

# tBOX810-838-FL

Fanless Embedded System with Intel® Atom™ Processor E3845/E3827 for Vehicle, Railway and Marine PC

## Features

- EMark, ISO 7637, EN 50155, EN 50121, DNV 2.4 certified and IEC 60945 compliance
- Intel® Atom™ E3845 or E3827
- DDR3L-1333 4GB memory onboard
- Fanless design and wide temperature range from -40°C to +70°C (EN 50155 class TX)
- Intelligent power management solution
- Compact size with multiple I/Os, DIN-rail and wall mount
- 2 PCIe Mini Card slots and 1 SIM card slot



▲ Front view



▲ Rear view

## Specifications

Standard Color	Silver-Black				
Construction	Aluminum extrusion and heavy-duty steel				
CPU	Intel® Atom™ processor E3845 (4C@1.91 GHz) Intel® Atom™ processor E3827 (2C@1.75 GHz)				
System Memory	DDR3L-1333, 4GB memory onboard				
Chipset	SoC integrated				
BIOS	AMI				
System I/O/Outlet	<table border="0"> <tr> <td>Rear Side</td> <td>                     Option #1: 2 x M12 A-coded GbELAN + 1 x M12 DC power input Option #2: 2 x RJ-45 GbELAN + 1 x Phoenix DC power input (Intel® i210 x2) 4 x Antenna opening                 </td> </tr> <tr> <td>Front Side</td> <td>                     2 x RS-232/422/485 1 x DI/DO (8-bit programmable) 1 x VGA 2 x USB 2.0 1 x Remote switch 1 x Reset button                 </td> </tr> </table>	Rear Side	Option #1: 2 x M12 A-coded GbELAN + 1 x M12 DC power input Option #2: 2 x RJ-45 GbELAN + 1 x Phoenix DC power input (Intel® i210 x2) 4 x Antenna opening	Front Side	2 x RS-232/422/485 1 x DI/DO (8-bit programmable) 1 x VGA 2 x USB 2.0 1 x Remote switch 1 x Reset button
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Front Side	2 x RS-232/422/485 1 x DI/DO (8-bit programmable) 1 x VGA 2 x USB 2.0 1 x Remote switch 1 x Reset button				
Watchdog Timer	255 levels, 0 ~ 255 seconds/minutes				
Storage	1 x 2.5" 9.5 mm SATA drive 1 x mSATA				
Expansion Interface	2 x full-size PCIe Mini Card slot 1 x mSATA 1 x SIM card slot				
System Indicator	1 x green LED indicator for system power 1 x green LED indicator for programmable #1 1 x green LED indicator for programmable #2 1 x yellow LED indicator for HDD active 1 x green LED indicator for LAN #1 active 1 x green LED indicator for LAN #2 active				
Power Supply	Power input: 9 ~ 36 VDC Typical: 12/24 VDC				
Operating Temperature	-40°C ~ +70°C (-40°F ~ +158°F) with W.T. SSD -25°C ~ +55°C (-13°F ~ +131°F) with W.T. HDD				
Humidity	5% ~ 95%, non-condensing				
Vibration Endurance	3 Grms w/ SSD (5-500Hz, X, Y, Z direction; random) 1 Grms w/ HDD (5-500Hz, X, Y, Z direction; random)				
Shock	Comply EN 61373 section 10 table 3 category 1 class A and class B up to 5 Grms (30ms, ±X/Y/Z direction)				
Dimensions	163.8 mm (6.44") (W) x 108 mm (4.25") (D) x 44 mm (1.73") (H)				
Weight (net/gross)	0.77 kg (1.69 lb) / 1.25 kg (2.76 lb)				
Certificate	CE (Class A), EN 50155, EN 50121, E-Mark, ISO 7637, IEC 60945, DNV 2.4 certified				
OS support	Windows® 10, WEBS, WES7, Linux, VXWorks7				

