

tBOX320-852-FL

Fanless Embedded System with Intel® Core™ 2 Duo Processor 2.26 GHz and Intel® GM45 for Railway PC

Intel® Core™ 2 Duo SP9300 2.26 GHz
or Intel® Celeron® M 723



Swappable HDD/CF

▲ Front view

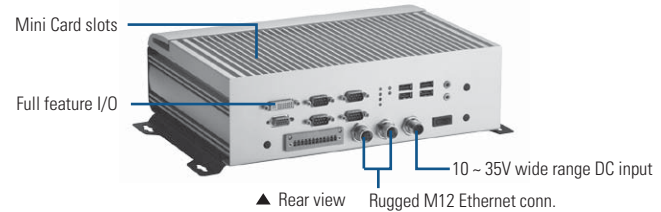


Specifications

| | | |
|-----------------------|---|---|
| Standard Color | Silver-Black | |
| Construction | Aluminum extrusion and heavy-duty steel, IP40 | |
| CPU | Intel® Core™ 2 Duo SP9300 2.26 GHz processor or Intel® Celeron® M 723 1.2 GHz processor | |
| System Memory | DDR3-1333 2 GB DRAM | |
| Chipset | Intel® GM45 + ICH9M | |
| BIOS | AMI | |
| System I/O Outlet | Rear Side | 2 x GbE LAN (M12 D-coded) 4 x isolated RS-232/422/485 1 x isolated DI/DO (6-in/2-out) 4 x USB 2.0 2 x audio (mic-in/line-out) 1 x VGA 1 x DVI-D 1 x VDC power input (M12 A-coded) 1 x power switch 3 x antenna opening |
| | Front Side | 2 x 2.5" SATA drive trays 1 x CFast™ slot 1 x SIM card socket |
| Watchdog Timer | 255 levels, 1~255 sec. | |
| Storage | 2 x 2.5" SATA HDD drive bay 1 x CompactFlash™ | |
| Expansion Interface | 2 x PCI Express Mini Card 1 x SIM card | |
| System Indicator | 1 x green LED for system power-on 1 x red LED for HDD active 1 x green LED for LAN1 link 1 x green/yellow LED for LAN1 speed 1 x green LED for LAN2 link 1 x green/yellow LED for LAN2 speed | |
| Power Supply | DC 12~32V input with isolation support Default rating: DC24V M12 5-pin connector | |
| Power Consumption | 6.7A @ 12V 3.4A @ 24V 2.5A @ 32V | |
| Operating Temperature | -25°C ~ +55°C (77°F ~ 130°F) (with W.T. HDD) | |
| Storage Temperature | -40°C ~ +80°C (-40°F ~ +176°F) | |
| Humidity | 10% ~ 90%, non-condensing | |
| Vibration Endurance | 2 Grms (5-500Hz, X, Y, Z directions) | |

Features

- EN50155, EN50121 certificates
- Fanless with operation temperature range of -25°C ~ +55°C
- Comply to fire protection of railway vehicles Europe standard PrCEN TS 45545-2
- Supports onboard Intel® Core™ 2 Duo SP9300 2.26 GHz or Intel® Celeron® M 723 1.2 GHz processor
- Intel® GM45 + ICH9M
- 4 isolated RS-232/422/485 ports
- High performance DDR3-1333 2 GB DRAM
- One 2.5" swappable SATA drive bay, 1 internal SATA drive bay and one CompactFlash™
- 2 internal PCI Express Mini Card slots with 1 SIM slot
- Lockable I/O interface and M12 LAN connector



▲ Rear view Rugged M12 Ethernet conn.

| | |
|--------------------|--|
| Dimensions | 288 mm (11.33") (W) x 211 mm (8.3") (D) x 85.7 mm (3.37") (H) |
| Weight (net/gross) | 5.06 kg (11.15 lb)/6.5 kg (14.33 lb) |
| Certificate | CE, EN50155, EN50121, EN45545, EN60950 compliance |
| EOS Support | XPE, WinCE, Linux |

