

# tBOX810-838-FL

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

## Features

- E-Mark, ISO 7637, EN 50155, EN 50121, DNV 2.4 and IEC 60945 certified
- Intel® Atom® processor 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 PCI Express Mini Card slots and 1 SIM card slot



e13/ISO7637



## 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 GbE LAN + 1x M12 DC power input Option #2: 2 x RJ-45 GbE LAN + 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 GbE LAN + 1x M12 DC power input Option #2: 2 x RJ-45 GbE LAN + 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 PCI Express 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 (E-Mark) Power input: 14 ~ 32 VDC, typical: 24 VDC (EN 50155, DNV 2.4)				
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				
EOS support	Windows® 10, WE8S, WES 7, Linux, VxWorks7				



▲ Front view



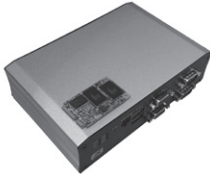
▲ Rear view

## Ordering Information

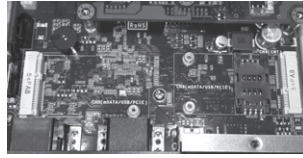
Standard	
tBOX810-838-FL-E3827-RJ-DC (P/N: E26N810105)	Fanless vehicle/railway/marine embedded system with E3827 processor, 4GB DRAM, 2 GbE LANs (RJ-45), phoenix DC-in, 2 USB, VGA, 2 COM, DIO with ACC power setting for vehicle only
tBOX810-838-FL-E3827-M12-ACC-DC (P/N: E26N810102)	Fanless vehicle/railway/marine 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



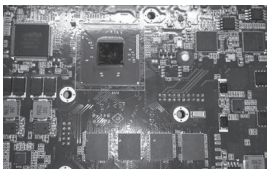
Slim and compact size 163.8 x 108 x 44 mm



2 x PCI Express 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
- 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-ON delay, Shut down delay

## Dimensions

