TANK-XM813

- ***High-Performance Intel® Core™ Ultra Processors (Series 2)***
- ***Fanless Embedded Computer***

Features

- Supported CPUs:
  Intel® Core™ Ultra 9 285T 1.4 GHz (up to 5.4 GHz, 24-core, 35W TDP)
  Intel® Core™ Ultra 9 285 2.5 GHz (up to 5.6 GHz, 24-core, 65W TDP)
  Intel® Core™ Ultra 7 265T 1.5 GHz (up to 5.3 GHz, 20-core, 35W TDP)
  Intel® Core™ Ultra 7 265 2.4 GHz (up to 5.3 GHz, 20-core, 65W TDP)
  Intel® Core™ Ultra 5 225T 2.5 GHz (up to 4.9 GHz, 10-core, 35W TDP)
  Intel® Core™ Ultra 5 225 3.3 GHz (up to 4.9 GHz, 10-core, 65W TDP)
- 2 x 2.5G Ethernet ports
- Multiple USB ports and serial ports
- Multiple internal expansion boards for flexible selection
- Various optional backplanes and chassis
- CE/FCC compliant

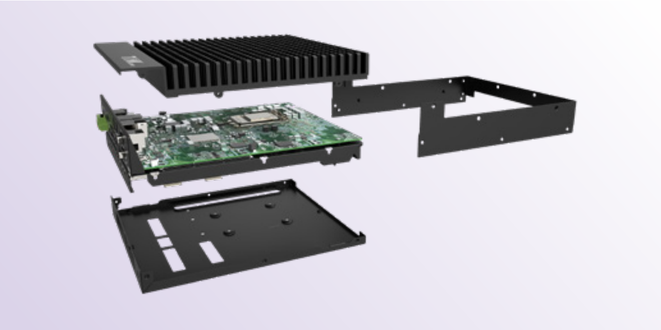
Fanless *M.2* *Dual Display* *Dual LAN*

Specifications

Model Name		**TANK-XM813**
Chassis	**Color**	Black C
	Dimensions (WxDxH) (mm)	230.6 x 255 x68.7
	System Fan	Fanless
	Chassis Construction	Extruded aluminum alloys
Motherboard	**CPU**	Intel® Core™ Ultra 9 285T 1.4 GHz (up to 5.4 GHz, 24-core, 35W TDP) Intel® Core™ Ultra 9 285 2.5 GHz (up to 5.6 GHz, 24-core, 65W TDP) Intel® Core™ Ultra 7 265T 1.5 GHz (up to 5.3 GHz, 20-core, 35W TDP) Intel® Core™ Ultra 7 265 2.4 GHz (up to 5.3 GHz, 20-core, 65W TDP) Intel® Core™ Ultra 5 225T 2.5 GHz (up to 4.9 GHz, 10-core, 35W TDP) Intel® Core™ Ultra 5 225 3.3 GHz (up to 4.9 GHz, 10-core, 65W TDP)
	Chipset	W880
	Memory	2 x SO-DIMM DDR5 5600 (16GB pre-installed) (up to 96GB)
Storage	**HDD Bay**	2 x 2.5" SATA 6Gb/s HDD/SSD bay (RAID 0/1 supported)
I/O Interfaces	**Ethernet**	1 x 2.5 GbE by Intel® I226LM controller 1 x 2.5 GbE by Intel® I226-V controller
	USB 3.2 Gen 2 (10Gb/s)	7
	COM	2 x RS-232/422/485, 4 x RS-232
	Digital I/O	12-bit (6-in/6-out) DB15
	Display Interface	1 x DP++, 1 x HDMI™, 1 x USB4 (Display+USB 3.2 Gen 2x2)
	Audio	1 x Mic, 1 x Line out
	TPM	1 x Intel TPM 1 x 20pin TPM connector (Optional TPM-IN03 module)
	Others	1 x Power button, 1 x 2-pin terminal block for Remote Power Button, 1 x Reset button, 1 x AT/ATX switch, 1 x Power LED (red), 1 x HDD LED (green), 1 x 4-pin external system fan connector
Internal Expansions	**M.2**	1 x 2280 M-key (PCIe Gen4 x4) 1 x 2230 A-key (USB+PCIe Gen3 x1, supports vPRO)
	Expansion Backplane	Optional
Power	**Power Input**	12 ~ 28V DC
	Power Consumption	12V @ 8.8A (Intel® Core™ Ultra9 285 with 16GB memory)
Reliability	**Mounting**	Wall mount
	Operating Temperature	-20°C ~ 60°C (CPU TDP35W &SSD) -20°C ~ 50°C (CPU TDP65W &SSD), 10% ~ 95% non-condensing
	Storage Temperature	-40°C ~ 85°C, 10% ~ 95%, non-condensing
	Operating Shock	IEC68-2-27 half-sine, 5G, 11ms, 100 shocks with SSD
	Operating Vibration	MIL-STD-810H 514.8C-I with SSD
	Weight (Net/Gross)	3.24 kg / 3.6 kg
	Safety / EMC	CE, FCC
	Watchdog Timer	Programmable 1 ~ 255 sec/min
OS	**Supported OS**	Windows® 10/11 IoT Enterprise/ Linux

