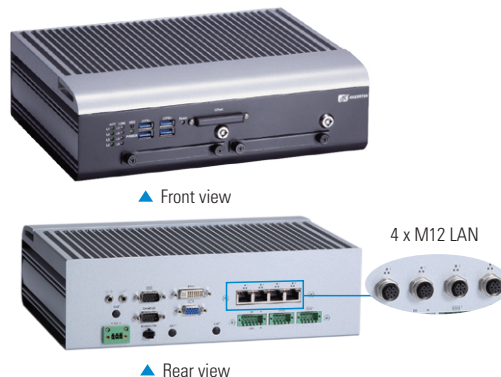
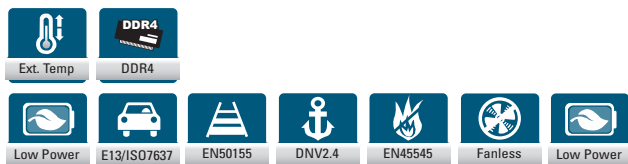


# tBOX324-894-FL

Fanless Embedded System with 7th Gen Intel® Core™ i7/i5/i3 & Celeron® for Vehicle, Railway and Marine PC

## Features

- CE (Class A), EN 50155, EN 50121, E-Mark, ISO 7637-2, IEC 60945 certified and DNV 2.4 compliance
- 7th gen Intel® Core™ i7/i5/i3 & Celeron® processor (Kaby Lake-U SoC)
- Modular I/O design, 4 GbE LANs (M12/RJ-45), 3 isolated COMs (4 COMs optional) and 1 CANbus
- 2 DDR4-1866/2133 SO-DIMM, up to 32GB
- Typical 12/24/110 VDC power input for different power modules, available with various transportation certificates
- Fanless design and suitability for wide operating temperatures from -40°C to +70°C
- Intelligent solution of vehicle power management (ACC ignition)
- 2 swappable 2.5" SATA drives
- 3 PCI Express Mini Card slots and 1 SIM Card slot



Operating Temperature	-40°C ~ +70°C (-40°F ~ +158°F) with W.T. SSD 0°C ~ +55°C (+32°F ~ +131°F) with 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)
Dimensions	288.5 mm (11.36") (W) x 211.3 mm (8.32") (D) x 85.75 mm (3.38") (H)
Weight	5 kg (11 lb)/6.5 kg (14.33 lb)
Certificates	CE (Class A), EN 50155, EN 50121, E-Mark, ISO 7637-2, IEC 60945 certified and DNV 2.4 compliance
EOS support	Windows® 10 64-bit, Linux

## Specifications

Standard Color	Silver black				
Construction	Aluminum extrusion and heavy-duty steel, IP40				
CPU	Intel® Core™ i7-7600U 2C @ 2.8 ~ 3.9 GHz Intel® Core™ i5-7300U 2C @ 2.6 ~ 3.5 GHz Intel® Core™ i3-7100U 2C @ 2.4 GHz Intel® Celeron® 3965U 2C @ 2.2 GHz				
System Memory	2 x DDR4-1866/2133 SO-DIMM, up to 32GB				
Chipset	SoC integrated				
BIOS	AMI				
System I/O Outlet	<table border="0"> <tr> <td>Rear Side</td> <td> <ul style="list-style-type: none"> <li>1 x M12 (5P)/TB (3P) power connector</li> <li>1 x isolated RS-232/422/485 (DB9)</li> <li>1 x isolated CANbus 2.0 A/B (DB9) or RS-232/422/485 (optional)</li> <li>2 x isolated RS-232/422/485 (TB 2 x 5P)</li> <li>1 x isolated DIO 4-in/4-out (TB 2 x 6P)</li> <li>1 x DVI-I</li> <li>1 x VGA</li> <li>1 x Remote switch</li> <li>2 x Audio, Mic-in/Line-out</li> <li>4 x M12 A-coded GbE LAN</li> <li>3 x Antenna opening</li> </ul> </td> </tr> <tr> <td>Front Side</td> <td> <ul style="list-style-type: none"> <li>8 x LED indicator for LAN link/activity</li> <li>1 x LED indicator for SATA drive activity</li> <li>1 x LED indicator for power</li> <li>4 x USB 3.0</li> <li>1 x CFast™</li> <li>1 x Reset button</li> <li>2 x 2.5" SATA drive tray</li> </ul> </td> </tr> </table>	Rear Side	<ul style="list-style-type: none"> <li>1 x M12 (5P)/TB (3P) power connector</li> <li>1 x isolated RS-232/422/485 (DB9)</li> <li>1 x isolated CANbus 2.0 A/B (DB9) or RS-232/422/485 (optional)</li> <li>2 x isolated RS-232/422/485 (TB 2 x 5P)</li> <li>1 x isolated DIO 4-in/4-out (TB 2 x 6P)</li> <li>1 x DVI-I</li> <li>1 x VGA</li> <li>1 x Remote switch</li> <li>2 x Audio, Mic-in/Line-out</li> <li>4 x M12 A-coded GbE LAN</li> <li>3 x Antenna opening</li> </ul>	Front Side	<ul style="list-style-type: none"> <li>8 x LED indicator for LAN link/activity</li> <li>1 x LED indicator for SATA drive activity</li> <li>1 x LED indicator for power</li> <li>4 x USB 3.0</li> <li>1 x CFast™</li> <li>1 x Reset button</li> <li>2 x 2.5" SATA drive tray</li> </ul>
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Watchdog Timer	255 levels, 1 ~ 255 sec.				
Storage	2 x 2.5" 7/9.5 mm SATA drive 1 x CFast™				
RAID function	Intel® RAID 0/1				
Expansion Interface	3 x full-size PCI Express Mini Card slot 1 x SIM Card slot				
System Indicator	1 x LED indicator for system power 1 x LED indicator for SATA drive active 4 x LED indicator for LAN activated 4 x LED indicator for LAN linked				
Power Supply	9 ~ 36 VDC, typical: 12/24 VDC 14 ~ 32 VDC, typical: 24 VDC 77 ~ 137.5 VDC, typical: 110 VDC				

