

TBOX-16D28

Intel 12th Alder Lake -U Core i5-1235U

2 RJ45, 4 USB, 1 USB-C, 1 HDMI, 1 DP, 1 COM; DC 9~36V input

Powerful Control Cabinet Industrial PC

Version: 3.0



Features:

- Rugged & Slim design, fanless design;
- Intel 12th Gen. Alder Lake-U Core i5-1235U 2P/8E core processor;
- Dual DDR5 memory, up to 64GB, 2* M.2 2280 storage slots;
- DC terminal wide 9 ~36V input, 1 SW remote switch;
- 2 RJ45, optional with Wi-Fi/BT, 3G/4G/5G wireless function;
- 2 USB3.1, 2 USB3.0, 1 USB-C, 1 COM, 1 HDMI, 1 DP, Audio;
- 2 M.2 & 1 Mini-PCIe expansion slots, 1 SIM card slot;
- Cabinet mount, optional Din-Rail mount;
- Industrial operating -20 ~ +60°C temp. range.

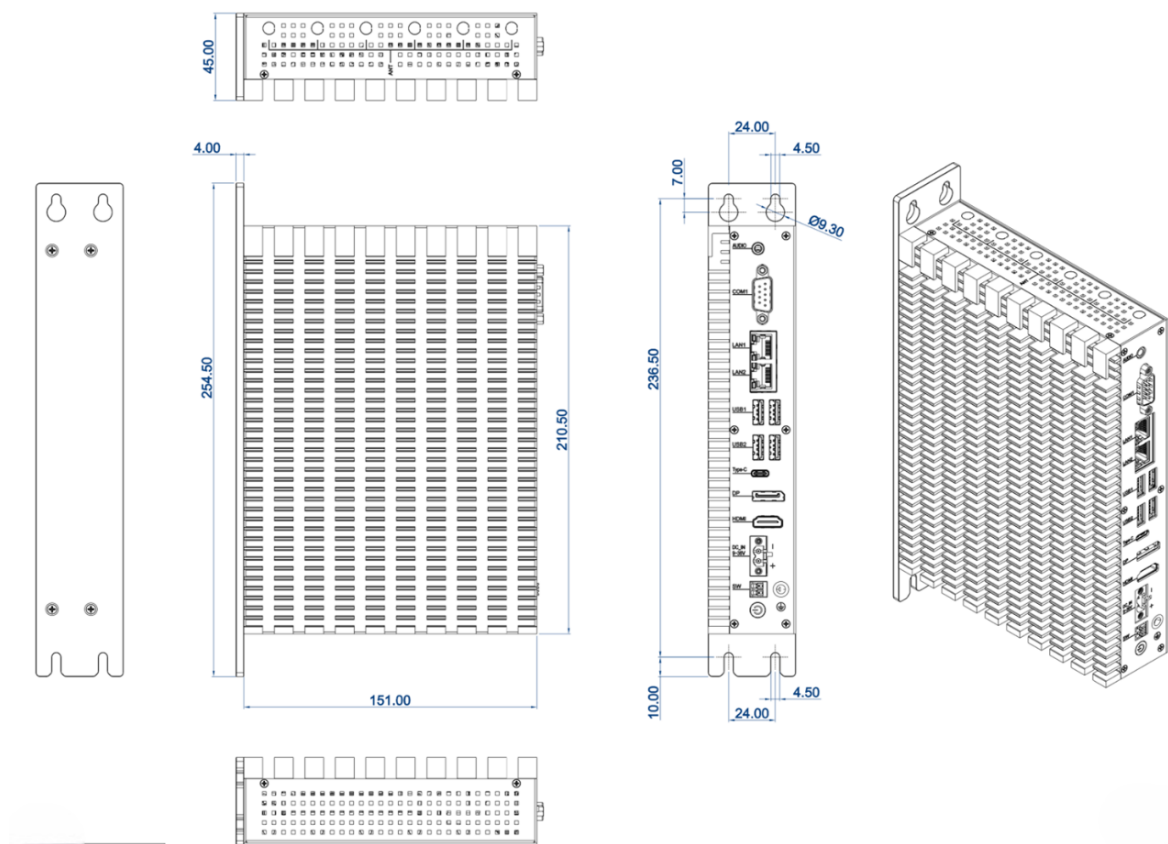
Specification



System	BIOS	SPI AMI EEI BIOS
	CPU	Intel 12 th Gen. Alder Lake-U Core i5-1235U processor, 2P/8E-Core
	CPU Ghz	P-core Up to 4.40Ghz; E-core up to 3.30Ghz
	TDP	15W
	Graphic	Intel Iris Xe Graphics eligible (Up to 80 EUs, 1.2Ghz)
	TPM	Intel PTT TMP2.0
	Memory	SO-DIMM, DDR5-4800 Mhz, Dual Channels, Max. up to 64GB
	Storage	1* M.2 2280 M-Key slot (PCIe x4 Gen IV, NVMe) SSD, 1* M.2 2280 M-Key slot (SATA) SSD ^[1]
	Network	1* Intel I226 (2.5GbE), 1* Intel I219 (1.0GbE) Network chips, optional support 3G/4G/5G/Wi-Fi/BT, Wi-Fi6 wireless
	Expansion	1* M.2 (NGFF) B-Key 3042/3052 slot, 1* M.2 E-Key 2240 slot, 1* Mini-PCIe slot, 1* Sim card slot
IO interface	Watchdog	0 ~ 256 seconds programmable
	Operating system	Win10 IoT 2021 LTSC; Win10 (21H2), Win11(21H2 or later); Linux Kernel 5.17 or later
	Serial port	COM1: RS232/RS485/RS422 (BIOS control)
	Ethernet	2* RJ45
	USB	2* USB3.1 type-A (USB3.2 Gen2x1 10Gbps), 2* USB3.0 type-A (USB3.2 Gen1x1 5Gbps), 1* USB-C (USB3.1 & DP1.4)
	Display	1* HDMI1.4 (Max. resolution to 4K@30Hz), 1* DP++ (Max. support 8K @30Hz)
	Audio	1* Mic-in/Line-out (2-in-1, 3.5mm Jack)
Structure	GPIO	8* GPIO (Optional shared via 1* DB9 COM port)
