

tBOX210 NEW

Rail-grade Fanless Embedded System with LGA1700 14th/13th/12th Gen Intel® Core™ i9/i7/i5/i3 or Celeron® Processor, Intel® Q670E, 24 to 110 VDC for Onboard Intelligent Surveillance Application



Features

- CE, LVD, FCC, EN 50155, EN 45545-2, and NFPA 130 certified
- LGA1700 14th/13th/12th Gen Intel® Core™ i9/i7/i5/i3 or Celeron® processor (CPU TDP 35W)
- 24 to 110 VDC input for all train types
- 4 M12 2.5GbE LAN ports for secure, high-bandwidth camera connections
- Intelligent solution of power management (smart ignition)
- 2 or 4 internal 2.5" 15 mm SATA drives for high storage capacity

Specifications

CPU	LGA1700 14th/13th/12th Gen Intel® Core™ i9/i7/i5/i3 or Celeron® processor (CPU TDP 35W)	
Chipset	Q670E	
System Memory	1 x DDR5 SO-DIMM slot, up to 32GB	
System I/O Outlets	Display	1 x HDMI Type A 1.4b (3840 x 2160 @ 30 Hz)
	DIO	1 x terminal block isolated 6-in/2-out DIO (isolation voltage: 2 kV)
	Ethernet	1 x RJ-45 2.5GbE LAN (Intel® I226-IT) (Rear) 4 x M12 X-code 2.5GbE LAN (Intel® I226-IT) (Front)
	USB	2 x USB 3.2 Gen 2 Type A
	Others	5 x antenna opening 1 x remote switch
Storage	SATA drive	2 x 2.5" 15 mm swappable SATA drive with 2 SATA, Intel® RAID 0/1 supported 4 x 2.5" 15 mm swappable SATA drive with 4 SATA, Intel® RAID 0/1/5/10 supported
	Expansion Interface	1 x M.2 Key M 2280 NVMe (PCIe x4 /SATA) occupied for OS storage 1 x M.2 Key B 3052 for 5G/LTE (4G) (PCIe/USB 3.0) 1 x full-size Rev. 1.2 PCI Express Mini Card slot for LTE/Wi-Fi/Bluetooth/GPS (PCIe/USB) 2 x Nano SIM slot 1 x M.2 Key E for Wi-Fi 6/Bluetooth (PCIe/USB)



Specifications

TPM	TPM 2.0
BIOS	AMI
Watchdog Timer	255 levels, 1 to 255 sec.
System Indicator	1 x LED indicator for power 1 x LED indicator for SATA drive activity
Power Supply	Railway: 1 x M12, 24 to 110 VDC
Power Consumption (Max.)	72 W
Operating Temperature	-40°C to +70°C (-40°F to +158°F) with W.T. peripheral*
Storage Temperature	-40°C to +85°C (-40°F to 185°F)
Relative Humidity	0% to 95% relative humidity, non-condensing
Shock (Operation)	EN 50155 EN 61373 (IEC 61373) Category 1 Class B, half-sine pulse, 5 g, 30 ms (longitudinal), 3 g, 30 ms (vertical/transverse)
Vibration (Operation)	3 Grms with SSD (5 to 500Hz, X/Y/Z direction; random, operating) 1 Grms with HDD (5 to 500Hz, X/Y/Z direction; random, operating) MIL-STD-810G, Method 514.6C-VI Category 4 compliant EN 50155 EN 61373 category 1 class B
IP Rating	IP30
Construction	Aluminum extrusion and heavy-duty steel
Dimensions (W x D x H)	2 SATA SKU: 300.6 x 182.4 x 81 mm (11.84" x 7.19" x 3.19") (Default with wall mount) 4 SATA SKU: 300.6 x 182.4 x 101 mm (11.84" x 7.19" x 3.98") (Default with wall mount)
Packing Dimensions (W x D x H)	417 x 388 x 208 mm (16.42" x 15.28" x 8.19")
Weight (net/gross)	2 SATA SKU: 4.2 kg (9.25 lbs)/5 kg (11.02 lbs) 4 SATA SKU: 4.3 kg (9.47 lbs)/5.1kg (11.24 lbs)
Mounting	Wall mount
Certifications	CE (Class A), LVD, FCC (Class A), EN 50155, EN 45545-2, and NFPA 130 CE/FCC EN 61000-6-4 (Class A), EN 61000-6-2, and FCC part 15 B (Class A) EN 50155 EN 50121-3-2, IEC 62236-3-2 LVD IEC 62368-1:2018
OS Support	Ubuntu 22.04, Windows® 10, and Windows® 11
Software Support	AXView

*Wide Temperature. All W.T. supported products have to be sorted by Axiomtek.