## Ordering Information

Standard	
tBOX324-894-FL-Celeron-DIO-24MRDC-CAN	Fanless railway embedded system with Intel® Celeron® 3965U 2.2 GHz processor, 4 USB, VGA+DVI, 4 GbE LANs (M12), 3 COM, CAN, DIO, 14 ~ 32VDC and M12 DC-in (P/N: E26N324100)
tBOX324-894-FL-i3-DIO-24MRDC-CAN	Fanless railway embedded system with Intel® Core™ i3-7100U 2.4 GHz processor, 4 USB, VGA+DVI, 4 GbE LANs (M12), 3 COM, CAN, DIO, 14 ~ 32VDC and M12 DC-in (P/N: E26N324101)
tBOX324-894-FL-i5-DIO-24MRDC-CAN	Fanless railway embedded system with Intel® Core™ i5-7300U 2.6 ~ 3.5 GHz processor, 4 USB, VGA+DVI, 4 GbE LANs (M12), 3 COM, CAN, DIO, 14 ~ 32VDC and M12 DC-in (P/N: E26N324102)
tBOX324-894-FL-i7-DIO-24MRDC-CAN	Fanless railway embedded system with Intel® Core™ i7-7600U 2.8 ~ 3.9 GHz processor, 4 USB, VGA+DVI, 4 GbE LANs (M12), 3 COM, CAN, DIO, 14 ~ 32VDC and M12 DC-in (P/N: E26N324103)
tBOX324-894-FL-Celeron-DIO-TMDC-CAN	Fanless marine embedded system with Intel® Celeron® 3965U 2.2 GHz processor, 4 USB, VGA+DVI, 4 GbE LANs (RJ-45), 3 COM, CAN, DIO, 14 ~ 32VDC and TB DC-in (P/N: E26N324104)
tBOX324-894-FL-i3-DIO-TMDC-CAN	Fanless marine embedded system with Intel® Core™ i3-7100U 2.4 GHz processor, 4 USB, VGA+DVI, 4 GbE LANs (RJ-45), 3 COM, CAN, DIO, 14 ~ 32VDC and TB DC-in (P/N: E26N324105)
tBOX324-894-FL-i5-DIO-TMDC-CAN	Fanless marine embedded system with Intel® Core™ i5-7300U 2.6 ~ 3.5 GHz processor, 4 USB, VGA+DVI, 4 GbE LANs (RJ-45), 3 COM, CAN, DIO, 14 ~ 32VDC and TB DC-in (P/N: E26N324106)
tBOX324-894-FL-i7-DIO-TMDC-CAN	Fanless marine embedded system with Intel® Core™ i7-7600U 2.8 ~ 3.9 GHz processor, 4 USB, VGA+DVI, 4 GbE LANs (RJ-45), 3 COM, CAN, DIO, 14 ~ 32VDC and TB DC-in (P/N: E26N324107)
tBOX324-894-FL-Celeron-DIO-TVDC-CAN	Fanless vehicle embedded system with Intel® Celeron® 3965U 2.2 GHz processor, 4 USB, VGA+DVI, 4 GbE LANs (RJ-45), 3 COM, CAN, 9 ~ 36VDC, ACC ignition and TB DC-in (2018 Q2 available)
tBOX324-894-FL-i3-DIO-TVDC-CAN	Fanless vehicle embedded system with Intel® Core™ i3-7100U 2.4 GHz processor, 4 USB, VGA+DVI, 4 GbE LANs (RJ-45), 3 COM, CAN, DIO, 9 ~ 36VDC, ACC ignition and TB DC-in (2018 Q2 available)
tBOX324-894-FL-i5-DIO-TVDC-CAN	Fanless vehicle embedded system with Intel® Core™ i5-7300U 2.6 ~ 3.5 GHz processor, 4 USB, VGA+DVI, 4 GbE LANs (RJ-45), 3 COM, CAN, DIO, 9 ~ 36VDC, ACC ignition and TB DC-in (2018 Q2 available)