	Power input	1* 2 pin, DC terminal
	Box structure and surface	Aluminum alloy, anodizing and anti-scratch treatment
	Color	Black
	Mount method	Cabinet mount, Din-Rail mount (Optional)
	Cooling system	Finned aluminum heatsinks
	Indicator & Button	Power switch, Power LED, HDD LED
	Dimension	254.50 mm * 151.00mm * 45.00 mm (210.50mm with mount rack)
Power & Environmental	Net weight	About 1.3 KG
	Operating temp.	-20 ~ + 60 (°C)
	Storage temp.	-40 ~ + 80 (°C)
	Humidity	10 ~ 95% @ 10C (No condensation)
	Vibration	50 ~ 500 Hz, 1.5G, 0.15mm peak to peak
	Shock	10G/Peak (11 ms)
	Power input	DC 9~36V
	Power consumption	About 25W
Power & Environmental	Certificate	CE/FCC/ROHS

[1] This M.2 slot Default as SATA SSD, optional as NVMe 4x SSD to support RAID 0/1 (selected by resistors).

Dimensions (mm)



Ordering information

Part no.	Description
TBOX-16D28	Intel 12 th Gen. Alder Lake-U Core i5-1235U Processor, 2 RJ45, 2 USB3.1, 2 USB3.0, 1 USB-C, 1 COM, 1 HDMI, 1DP, Audio, DC 9~36V, No PSU, Cabinet mount rack
TBOX-16D28R	Intel 12 th Gen. Alder Lake-U Core i5-1235U Processor, 2 RJ45, 2 USB3.1, 2 USB3.0, 1 USB-C, 1 COM, 1 HDMI, 1DP, Audio, DC 9~36V, No PSU, Din-Rail mount rack
TBOX-16D28N	Intel 12 th Gen. Alder Lake-U Core i5-1235U Processor, 2 RJ45, 2 USB3.1, 2 USB3.0, 1 USB-C, 1 COM, 1 HDMI, 1DP, Audio, DC 9~36V, No PSU, No mount rack
Optional	Description
-8G / -16G / -32G/-64G	SO-DIMM, DDR5, <u>8GB/16GB/32GB/64GB</u>
-256GS / -512GS/-1TS	M.2 NVMe SSD: <u>256GB/512GB/1TB</u> M.2 SATA SSD: 256GB/512GB/1TB
	Wi-Fi 6 module, with Antenna
TBOX-WiBlu2	Wi-Fi module with BT integrated, with Antenna Wi-Fi module, with Antenna
EM06-E-PCKit	All network 4G/5G network module, with antenna
Power Supply	60W/12V power supply unit (If needed)

Packing List

Description	Quantity
Standard TBOX-16D28 Box PC Product	1 piece
DC Power Flying Lead (mains adaptor not included)	1 set