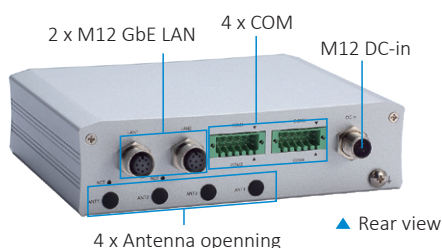
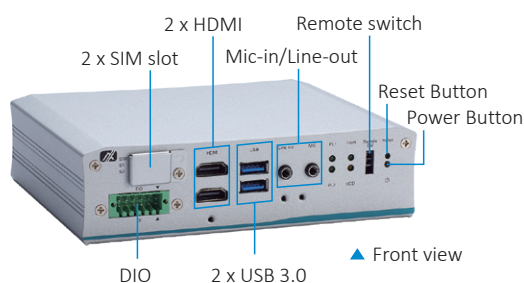


tBOX110 NEW

Vehicle and Rail-grade Fanless Embedded System with Intel Atom® x5-E3940 Processor



Features




- CE, FCC, LVD, EN 45545-2 and EN 50155 certified; ISO7637-2 compliant
- Wide operating temperatures from -40°C to +70°C (EN 50155 OT4)
- Wide range 9 to 36VDC and full range 24 to 110VDC (EN 50155 compliant) power input
- Smart ignition for safe shutdown and vehicle battery protection
- Compact size with rich I/O connectivity, TPM2.0 supported



Specifications

Model Name		tBOX110-APL-TV	tBOX110-APL-MR2	tBOX110-APL-MR4
P/N		E26N110100	E26N110102	E26N110103
Standard Color		Silver		
Construction		Aluminum extrusion and heavy-duty steel, IP20		
CPU		Intel Atom® x5-E3940 4C @1.6 GHz, TDP: 9.5W		
Chipset		SoC integrated		
System Memory		1 x DDR3L-1866 SO-DIMM, up to 8GB		
BIOS		AMI		
System I/O Outlet	Serial	2 x RS-232/422/485 (4-wire) with shield grounding	4 x Isolated RS-232/422/485 (4-wire) with shield grounding	
	Display	2 x HDMI 1.4b (with screw lock)		
	CANBus	2 x Isolated CANBus 2.0 A/B with SocketCAN supported	N/A	N/A
	Audio	1 x Mic-in, 1 x Line-out		
	Ethernet	2 x RJ-45 10/100/1000 Mbps Ethernet (Intel® I210-IT)	2 x M12 A-coded 10/100/1000 Mbps Ethernet (Intel® I210-IT)	2 x M12 X-coded 10/100/1000 Mbps Ethernet (Intel® I210-IT)
System I/O Outlet	USB	2 x USB 3.0		
	DIO	1 x DB9 8-bit programmable DIO		
	Others	1 x Reset button 1 x Power button 1 x Remote switch 4 x Antenna opening		
Expansion Interface		2 x Full-size Rev.1.2 PCI Express Mini Card slot: • 1 x USB/PCIe with external SIM socket (Standard size SIM socket) • 1 x mSATA/USB/PCIe with external SIM socket (Standard size SIM socket)		

Specifications

		Model Name	tBOX110-APL-TV 	tBOX110-APL-MR2 	tBOX110-APL-MR4 
		P/N	E26N110100	E26N110102	E26N110103
Storage	SATA Drive	1 x Internal 2.5" SATA drive (9.5 mm height)			
	mSATA	1 x mSATA (occupied 1 x PCI Express Mini Card slot)			
Watchdog Timer		255 levels, 1 to 255 sec.			
Power	Power Supply	1 x Terminal block, 9 to 36VDC with Smart Ignition		1 x M12 Male A-coded, 24 to 110VDC with Smart Ignition	
System Indicator		1 x LED indicator for SATA drive activity 1 x LED indicator for power 2 x LED indicator for LAN activity 2 x Programmable indicator			
Operating Temperature		-40°C to +70°C (-40°F to +158°F) with W.T. peripheral*			
Humidity		0% to 95%, non-condensing			
Dimensions		164.1 mm (6.46") (W) x 128 mm (5.04") (D) x 44.1 mm (1.74") (H) (without wall mount)			
Mounting		Wall mount, DIN-rail (optional)			
Weight (net/gross)		1.02 kg (2.24 lb)/1.44 kg (3.17 lb)			
Certifications		CE, FCC, LVD certified; ISO 7637-2 compliant		CE, FCC, LVD, EN 45545-2 and EN 50155 certified	
EMC	CE/FCC	EN 55032 (Class A), EN 55035, FCC part 15 B (Class A)		EN 61000-6-4 (Class A), EN 61000-6-2, EN 50155, EN 50121-3-2, IEC 62236-3-2, FCC part 15 B (Class A)	
Vibration Endurance		3 Grms w/ SSD (5 to 500Hz, X/Y/Z direction; random, operating) 1 Grms w/ HDD (5 to 500Hz, X/Y/Z direction; random, operating) 2 Grms w/ HDD & Anti-Vibration Kit (5 to 500Hz, X/Y/Z direction; random, operating) MIL-STD-810G, Method 514.6C-VI Category 4 compliant			
EOS Support		Windows® 10 64-bit, Ubuntu 20.04			
Software Support		AXView			

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

Ordering Information

Standard

tBOX110-APL-TV	E26N110100
tBOX110-APL-MR2	E26N110102
tBOX110-APL-MR4	E26N110103

Optional

Communication modules	886N32410A0E	MCR8822CE-P Wi-Fi KIT (20) for tBOX (E)
	886N11012A0E	LTE NL668-JP tBOX110 M1R 2020(E)
	886N11010A0E	LTE LE910C4-AP (20) for tBOX110 (E)
AC to DC adapter	509000001500	PWS FSP120-AAAN3(9NA1206647) FSP 120W for E26N110100 tBOX110-APL-TV
	509000002200	PWS 9NA0908344 FSP 90W for E26N110102/E26N110103 tBOX110-APL-MR2&4
Cable/Power Cord	594B8120B30E	DC IN CABLE M12 FEMALE 5P 180CM W/O ACC (for testing purpose)
	594B8152710E	LAN CABLE M12-XCODE/RJ45PLUG CAT6 180CM
	594N3202730E	LAN CABLE M12-A MALE 8P TO RJ-45
	59906000010E	Power Cord YP-12/YC-12(Japan)
	59903000000E	POWER CORD YP-22/YC-12 (Europe)
	59904010000E	Power Cord/UK YP-61A/YC-12 L=1830mm
Mounting Kit	886N11011A0E	tBOX110 DIN RAIL KITS (E)
Anti-vibration Kit	8816N1000A0E	tBOX Anti-vibration kit(S) (E)

*Specifications and certifications may vary based on different requirements.

Packing List

- 1 x Wall mount kit
- 1 x Thermal pad for memory
- 4 x Wall mount kit screw
- 1 x HDMI bracket
- 1 x Audio bracket
- 1 x DIO terminal block connector (MR only)
- 1 x Power 3-pin terminal block connector (TV only)
- 1 x Rubber for HDD
- 1 x Cable holder kit

Power Protection

- OCP (over current protection)
- OVP (over voltage protection)
- UVP (under voltage protection)
- RPP (reverse polarity protection)
- ISO 7637-2 pulse 1, 2a, 2b, 3a, 3b, 4 (vehicle version)
- Setting for in-vehicle battery protection: system will be automatically turned down at low voltage level
- Setting for ignition control: system will activate a counter while in-vehicle battery at low voltage, IGN ON delay and IGN OFF delay

Dimensions

