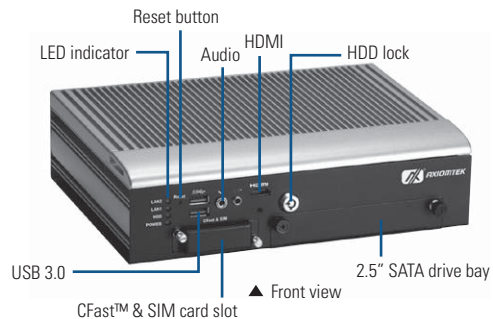


# tBOX322-882-FL

Fanless Embedded System with  
4th Generation Intel® Core™ Processor  
for Railway PC

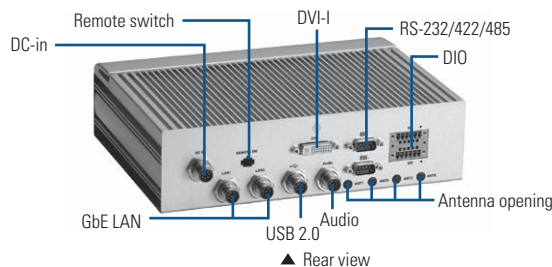


## Specifications

|                       |   |
|-----------------------|---|
| Standard Color        | Silver-Black  |
| Construction          | Aluminum extrusion and heavy-duty steel, IP40   |
| CPU                   | 4th Generation Intel® Core™ processor ;<br>4th generation Intel® Core™ i7-4650U (1.7 GHz up to 3.3 GHz)<br>or 4th generation Intel® Core™ i3-4010U (1.7 GHz)  |
| System Memory         | DDR3L-1600 4 GB or 8 GB DRAM  |
| Chipset               | SoC integrated  |
| BIOS                  | AMI UEFI BIOS with OA 3.0 built   |
| System I/O Outlet     | Rear Side <ul style="list-style-type: none"> <li>2 x GbE LAN (M12 A-coded)</li> <li>2 x isolated RS-232/422/485</li> <li>1 x isolated DI/DO (6-in/2-out)</li> <li>1 x USB 2.0 (M12 A-coded)</li> <li>1 x audio (mic-in/line-out, M12 D-coded)</li> <li>1 x DVI-I</li> <li>1 x VDC power input (M12 A-coded)</li> <li>1 x remote power switch</li> <li>4 x antenna opening</li> <li>1 x power switch</li> </ul> Front Side <ul style="list-style-type: none"> <li>2 x USB 3.0</li> <li>2 x audio (mic-in/line-out, screw type)</li> <li>1 x HDMI</li> <li>1 x reset switch</li> <li>1 x 2.5" SATA drive tray</li> <li>1 x CFast™ slot + 2x SIM card sockets</li> </ul> |
| Watchdog Timer        | 255 levels, 0 ~ 255 sec./min.   |
| Storage               | 1 x 2.5" SATA HDD (Removable and with lock protection)<br>1 x CFast™  |
| Expansion Interface   | 3 x PCI Express Mini Card<br>2 x SIM card slots   |
| System Indicator      | 1 x green LED for system power on<br>1 x green LED for HDD active<br>1 x green LED for LAN1 link<br>1 x green LED for LAN2 link   |
| Power Supply          | Power input : 14VDC ~ 32VDC (isolation)<br>Typical : 24VDC  |
| Power Consumption     | 1.8A @ 24V  |
| Operating Temperature | -40°C ~ +70°C (-40°F ~ +158°F) W/T SSD<br>-25°C ~ +55°C (-13°F ~ +131°F) W/T HDD  |
| Storage Temperature   | -40°C ~ +80°C (-40°F ~ +176°F)  |
| Humidity              | 5% ~ 95%, non-condensing  |

## Features

- EN50155, EN50121 certificates
- Fanless with operating temperature range of -40°C ~ +70°C (EN50155 class TX)
- Comply to fire protection of railway vehicles Europe standard PrCEN TS 45545-2
- 4th generation Intel® Core™ i7 or Core™ i3 processor
- High performance DDR3L 4 GB or 8 GB memory onboard
- Isolated RS-232/422/485 and DIO ports
- Supports USB 3.0 and SATA3 interface
- 1 removable & lockable 2.5" SATA HDD and 1 CFast™
- 3 internal PCI Express Mini Card slot and 2 SIM slots
- Lockable I/O interface and M12 type LAN, audio, power and USB connector
- Suspension designed for HDD



|                     |  |
|---------------------|--|
| Vibration Endurance | 3 Grms with SSD or CFast™ (5-500Hz, X, Y, Z directions)<br>2 Grms with HDD (5-500Hz, X, Y, Z directions) |
| Dimensions          | 244 mm (9.6") (W) x 180.5 mm (7.1") (D) x 65.1 mm (2.56") (H)  |
| Weight (net/gross)  | 2.94 kg (6.48 lb)/ 3.94 kg (8.68 lb)   |
| Certificate         | CE (Class A), EN50155, EN50121, EN45545-2, EN60950-1 compliance  |
| EOS Support         | WEBS, WES 7, Linux   |

