

tBOX300-510-FL NEW

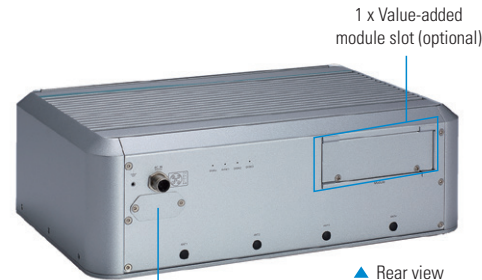
Fanless Embedded System with 7th Gen Intel® Core™ i7/i5/i3 & Celeron® Processor for Vehicle, Railway and Marine PC

Features

- CE (Class A), FCC, EN 50155, EN 50121-3-2, EN 45545-2, and IEC 60945 certified; E-Mark, ISO 7637-2, and DNV 2.4 compliant
- 7th gen Intel® Core™ & Celeron® processors (Kaby Lake)
- Value-added module slot for 9 types of value-added modules (COM/LAN/DIO/PoE/CAN/BNC)
- Supports Marvell Hardware RAID 0/1/10
- External PoE PSU (optional), up to 120W power supply
- Wide operating temperatures from -25°C to +70°C
- Power Input:
 - 24 to 110 VDC for railway version
 - 12/24 VDC for vehicle version
 - 24 VDC for marine version
- Intelligent solution of vehicle power management (ACC ignition)
- 4 swappable 2.5" SATA drives



▲ Front view



1 x Value-added module slot (optional)

PSU DC-IN connector (optional)

▲ Rear view

Specifications

Standard Color	Silver				
Construction	Aluminum extrusion and heavy-duty steel, IP30				
CPU	Intel® Core™ i7-7600U 2C @ 2.8 Intel® Core™ i5-7300U 2C @ 2.6 Intel® Core™ i3-7100U 2C @ 2.4 GHz Intel® Celeron® 3965U 2C @ 2.2GHz				
Chipset	SoC integrated				
System Memory	2 x DDR4 SO-DIMM slot, up to 32GB				
BIOS	AMI				
System I/O Outlet	<table border="0"> <tr> <td>Rear</td> <td> <ul style="list-style-type: none"> 1 x M12 or terminal block DC-in (optional) 1 x PoE power-in (Terminal block, optional) 1 x Value-added module slot 4 x Antenna opening 4 x RAID LED indicator </td> </tr> <tr> <td>Front</td> <td> <ul style="list-style-type: none"> 4 x LED indicator 2 x Audio (Mic-in & Line-out) 1 x RJ-45 10/100/1000 Mbps Ethernet (Intel® i210-IT) 4 x USB 3.0 1 x DVI-I 1 x DB9 serial console or RS-232/422/485 1 x Remote switch 1 x Reset bottom 4 x HDD/SSD tray </td> </tr> </table>	Rear	<ul style="list-style-type: none"> 1 x M12 or terminal block DC-in (optional) 1 x PoE power-in (Terminal block, optional) 1 x Value-added module slot 4 x Antenna opening 4 x RAID LED indicator 	Front	<ul style="list-style-type: none"> 4 x LED indicator 2 x Audio (Mic-in & Line-out) 1 x RJ-45 10/100/1000 Mbps Ethernet (Intel® i210-IT) 4 x USB 3.0 1 x DVI-I 1 x DB9 serial console or RS-232/422/485 1 x Remote switch 1 x Reset bottom 4 x HDD/SSD tray
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Watchdog Timer	255 levels, 1 to 255 sec.				
Storage	4 x swappable 2.5" SATA drive (9.5 mm height) 1 x mSATA (use 1 PCI Express Mini Card slot)				
RAID Function	Marvell HW RAID 0/1/10				
Expansion Interface	3 x Full-size PCI Express Mini Card slot 2 x SIM card slot 1 x Value-added module slot				
System Indicator	1 x LED indicator for system power 1 x LED indicator for HDD activities 2 x Programmable				
Power Supply	Railway version DC-input: 24 to 110 VDC (tolerance: 16.8 to 137.5 VDC) Vehicle version DC-input: 12/24 VDC (tolerance: 9 to 36 VDC, w/ ACC ignition) Marine version DC-input: 24 VDC (tolerance: 14 to 32 VDC)				
PoE Power Supply	PoE power output maximum 120W (**/****) 15.4W/8 ports (802.3af), 30W/4 ports (802.3at) * To be used with PoE VAM (VAM701 & 703) ** Different system version has different PSU. *** 24V input Railway ver. is available (Marine by request)				

