

# tBOX810-838-FL NEW

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

## Features

- E-Mark, ISO 7637-2, 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 solution of vehicle power management (ACC ignition)
- Compact size with multiple I/Os, DIN-rail and wall mount
- 2 PCI Express Mini Card slots and 1 SIM Card slot



▲ Front view



▲ Rear view

## Specifications

Standard Color	Silver-Black
Construction	Aluminum extrusion and heavy-duty steel, IP40
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	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 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
Watchdog Timer	255 levels, 1 ~ 255 sec.
Storage	1 x 2.5" 7/9.5 mm SATA drive 1 x mSATA
RAID function	N/A
Expansion Interface	2 x full-size PCI Express Mini Card slot 1 x mSATA (use 1 PCI Express Card slot) 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	9 ~ 36 VDC, typical: 12/24 VDC 14 ~ 32 VDC, typical: 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 7637-2, IEC 60945, DNV 2.4 certified
EOS support	Windows® 10, WE8S, WES 7, Linux, VxWorks7

## Ordering Information

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

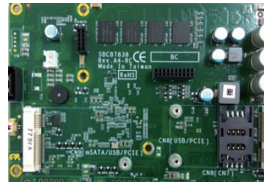
Optional	
2.5" SATA HDD/SSD	16GB or above
mSATA	16GB or above
3G/4G/GPS module	826N3230130E, 826N3230140E, 826N8101040E, 826N8101030E, 826N8101020E
Wi-Fi/Bluetooth module	826K6231010E, 826K3101060E, 826N3230110E, 826N3230100E, 826N3230120E
DC in cable	594B8120B30E(M12-wire, w/o ACC), 594B7100B00E (M12-wire, w/ ACC)

LAN cable	594N3202730E(M12-A male 8P to RJ-45)
Remote Switch Cable	594K3101020E
AC to DC Adapter	50957245000E(24V/90W,WIRE), 50906D24000E(24V/120W,WIRE), 50966D45010E(24V/120W.M12)
Power cord	59903000000E(EU), 59906000010E(JP), 59902000000E(US), 59904000000E(UK)
CANbus module	E392903100 (AX92903)
Audio module	E392905100 (AX92905)

## Expansion & Installation



Slim and compact size 163.8 x 108 x 44 mm



2 x PCI Express Mini Card slot + 1 x 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

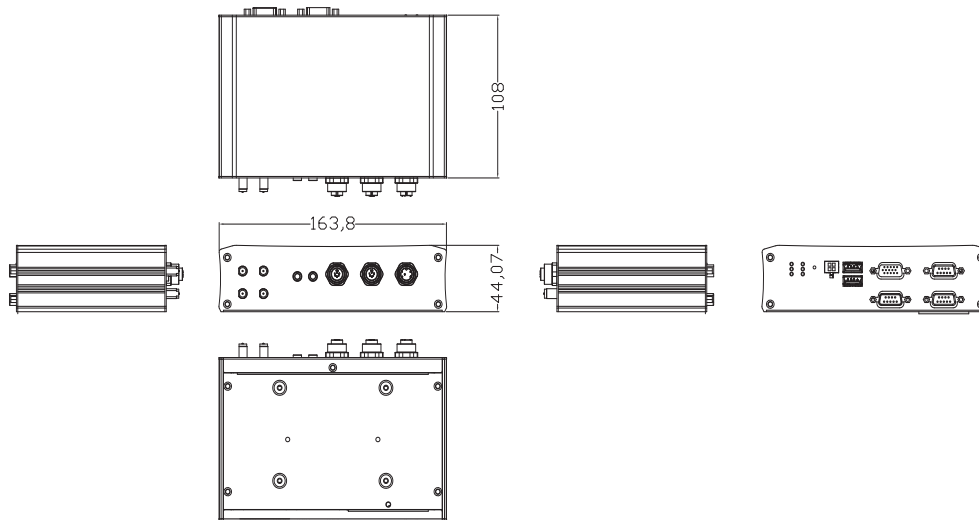
### DC Version

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

### Vehicle Version

- ISO 7637-2 pulse 1/2/3/4
- Battery protection setting: Low voltage, Very low voltage
- Ignition control setting: Low voltage counter, ACC-ON delay, Shut down delay

## Dimensions



## Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

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