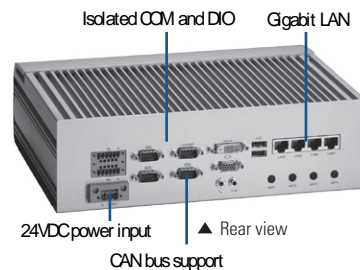
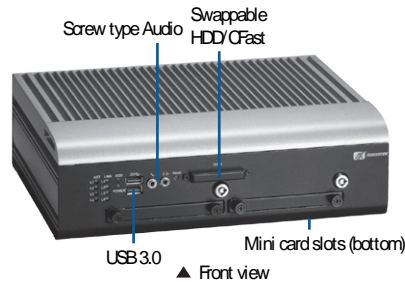


# tBOX330-870-FL

Fanless Embedded System with 3rd Gen Intel® Core™ Processor and Intel® QM77 for Marine PC

## Features

- IEC 60945 certified
- Comply to fire protection of railway vehicles Europe standard EN TS 45545-2
- 3rd gen Intel® Core™ i7 or Intel® Core™ i3 processor
- DDR3-1600 4GB memory onboard
- Fanless design and wide temperature range from -40°C to +70°C
- Isolated RS-232/422/485, CAN bus and DIO ports
- USB 3.0 and SATA3
- 2 removable & lockable 2.5" SATA HDD and 1 CFAST™
- 3 internal PCIe Mini Card slot and 1 SIM slot



## Specifications

Standard Color	Silver-Black				
Construction	Aluminum extrusion and heavy-duty steel, IP40				
CPU	Intel® Core™ i7-3517UE (1.7 GHz up to 2.8 GHz) or Intel® Core™ i3-3217UE (1.6 GHz)				
System Memory	DDR3-1600 4GB DRAM				
Chipset	Intel® QM77				
BIOS	AMI UEFI BIOS with OA 3.0 built				
System I/O/Outlet	<table border="0"> <tr> <td>Rear Side</td> <td>                     4 x GbE                      3 x Isolated RS-232/422/485                      1 x Isolated DI/DO (4-in/4-out)                      1 x Isolated CAN Bus                      2 x USB 2.0                      2 x Audio (mic-in/line-out, screw type)                      1 x VGA                      1 x DVI-D                      1 x VDC power input                      1 x Remote power switch                      4 x Antenna opening                 </td> </tr> <tr> <td>Front Side</td> <td>                     2 x USB 3.0                      2 x Audio (mic-in/line-out, screw type)                      1 x Reset switch                      2 x 2.5" SATA drive trays                      1 x CFAST™ slot                 </td> </tr> </table>	Rear Side	4 x GbE 3 x Isolated RS-232/422/485 1 x Isolated DI/DO (4-in/4-out) 1 x Isolated CAN Bus 2 x USB 2.0 2 x Audio (mic-in/line-out, screw type) 1 x VGA 1 x DVI-D 1 x VDC power input 1 x Remote power switch 4 x Antenna opening	Front Side	2 x USB 3.0 2 x Audio (mic-in/line-out, screw type) 1 x Reset switch 2 x 2.5" SATA drive trays 1 x CFAST™ slot
Rear Side	4 x GbE 3 x Isolated RS-232/422/485 1 x Isolated DI/DO (4-in/4-out) 1 x Isolated CAN Bus 2 x USB 2.0 2 x Audio (mic-in/line-out, screw type) 1 x VGA 1 x DVI-D 1 x VDC power input 1 x Remote power switch 4 x Antenna opening				
Front Side	2 x USB 3.0 2 x Audio (mic-in/line-out, screw type) 1 x Reset switch 2 x 2.5" SATA drive trays 1 x CFAST™ slot				
Watchdog Timer	255 levels, 0 ~ 255 sec./min.				
Storage	2 x 2.5" SATA HDD (removable and with lock protection), with RAID 0/1 1 x CFAST™				
Expansion Interface	3 x PCIe Mini Card 1 x SIM card slot				
System Indicator	1 x green LED for system power on 1 x blue LED for HDD active 1 x green LED for LAN1 link 1 x green/yellow LED for LAN 1 speed 1 x green LED for LAN2 link 1 x green/yellow LED for LAN 2 speed 1 x green LED for LAN3 link 1 x green/yellow LED for LAN 3 speed 1 x green LED for LAN4 link 1 x green/yellow LED for LAN 4 speed				
Power Supply	Power input : 14-32VDC, Typical 24VDC				

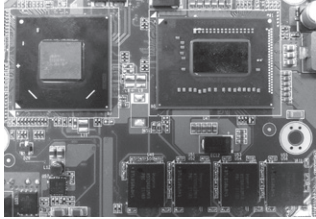
Power Consumption	1.8A @ 24V
Operating Temperature	-40°C ~ +70°C (-40°F ~ +158°F) with W.T. SSD -25°C ~ +55°C (-13°F ~ +131°F) with W.T. HDD
Humidity	5% ~ 95%, non-condensing
Vibration Endurance	5 Grms with CFAST™ (5-500-Hz, X, Y, Z directions) 1 Grms with HDD (5-500-Hz, X, Y, Z directions)
Dimensions	288 mm (11.33") (W) x 211 mm (8.3") (D) x 85.7 mm (3.37") (H)
Weight (net/gross)	5.5 kg (12.12 lb) / 6.5 kg (14.33 lb)
Certificate	CE (Class A), IEC 60945 certificate, EN 45545-2 compliance
ECS Support	WEBS, WES 7, Linux

## Ordering Information

Standard	
tBOX330-870-FL-i7-DC	Fanless marine embedded system with Intel® Core™ i7 processor, 4GB DDR3-1600, 4 GbE LANs, 3 isolated COM, CFAST™ and isolated CAN bus
tBOX330-870-FL-i3-DC	Fanless marine embedded system with Intel® Core™ i3 processor, 4GB DDR3-1600, 4 GbE LANs, 3 isolated COM, CFAST™ and isolated CAN bus
Optional	
2.5" SATA HDD/SSD	16GB or above
CFAST™	1GB or above
3G module	
Wi-Fi module	
Wi-Fi Bluetooth	
GPS module	

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

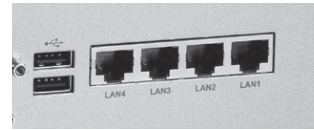
## Expansion & Installation



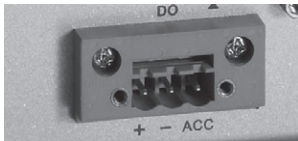
Onboard 3rd generation Intel® Core™ i7 or i3 processor and 4GB DDR3-1600 DRAM



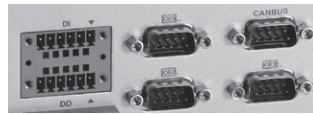
Swappable and Lockable SATA3 HDD/SSD, Audio jack, USB 3.0 and CFast



Four Ggabit LAN ports



24VDC power input



Isolated RS-232/422/485, CAN bus and DIO



3 PCIe Mini Card slots and 1 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)
  - LVP (under voltage protection)

## Dimensions