Operating Temperature	-25°C to +70°C (-13°F to +158°F) with W.T. SSD -25°C to +55°C (-13°F to +131°F) with W.T. HDD
Humidity	10% to 95%, non-condensing
Vibration Endurance (operational)	3 Grms with SSD, 1 Grms with HDD (5 to 500Hz, X/Y/Z direction; random) EN 61373 cat. 1 class B IEC 60068-2-64 MIL-STD-810G, Method 514.6C, Procedure I, Category 4
Shock (non-operating test)	Shock optioning, 50 Grms, Half-sine 11 ms duration (with SSD, according to IEC60068-2-27)
Dimensions	321 mm (12.64") (W) x 210.2 mm (8.28") (D) x 105.33 mm (4.15") (H) 321 mm (12.64") (W) x 210.2 mm (8.28") (D) x 109.33 mm (4.30") (with wall mount)
Weight	4.5 kg (9.92 lb)/6 kg (13.23 lb)
Certifications	CE (Class A), FCC, EN 50155, EN 50121-3-2, EN 45545-2, and IEC 60945 certified; E-Mark, ISO 7637-2, and DNV 2.4 compliant
EOS support	Windows® 10 64-bit, Linux

Ordering Information










Standard	
tBOX300-510-FL-Celeron/i3/i5/i7-24-110-MRDC	Fanless railway embedded system, Intel® Celeron® 3965U/Core™ i3-7100U/i5-7300U/i7-7600U processor, 4 USB 3.0, DVI-I, RJ-45 LAN, serial console, Mic-in & Line-out, four 2.5" SATA trays, M12 A-code 5P DC-in, and 16.8 to 137.5 VDC
tBOX300-510-FL-Celeron/i3/i5/i7-TVDC No supporting PoE/PoE+	Fanless vehicle embedded system, Intel® Celeron® 3965U/Core™ i3-7100U/i5-7300U/ i7-7600U processor, 4 USB 3.0, DVI-I, RJ-45 LAN, serial console, Mic-in & Line-out, four 2.5" SATA trays, 9 to 36 VDC, TB 3P DC-in, and ACC ignition
tBOX300-510-FL-Celeron/i3/i5/i7-TMDC	Fanless marine embedded system, Intel® Celeron® 3965U/Core™ i3-7100U/i5-7300U/ i7-7600U processor, 4 USB 3.0, DVI-I, RJ-45 LAN, serial console, Mic-in & Line-out, four 2.5" SATA trays, TB 3P DC-in, and 14 to 32 VDC

*MRDC: M12 DC-IN connector, Railway SKU, DC voltage input

*TVDC: Terminal Block DC-IN connector, Vehicle SKU, DC voltage input

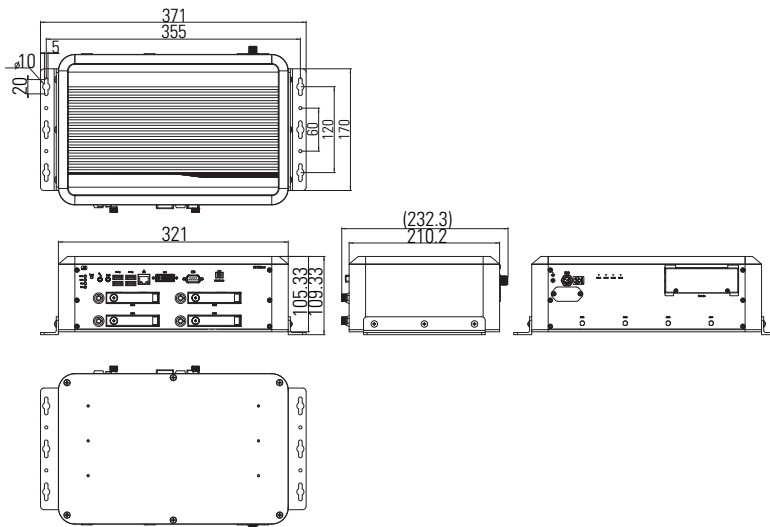
*TMDC: Terminal Block DC-IN connector, Marine SKU, DC voltage input

