded 7 (4GB CF Card)	TANKCF-800-D525-WES7E-4G-R10	OS Image with Windows® Embedded Standard 7 E for TANK-800 D525 Series, 4 GB CompactFlash® card, RoHS
System Fan	19Z00-000605-00-RS	Fan, +12V DC, 4-pin, 40 mm x 40 mm x 10 mm, 6500RPM, RoHS

### TANK-800 series

Item	Part No.	Description
OS: Linux (2GB CF Card)	TANKCF-820-H61-LNX-2G-R10	OS Image with Linux for TANK-820 H61, Debian operating system, Kernel version 2.6.26, 2 GB CompactFlash® card, RoHS
OS: XP	TANKCF-820-H61-XPE-4G-R10	OS Image with XPE, for TANK-820-H61 series, W/Compact Flash Memory Card 4GB, R10, RoHS
OS: Windows Embedded 7 (4GB CF Card)	TANKCF-820-H61-WES7E-4G-R10	OS Image with Windows® Embedded Standard 7 E for TANK-820 H61 Series, 4 GB CompactFlash® card, RoHS

## Packing List

### TANK-820 series

1 x Power Cord	4 x HDD Screw	1 x Pluggable DC-in Terminal Block
1 x Power Adapter	4 x Rubber Foot Pad Screw	1 x Utility CD
2 x Mounting Bracket	2 x Foot Pad	1 x One Key Recovery CD
4 x Mounting Bracket Screw	2 x RJ-45 to DB-9 COM Port Cable	4 x Fan screw

### TANK-800 series

1 x Power Cord	4 x HDD Screw	1 x Pluggable DC-in Terminal Block
1 x Power Adapter	8 x Rubber Foot Pad Screw	1 x Utility CD
2 x Mounting Bracket	4 x Foot Pad	1 x One Key Recovery CD
4 x Mounting Bracket Screw	2 x RJ-45 to DB-9 COM Port Cable	