Modular Design, Easy to Install

The mainboard is secured to the support bracket to prevent PCB from bending or warping. The three-layer structure consisting of heat spreader, mainboard and baseboard makes it easier to install CPU, memory and HDD, compared with the former TANK series.

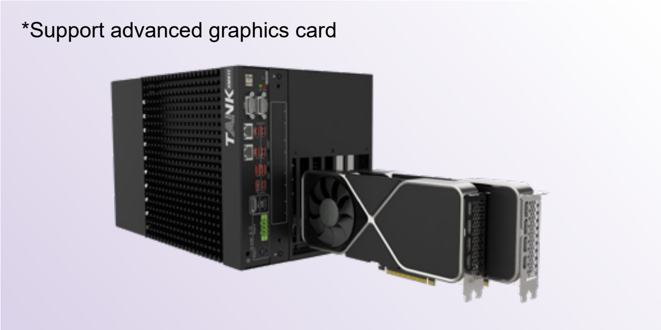


Support High-performance Graphics Card

With IEI power board, it can support full-height and full-length 3-slot high-end graphics cards.

Maximum length of graphics card supported:350mm

*Specified power adapter is required.

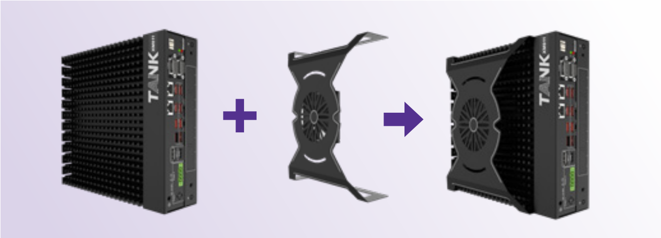

*Support advanced graphics card

Flexible Expansion

Different expansion requirements can be met. Dual-slot and four-slot SKUs are provided for selection. Customers can choose the type of expansion slot according to their needs.

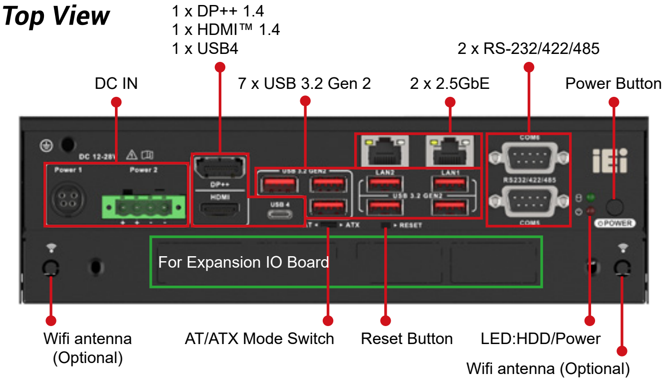
External Fan

Installing an external fan helps to increase system performance in harsh environment.

