

# tBOX313-835-FL

Fanless Embedded System with Intel® Atom™ Processor E3845 Quad Core™ (1.91 GHz) for Vehicle PC



▲ Front view

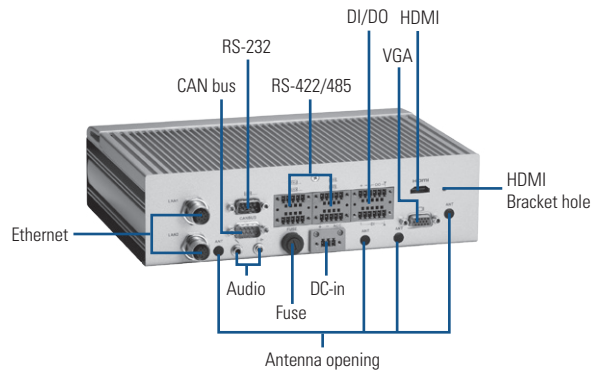


## Specifications

Standard Color	Silver-Black				
Construction	Aluminum extrusion and heavy-duty steel				
CPU	Intel® Atom™ processor E3845 (4C@1.91 GHz)				
System Memory	DDR3L-1333, 4 GB memory onboard				
Chipset	SoC integrated				
BIOS	AMI				
System I/O Outlet	<table border="0"> <tr> <td>Rear Side</td> <td>                     2 x GbE LAN (M12 D-coded)(RJ-45, PoE is optional)                      4 x isolated RS-422/485                      1 x RS-232                      1 x isolated DI/DO (6-in/2-out)                      1 x isolated CAN Bus                      2 x audio (mic-in/line-out, screw type)                      1 x VGA                      1 x HDMI                      1 x HDMI bracket hole                      1 x VDC power input                      1 x fuse                      4 x antenna opening                 </td> </tr> <tr> <td>Front Side</td> <td>                     2 x USB 2.0                      2 x audio (mic-in/line-out, screw type)                      1 x reset switch                      1 x remote power switch                      1 x 2.5" SATA drive tray                      1 x CFAST™ slot + 2 x SIM card sockets                 </td> </tr> </table>	Rear Side	2 x GbE LAN (M12 D-coded)(RJ-45, PoE is optional) 4 x isolated RS-422/485 1 x RS-232 1 x isolated DI/DO (6-in/2-out) 1 x isolated CAN Bus 2 x audio (mic-in/line-out, screw type) 1 x VGA 1 x HDMI 1 x HDMI bracket hole 1 x VDC power input 1 x fuse 4 x antenna opening	Front Side	2 x USB 2.0 2 x audio (mic-in/line-out, screw type) 1 x reset switch 1 x remote power switch 1 x 2.5" SATA drive tray 1 x CFAST™ slot + 2 x SIM card sockets
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Instant Fuse Repair	Current Rating 15A, Voltage Rating: 125V				
Watchdog Timer	255 levels, 0 ~ 255 seconds/minutes				
Storage	1 x 2.5" SATA HDD (suspension designed, HDD height supports 7/9.5/12.5/15 mm) 1 x CFAST™ (front accessible)				
Expansion Interface	3 x PCI Express Mini Card with 2 x SIM card slot (two front accessible) 1x PCIe mini card supports mSATA				
System Indicator	1 x green LED for HDD active 1 x yellow LED for LAN1 active 1 x yellow LED for LAN2 active 1 x red LED for power				

## Features

- eMark, ISO7637 certificated, EN45545-2 complied
- Intel® Atom™ Bay Trail-I E3845 4C@1.91 GHz
- High performance DDR-1333 4 GB memory onboard
- Fanless operation with IP40
- Operating temperature range of -40°C ~ +70°C
- Isolated RS-422/485, CANbus 2.0A/B and DIO ports
- Supports USB 2.0 and SATA2
- Suspension one 2.5" SATA HDD and 1 CFAST™ socket
- Instant fuse repair design
- Internal mini PCIe slots and SIM socket



▲ Rear view

Power Supply	Power input : Typical 12/24vdc (9 ~ 36 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
Storage Temperature	-40°C ~ +80°C (-40°F ~ +176°F)
Humidity	5% ~ 95%, non-condensing
Vibration Endurance	3 Grms with SSD & CFAST™ (5-500Hz, X, Y, Z direction; Random) (IEC60068-2-34) 2 Grms with HDD (5-500Hz, X, Y, Z direction; Random)
Dimensions	244 mm (9.6") (W) x 180.5 mm (7.1") (D) x 65.1 mm (2.56") (H)
Weight (net/gross)	3 kg (6.61 lb)/ 4 kg (8.82 lb)
Certificate	CE, eMark, ISO 7637, EN45545-2 compliance
EOS support	WES7/8, Compac2013, Linux