## Ordering Information

Standard	
tBOX810-838-FL-E3827-RJ-DC (P/N: E26N810105)	Fanless vehicle/railway/marine embedded system with E3827 processor, 4GB DRAM, 2 GbE LANs (RJ-45), phoenix DC-in, 2 USB, VGA, 2 COM, DIO with ACC power setting for vehicle only
tBOX810-838-FL-E3827-M12-ACC-DC (P/N: E26N810102)	Fanless vehicle/railway/marine embedded system with E3827 processor, 4GB DRAM, 2 GbE LANs (M12), M12 DC-in, 2 USB, VGA, 2 COM, DIO with ACC power setting for vehicle only
tBOX810-838-FL-E3827-M12-RL-DC (P/N: E26N810107)	Fanless vehicle/railway/marine embedded system with E3827 processor, 4GB DRAM, 2 GbE LANs (M12), M12 DC-in, 2 USB, VGA, 2 COM, DIO for railway and marine only
tBOX810-838-FL-E3845-RJ-DC (P/N: E26N810104)	Fanless vehicle/railway/marine embedded system with E3845 processor, 4GB DRAM, 2 GbE LANs (RJ-45), phoenix DC-in, 2 USB, VGA, 2 COM, DIO with ACC power setting for vehicle only
tBOX810-838-FL-E3845-RJ-AUDIO-DC (P/N: E26N810110)	Fanless vehicle/railway/marine embedded system with E3845 processor, 4GB DRAM, 2 GbE LANs (RJ-45), phoenix DC-in, 2 USB, VGA, 2 COM, DIO audio with ACC power setting for vehicle only
tBOX810-838-FL-E3845-M12-ACC-DC (P/N: E26N810100)	Fanless vehicle/railway/marine embedded system with E3845 processor, 4GB DRAM, 2 GbE LANs (M12), M12 DC-in, 2 USB, VGA, 2 COM, DIO with ACC power setting for vehicle only
tBOX810-838-FL-E3845-M12-RL-DC (P/N: E26N810106)	Fanless vehicle/railway/marine embedded system with E3845 processor, 4GB DRAM, 2 GbE LANs (M12), M12 DC-in, 2 USB, VGA, 2 COM, DIO for railway and marine only
tBOX810-838-FL-E3845-M12-AUDIO-DC (P/N: E26N810109)	Fanless vehicle/railway/marine embedded system with E3845 processor, 4GB DRAM, 2 GbE LANs (M12), M12 DC-in, 2 USB, VGA, 2 COM, DIO audio for railway and marine only
tBOX810-838-FL-E3845-RJ-Marine-DC (P/N: E26N810114)	Fanless marine grade embedded system with E3845 processor, 4GB DRAM, 2 GbE LANs (M12), M12 DC-in, 2 USB, VGA, 2 COM, DIO audio for marine only
tBOX810-838-FL-E3827-RJ-Marine-DC (P/N: E26N810115)	Fanless marine grade embedded system with E3827 processor, 4GB DRAM, 2 GbE LANs (M12), M12 DC-in, 2 USB, VGA, 2 COM, DIO audio for marine only

### Optional

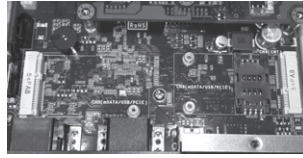
- 2.5" SATA HDD/SSD
- mSATA SSD
- 3G/4G module
- Wi-Fi module
- Wi-Fi & bluetooth
- GPS module
- CANbus module
- Video card module
- Audio module

\* Specifications and certifications may vary according to various options.

## Expansion & Installation



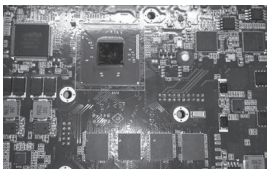
Slim and compact size 163.8 x 108 x 44 mm



2 x PCIe Mini Card slots + 1x SIM card slot  
Excellent extensibility in such compact size



Optional I/O ports for audio, LAN jack type and DC in jack type



Onboard processor and system memory for great reliability and stability



Easy storage maintenance



DIN rail, wall mount supported for various applications, without space limitation

### Packing List

- 1 x Quick manual
- 1 x Driver CD
- 1 x Screw pack
- 4 x Foot pad
- 1 x Wall-mount kit
- 1 x DIN-rail kit

### Power Protection

- DC Version**
- SCP (short circuit protection)
  - OVP (over voltage protection)
  - UVP (under voltage protection)
  - ISO 7637 pulse 1/2/3/4/5a
  - Battery protection setting: Low voltage, Very low voltage
  - Ignition control setting: Low voltage counter, ACC-CN delay, Shut down delay

### Dimensions