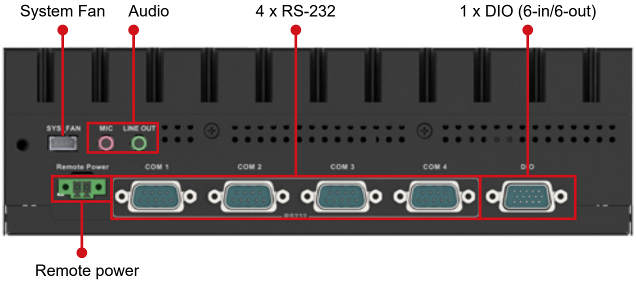


Fully Integrated I/O

Top View

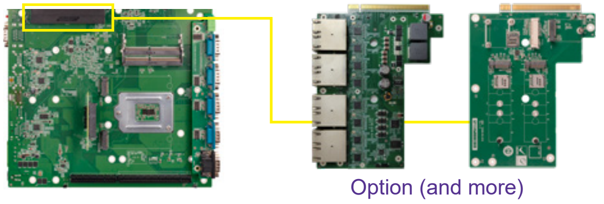


Front View



Modular Board Design

It supports various optional modules, such as M.2 expansion card, 8-port PoE expansion card, etc.


Option (and more)

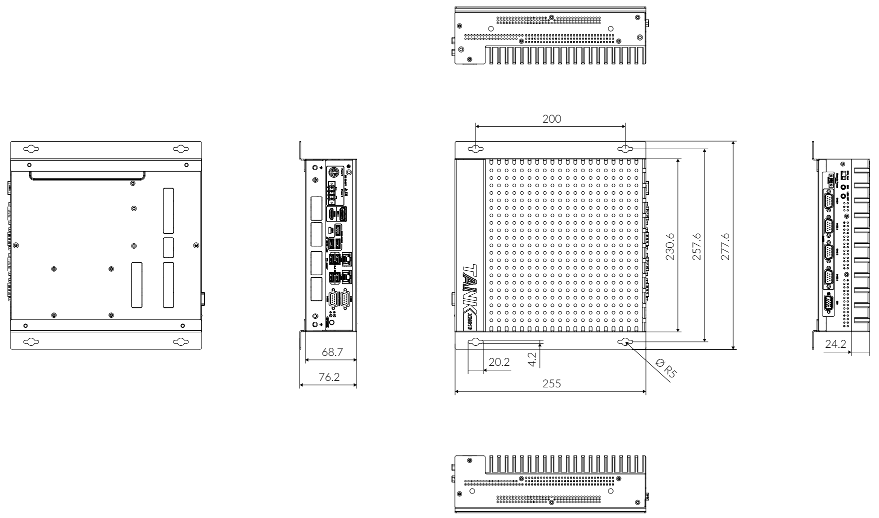
Expansion IO Board	
GPOE-XM81-8P	I/O expansion module for TANK 81 series, 8 x 2.5G LAN with PoE
TXIOB-XM81-A	I/O expansion module for TANK 81 series, 2 x M.2 B Key, 1 x M.2 A Key, 1 x PCIe Mini

Support 35W & 65W CPU

Operating temperature:	
With 35w CPU Or 65W CPU setting PL1&PL2 (Power limit at 35W):	-20°C ~ 60°C
With 65w CPU:	-20°C ~ 50°C

* Default CPU PL1/PL2 power limit: 35W (adjustable via BIOS)

Dimensions *(Unit: mm)*



TANK-XM813

Ordering Information

Model	Description
TANK-XM813-U5AD-R10	Ruggedized Fanless Embedded System With Intel® Ultra 5 225T 2.5GHz (up to 4.9GHz, 10-core, TDP 35W), 16GB RAM, 1xHDMI™, 1xDP++, USB4, 12~28V DC and RoHS
TANK-XM813-U5BD-R10	Ruggedized Fanless Embedded System With Intel® Ultra 5 225 3.4GHz (up to 4.9GHz, 10-core, TDP 65W), 16GB RAM, 1xHDMI™, 1xDP++, USB4, 12~28V DC and RoHS
TANK-XM813-U7AD-R10	Ruggedized Fanless Embedded System With Intel® Ultra 7 265T 1.5GHz (up to 5.3 GHz, 20-core, TDP 35W), 16GB RAM, 1xHDMI™, 1xDP++, USB4, 12~28V DC and RoHS
TANK-XM813-U7BD-R10	Ruggedized Fanless Embedded System With Intel® Ultra 7 265 2.4GHz (up to 5.3 GHz, 20-core, TDP 65W), 16GB RAM, 1xHDMI™, 1xDP++, USB4, 12~28V DC and RoHS
TANK-XM813-U9AD-R10	Ruggedized Fanless Embedded System With Intel® Ultra 9 285T 1.4GHz (up to 5.4 GHz, 24-core, TDP 35W), 16GB RAM, 1xHDMI™, 1xDP++, USB4, 12~28V DC and RoHS
TANK-XM813-U9BD-R10	Ruggedized Fanless Embedded System With Intel® Ultra 9 285 2.5GHz (up to 5.6 GHz, 24-core, TDP 65W), 16GB RAM, 1xHDMI™, 1xDP++, USB4, 12~28V DC and RoHS