## Ordering Information

### Standard

tBOX313-835-FL-M12-DC	Fanless vehicle embedded system, with Intel® Atom™ E3845 1.91 GHz processor, 4 GB DRAM, 2 USB, 1 CAN bus, 2 M12 GbE LAN, 4 RS-422/485, 1 RS-232 and DIO (6-in/2-out)
tBOX313-835-FL-M12-POE-DC	Fanless vehicle embedded system, with Intel® Atom™ E3845 1.91 GHz processor, 4 GB DRAM, 2 USB, 1 CAN bus, 2 PoE M12 GbE LAN, 4 RS-422/485, 1 RS-232 and DIO (6-in/2-out)
tBOX313-835-FL-RJ-DC	Fanless vehicle embedded system, with Intel® Atom™ E3845 1.91 GHz processor, 4 GB DRAM, 2 USB, 1 CAN bus, 2 RJ-45 GbE LAN, 4 RS-422/485, 1 RS-232 and DIO (6-in/2-out)
tBOX313-835-FL-RJ-POE-DC	Fanless vehicle embedded system, with Intel® Atom™ E3845 1.91 GHz processor, 4 GB DRAM, 2 USB, 1 CAN bus, 2 PoE RJ-45 GbE LAN, 4 RS-422/485, 1 RS-232 and DIO (6-in/2-out)

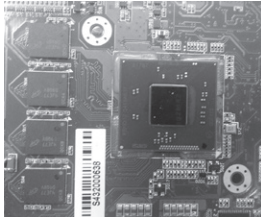
### Optional

2.5" SATA HDD/SSD  
CFAST™  
3G module  
Wi-Fi module  
Wi-Fi & bluetooth  
GPS module

\*Specifications and certifications are based on options and may vary.

\* All specifications and photos are subject to change without notice.

## Expansion & Installation



Onboard Intel® Atom™ Bay Trail-I E3845, 4C@ 1.91 GHz processor and 4 GB DDR3L-1333 DRAM



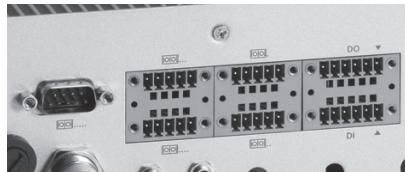
Removable CFast™, SIM slot and suspension 2.5" SATA HDD/SSD



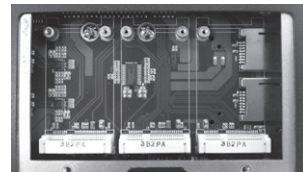
M12 railway power input and two Gigabit LAN connectors



HDMI and VGA display



Isolated RS-422/485 and DIO ports



3 x Mini Card with 2 x SIM slot

## Packing List

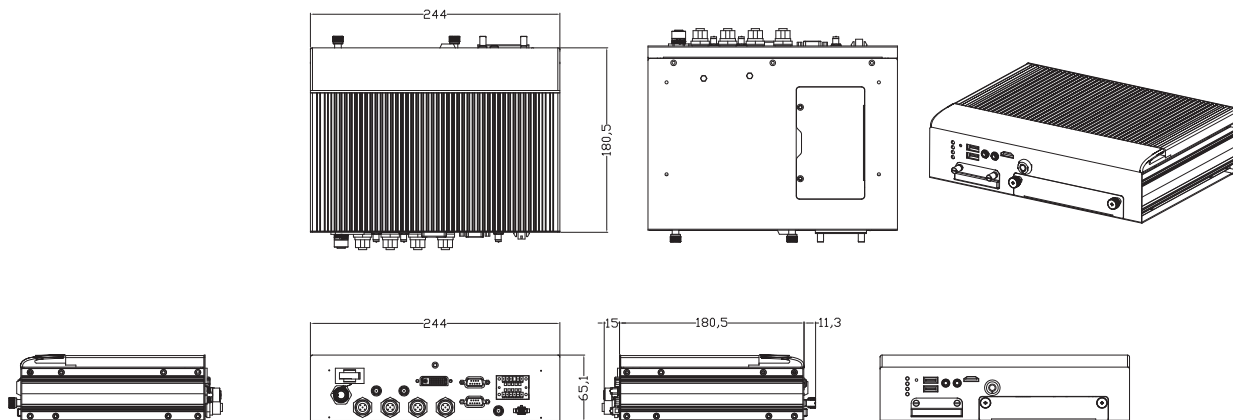
- 1 x quick manual
- 1 x driver CD
- 1 x screw pack
- 4 x foot pad
- 1 x wall-mount kit

## Power Protection

### DC Version

- SCP (short circuit protection)
- OVP (over voltage protection)
- UVP (under voltage protection)
- ISO7637 pulse 1/29/39/3b/4/5a
- Battery protection setting: Low voltage, Very low voltage
- Ignition control setting: Low voltage counter, ACC-ON delay, Shut down delay

## Dimensions



Overview

Embedded Systems

2

Embedded Systems for Transportation

Embedded Field Controllers

Industrial Firewall

Digital Signage Solutions

Embedded MicroBoxes

Industrial Barebone Systems

Industrial Chassis

Backplanes

Power Supplies

Peripherals & Accessories