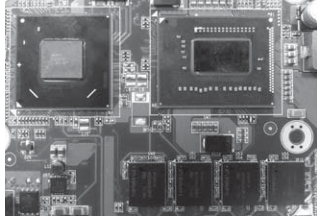
## Ordering Information

| Standard                 |   |
|--------------------------|---|
| tBOX322-882-FL-i7-DC     | Fanless railway embedded system with 4th generation Intel® Core™ i7-4650U, 4 GB DDR3L, 2 GbE LAN (M12), 2 isolated COM and CFast™ |
| tBOX322-882-FL-i3-DC     | Fanless railway embedded system with 4th generation Intel® Core™ i3-4010U, 4 GB DDR3L, 2 GbE LAN (M12), 2 isolated COM and CFast™ |
| tBOX322-882-FL-8GB-i7-DC | Fanless railway embedded system with 4th generation Intel® Core™ i7-4650U, 8 GB DDR3L, 2 GbE LAN (M12), 2 isolated COM and CFast™ |
| tBOX322-882-FL-8GB-i3-DC | Fanless railway embedded system with 4th generation Intel® Core™ i3-4010U, 8 GB DDR3L, 2 GbE LAN (M12), 2 isolated COM and CFast™ |
| Optional                 |   |
| 2.5" SATA HDD/SSD        | 16 GB or above  |
| CFast™                   | 1 GB or above   |
| 3G module                |   |
| Wi-Fi module             |   |
| Wi-Fi Bluetooth          |   |
| GPS module               |   |
| M12 Gigabit LAN cable    |   |
| M12 power cable          |   |
| M12 USB cable            |   |
| M12 audio cable          |   |
| Remote switch cable      |   |

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

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

## Expansion & Installation



Onboard 4th generation Intel® Core™ CPU and 4 GB/ 8 GB DDR3L DRAM



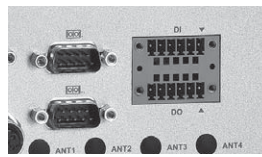
Swappable and lockable SATA3 HDD/SSD, Audio jack, USB 3.0 and CFast™



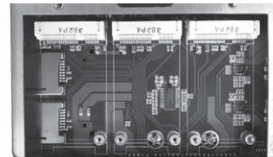
M12 type for Gigabit LAN, USB 2.0 and audio ports



M12 type power connector and remote switch connector



Isolated RS-232/422/485 and DIO ports



3 x Mini Card slots with 2 x SIM slot

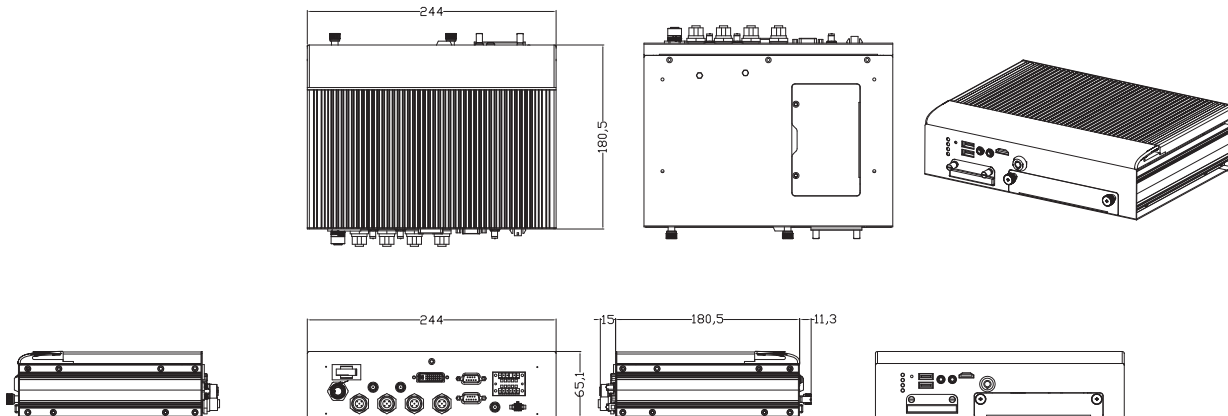
## Packing List

- 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)

## 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