tBOX324-894-FL-i7-DIO-TVDC-CAN 2018 Q2 available	Fanless vehicle embedded system with Intel® Core™ i7-7600U 2.8 ~ 3.9 GHz processor, 4 USB, VGA+DVI, 4 GbE LANs (RJ-45), 3 COM, CAN, DIO, 9 ~ 36VDC, ACC ignition and TB DC-in
tBOX324-894-FL-Celeron-DIO-110MRDC-CAN 2018 Q2 available	Fanless railway embedded system with Intel® Celeron® 3965U 2.2 GHz processor, 4 USB, VGA+DVI, 4 GbE LANs (M12), 3 COM, CAN, DIO, 77 ~ 137.5VDC and M12 DC-in
tBOX324-894-FL-i3-DIO-110MRDC-CAN 2018 Q2 available	Fanless railway embedded system with Intel® Core™ i3-7100U 2.4 GHz processor, 4 USB, VGA+DVI, 4 GbE LANs (M12), 3 COM, CAN, DIO, 77 ~ 137.5VDC and M12 DC-in
tBOX324-894-FL-i5-DIO-110MRDC-CAN 2018 Q2 available	Fanless railway embedded system with Intel® Core™ i5-7300U 2.6 ~ 3.5 GHz processor, 4 USB, VGA+DVI, 4 GbE LANs (M12), 3 COM, CAN, DIO, 77 ~ 137.5VDC and M12 DC-in

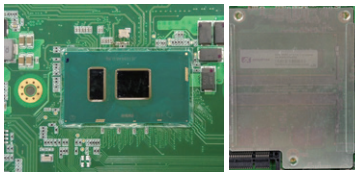
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**Optional**

- 2.5" SATA HDD/SSD
- 3G/4G/GPS module
- Wi-Fi/Bluetooth module
- PCI Express Mini Card
- Remote switch cable
- M12 LAN cable
- M12 power cable

\*Specifications and certificates may vary subject to options required.

**Expansion & Installation**



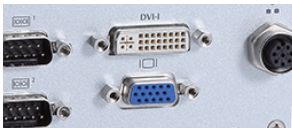
Onboard processor design and unique thermal/heat sink plate on the system memory for great reliability and stability



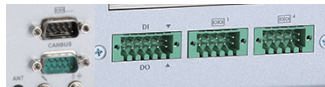
Swappable and Lockable SATA3 HDD/SSD, USB 3.0 and CFast



Optional M12 type for DC-in jack and LAN jack



DVI-I and VGA display



[1 x DIO (TB) and 2 x COM (TB)]  
[1 x COM (DB9) and 1 x CANbus (DB9) / COM (DB9)]

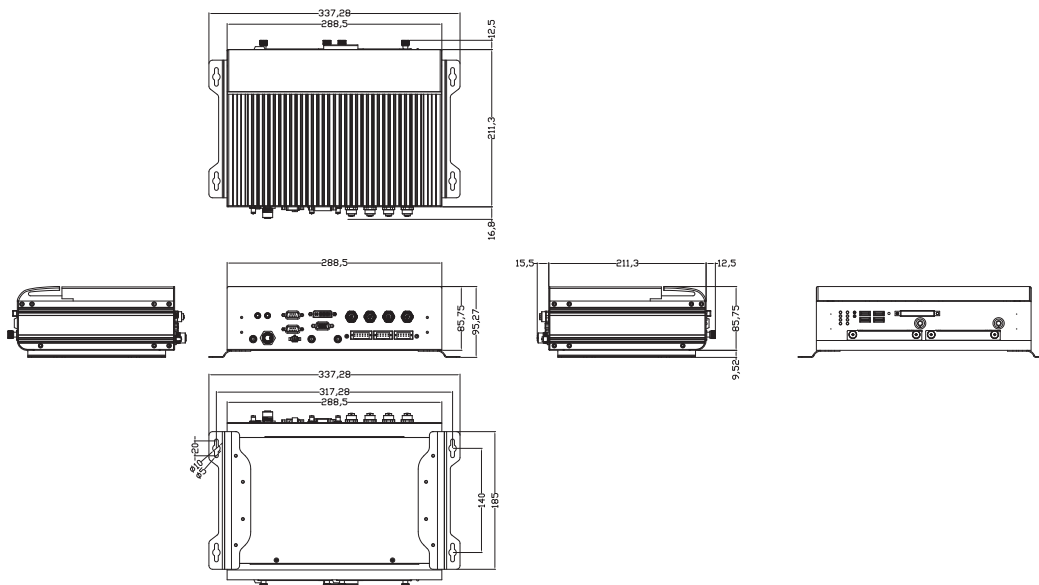


3 full-size PCI Express Mini Card slots and 1 SIM Card slot

**Packing List**

- 1 x Quick Manual
- 1 x Driver CD
- 1 x Screws pack
- 4 x Foot pad
- 1 x Wall-mount brackets
- 1 x DIO female connector (optional)

**Dimensions**



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