Ordering Information

tBOX210-RLS-MR (P/N: E26N210102)	Fanless embedded system with 14th/13th/12th Gen Intel® desktop processor (LGA1700), Q670E, HDMI, 6-in/2-out DIO, 2 USB 3.2, 4 M12 X-code 2.5 GbE LAN, RJ-45 2.5GbE LAN, 2 SATA drive, smart ignition, M12 A-code DC-in, and 24 to 110 VDC
tBOX210-RLS-MR2 (P/N: TBD)	Fanless embedded system with 14th/13th/12th Gen Intel® desktop processor (LGA1700), Q670E, HDMI, 6-in/2-out DIO, 2 USB 3.2, 4 M12 X-code 2.5 GbE LAN, RJ-45 2.5GbE LAN, 4 SATA drive, smart ignition, M12 A-code DC-in, and 24 to 110 VDC

Optional

AC to DC Adapter	509000002200	PWS 9NA0908344 FSP 90W AC to DC (24V) adapter with M12 connector
Cable/Power Cord	594B8120B30E 594B8152710E 599000001100 59906000010E 59903000000E 59904010000E	DC-in cable M12 female 5P 180 cm without ACC LAN cable M12 X-code to RJ-45 plug CAT6 180 cm Power cord YP12/YC12_CY-U0032 YUNG_LI 1830 mm Power cord YP-12/YC-12 (Japan) Power cord YP-22/YC-12 (Europe) Power cord YP-61A/YC-12 (UK) L=1830 mm
Anti-vibration Kit	8816N1000A0E	For in-vehicle/rolling stock which improves HDD stability in NVR applications *For more information, please search for "Anti-vibration kit" on the Axiomtek website.



*Specifications and certifications may vary based on different requirements.



Packing List

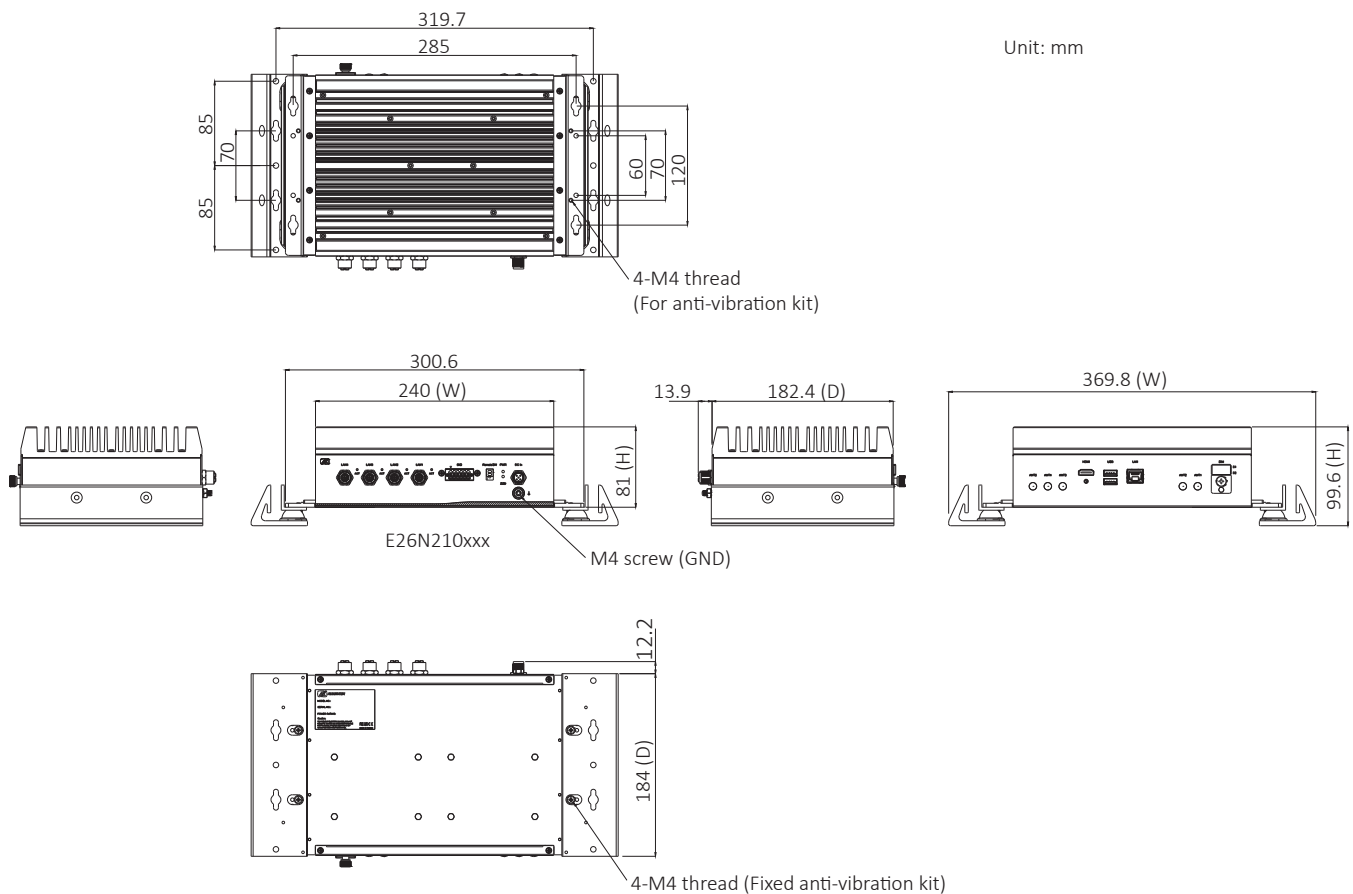
Thermal pads for memory and NVMe
1 x 12-pin terminal block connector for DIO
4 x mylar for HDD or SSD
1 x HDMI bracket

Power Protection

OCP (over current protection)
OVP (over voltage protection)
UVP (under voltage protection)
RPP (reverse polarity protection)

Dimensions

2 SATA SKU



Dimensions

4 SATA SKU