Options

Part No.	Description
EMB-WIFI-KIT02I3-R10	2T2R M.2 wifi module kit for embedded system, IEEE802.11a/b/g/n/ac/ax, 1 x M.2 AE Key Wireless LAN & Bluetooth 5.2;Intel;AX210.NGWG Module, 2 x RF cable, 2 x Antenna; RoHs
63040-010180-200-RS	Adapter Power;FSP;FSP180-ABAN3;9NA1804008;Active PFC;Vin:90~264VAC;180W;Dim:75.6*151.3*25.4mm;Plug=6.5mm;Cable=1500mm;Erp(NO LOAD 0.5W);Vout:19VDC;Din 4Pin/lock;CCL;RoHS
32702-000202-100-RS	POWER CORD; EUROPEAN CODE(VDE); 1000mm; 300V; (A)PLUG:SH-005(16A/250V); (B)CONNECTOR:C13(SH-006, 10A/250V)
SF-TANK-XM81-R10	External fan for TANK-XM81 Series
TPM-IN03-R10	20-pin Infineon SPI TPM2.0 module, software mangement tool

Optional Expansion Backplane

Part No.	Description
TXCBP-XM81-2A-R10	Expansion backplane for TANK 81 Series, 2 slots, 1 x PCIe Gen4 x16 & 1 x PCIe Gen3 x4
TXCBP-XM81-2B-R10	Expansion backplane for TANK 81 Series, 2 slots, 1 x PCIe Gen4 x16(x8 signal) & 1 x PCIe Gen3 x16(x8 signal)
TXCBP-XM81-4A-R11	Expansion backplane for TANK 81 Series, 4 slots, 1 x PCIe Gen4 x16 & 2 x PCIe Gen3 x4 & 1 x PCIe Gen3 x1 w/ Ext. PWR Conn.
TXCBP-XM81-4B-R11	Expansion backplane for TANK 81 Series, 4 slots, 1 x PCIe Gen4 x16(x8 signal) & 1 x PCIe Gen3 x16(x8 signal) & 2 x PCIe Gen3 x4 w/ Ext.PWR Conn.
TXCBP-XM81-4C-R10	Expansion backplane for TANK 81 Series, 4 slots, 1 x PCIe Gen4 x16 & 2 x PCI & 1 x PCIe Gen3 x4
TXCBP-XM81-G2-PW-R11	Expansion backplane for TANK 81 Series, 6 slots, 1 x PCIe Gen4 x16(x8 signal) & 1 x PCIe Gen3 x16(x8 signal) & 2 x PCIe Gen3 x4 w/ Ext. PWR Conn.
IDD-X1228150-R10*	Extended Power Board for TANK-XM81 Series, 150W@16~28V or 380W@12V DC input 12V output Power Module

* For expansion cards (graphics cards, accelerator cards) that require independent power supply to provide independent power supply, it must be equipped with a Backplane with W/extemal power supply function.

Optional Expansion Chassis

Part No.	Description
TXC-XM81-3S-R10	3-slot expansion chassis for TANK 81 Series
TXC-XM81-4S-R10	4-slot expansion chassis for TANK 81 Series
TXC-XM81-G1-R10	4-slot One GPU expansion chassis for TANK 81 Series
TXC-XM81-G2-R10	6-slot Dual GPU expansion chassis for TANK 81 Series

Optional Internal Expansion Boards

Part No.	Description
GPOE-XM81-8P-R11	I/O expansion module for TANK 81 Series, 8 x 2.5G LAN with PoE
TXIOB-XM81-A-R10	I/O expansion module for TANK 81 Series, 2 x M.2 B Key, 1 x M.2 A Key, 1 x PCIe Mini

Packing List

1 x Screw pack	2 x Terminal block	1 x Mounting bracket	1 x SATA Cable