*XPE: Windows® XP Embedded

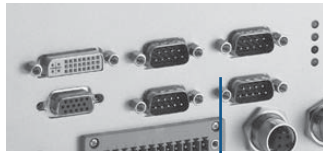
Ordering Information

| Standard | |
|---------------------------|---|
| tBOX320-852-FL-2.26G-DC | Fanless railway embedded system with Intel® Core™ 2 Duo SP9300 2.26 GHz processor, 4 COM, 4 USB, CFast™, 2 HDD support, onboard 2 GB DDR3-1333 DRAM and 4-pin GbE LAN M12 |
| tBOX320-852-FL-1.2G-DC | Fanless railway embedded system with Intel® Celeron® M 723 1.2 GHz processor, 4 COM, 4 USB, CFast™, 2 HDD support, onboard 2 GB DRAM and 4-pin GbE LAN M12 |
| tBOX320-852-FL-2.26G-DC-G | Fanless railway embedded system with Intel® Core™ 2 Duo SP9300 2.26 GHz processor, 4 COM, 4 USB, CFast™, 2 HDD support, onboard 2 GB DDR3-1333 DRAM and 8-pin GbE LAN M12 (optional lockable HDD cover) |
| tBOX320-852-FL-1.2G-DC-G | Fanless railway embedded system with Intel® Celeron® M 723 1.2 GHz processor, 4 COM, 4 USB, CFast™, 2 HDD support, onboard 2 GB DDR3-1333 DRAM and 8-pin GbE LAN M12 (optional lockable HDD cover) |

| Optional | |
|---------------------------|----------------|
| 2.5" SATA HDD/SSD | 40 GB or above |
| CompactFlash™ | 1 GB or above |
| 3G module | |
| Wi-Fi module | |
| Wi-Fi Bluetooth | |
| GPS module | |
| Graphic accelerator codec | |
| M12 LAN cable | 594N3202710E |
| M12 power cable | 594B8120B30E |
| M12 Gigabit LAN cable | 594N3202730E |

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

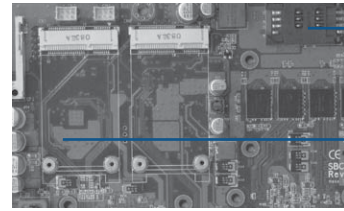
Expansion & Installation



Lockable I/O connector



Easy access opening for HDD & CF

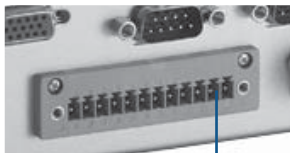


SIM slot

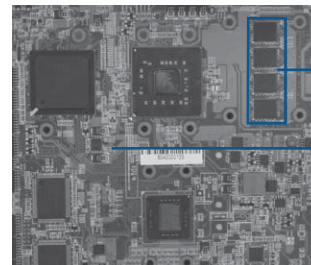
2 x Mini Card



M12 type connector



Isolated digital I/O



2 GB DDR3-1333 DRAM onboard

BGA type CPU & chipset

Packing List

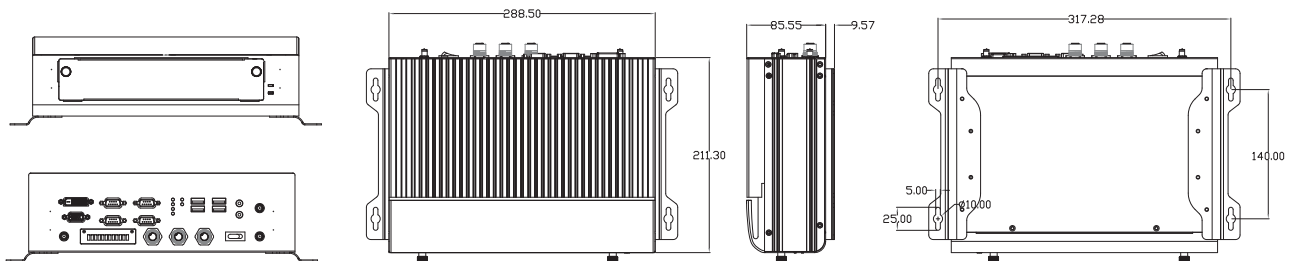
- 1 x quick manual
- 1 x driver CD
- 1 x screw pack
- 4 x foot pad
- 8 x HDD anti-vibration damper
- 1 x wallmount Kit

Power Protection

DC Version

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