Value-Added Modules (VAMs)

Item	Specifications		
#1	4 x M12 A-code GbE (PoE optional) (P/N: E277700100) (PoE/PoE+, P/N: E277701100) *PSU is required if select VAM701		
		VAM700	VAM701 (PoE/PoE+)
#2	4 x RJ-45 A-code GbE (PoE optional) (P/N: E277702100) (PoE/PoE+, P/N: E277703100) *PSU is required if select VAM703		
		VAM702	VAM703 (PoE/PoE+)
#3	4 x 4-wire isolated RS-232/422/485 (P/N: E277100100)		
		VAM100	
#4	4 x isolated CANbus 2.0A/B (P/N: E277101100)		
		VAM101	
#5	8-in/8-out isolated DIO (P/N: E277200100)		
		VAM200	
#6	1 x PCI Express Mini Card Slot + 1 x SIM Card Slot & 1 x PCI Express Mini Card Slot (USB only) + 1 x SIM Card Slot (P/N: E277600100)		
		VAM600	
#7	4 x Video & 1 x Audio-in +1 x PCI Express Mini Card Slot (USB only) + 1 x SIM Card Slot (P/N: E277400100)		
		VAM400	

*Specifications and certifications may vary based on different requirements.

Dimensions



* All specifications and photos are subject to change without notice. www.axiomtek.com © 2019 Axiomtek Co., Ltd. All rights reserved.

Optional

2.5" SATA HDD/SSD	128GB or above
mSATA	64GB or above
DDR4 SO-DIMM	4GB to 16GB
3G/4G/GPS module	826N3230140E, 82606200410E, 826N5000100E
Wi-Fi/Bluetooth module	826N3230060E, 826N3230100E, 826N3230110E, 826N3230120E
DC in cable	594B8120B30E (M12, with ACC), 594B7100B00E (Wire, with ACC)
LAN cable	594N3202730E (M12-A male 8P to RJ-45)
Remote switch cable	594K3101020E
Value-added module (VAM)	VAM700, VAM701, VAM702, VAM703, VAM100, VAM101, VAM200, VAM600, VAM400
AC to DC adapter	50906D24000E (24V/120W, wire), 50966224010E (24V 90W, M12 Acode 5P)
Power cord	59903000000E (EU), 59906000010E (JP), 59902000000E (US), 59904000000E (UK)
Power supply unit (PSU)	E276120101 PSU120-259-RAILWAY PoE 120W DC/DC external PSU (EN 50155 compliance, 24V-in, 53V-out, available for tBOX500 24V railway version only) E276120102 PSU120-259-RAILWAY-48VDC PoE 120W DC/DC external PSU (EN 50155 compliance, 48V-in, 53V-out, available for tBOX500 48V railway version only) E276120103 PSU120-259-RAILWAY-96/110VDC PoE 120W DC/DC external PSU (EN 50155 compliance, 96/110V-in, 53V-out, available for tBOX500 96/110V railway version only)

*Specifications and certifications may vary based on different requirements.

Power Protection

SCP (short circuit protection)
OVP (over voltage protection)
UVP (under voltage protection)
RVP (reverse voltage protection)

Vehicle Version

ISO 7637-2 pulse 1/2/3/4

Setting for battery protection: Low voltage or very low voltage

Setting for ignition control: Low voltage counter, ACC-ON delay or shut down delay

Packing List

1 x Quick installation guide
1 x Driver CD
4 x Foot pad
1 x Screw pack
1 x Wall mount kit
4 x DRAM thermal pad
1 x Terminal block DC-in connector (for marine and vehicle version)
8 x HDD mylar
4 x SATA drive key