

tBOX324-894-FL NEW

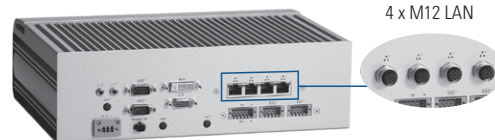
Fanless Embedded System with 7th Gen Intel® Core™ i7/i5/i3 & Celeron® for Vehicle, Railway and Marine PC

Features

- EN 50155, EN 50121, E-Mark, ISO 7637, DNV 2.4, IEC 60945 and EN 45545-2 certified
- 7th gen Intel® Core™ i7/i5/i3 & Celeron® (Kaby Lake-U SoC)
- Modular I/O design, 4 GbE LANs (M12/RJ-45), 3/4 isolated COMs, 1 CANbus (optional)
- 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
- 2 swappable 2.5" SATA drives
- 3 PCI Express Mini Card slots and 1 SIM card socket



▲ Front view



▲ Rear view

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), FCC, EN 50155, EN 50121, E-Mark, ISO 7637, DNV 2.4, IEC 60945 and EN 45545-2 certified
EOS support	Windows® 10 x64, Linux

Ordering Information

Standard

tBOX324-894-FL-Celeron-DIO-24MRDC-CAN 2017 Q4 available (P/N: E26N324100)	Fanless railway grade embedded system with Intel® Celeron® 3965U 2.2 GHz processor, 4 USB, VGA+DVI, 4 GbE LANs (M12), 3 COM, CAN, DIO, 14 ~ 32 VDC and M12 DC-in
tBOX324-894-FL-i3-DIO-24MRDC-CAN 2017 Q4 available (P/N: E26N324101)	Fanless railway grade embedded system with Intel® Core™ i3-7100U 2.4 GHz processor, 4 USB, VGA+DVI, 4 GbE LANs (M12), 3 COM, CAN, DIO, 14 ~ 32 VDC and M12 DC-in
tBOX324-894-FL-i5-DIO-24MRDC-CAN 2017 Q4 available (P/N: E26N324102)	Fanless railway grade 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 ~ 32 VDC and M12 DC-in
tBOX324-894-FL-i7-DIO-24MRDC-CAN 2017 Q4 available (P/N: E26N324103)	Fanless railway grade 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 ~ 32 VDC and M12 DC-in
tBOX324-894-FL-Celeron-DIO-TMDC-CAN 2017 Q4 available (P/N: E26N324104)	Fanless marine grade embedded system with Intel® Celeron® 3965U 2.2 GHz processor, 4 USB, VGA+DVI, 4 GbE LANs (RJ-45), 3 COM, CAN, DIO, 14 ~ 32 VDC and TB DC-in
tBOX324-894-FL-i3-DIO-TMDC-CAN 2017 Q4 available (P/N: E26N324105)	Fanless marine grade 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 ~ 32 VDC and TB DC-in
tBOX324-894-FL-i5-DIO-TMDC-CAN 2017 Q4 available (P/N: E26N324106)	Fanless marine grade 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 ~ 32 VDC and TB DC-in
tBOX324-894-FL-i7-DIO-TMDC-CAN 2017 Q4 available (P/N: E26N324107)	Fanless marine grade 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 ~ 32 VDC and TB DC-in
tBOX324-894-FL-Celeron-DIO-TVDC-CAN 2018 Q2 available	Fanless vehicle grade embedded system with Intel® Celeron® 3965U 2.2 GHz processor, 4 USB, VGA+DVI, 4 GbE LANs (RJ-45), 3 COM, CAN, 9 ~ 36 VDC, ACC ignition and TB DC-in
tBOX324-894-FL-i3-DIO-TVDC-CAN 2018 Q2 available	Fanless vehicle grade 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 ~ 36 VDC, ACC ignition and TB DC-in
tBOX324-894-FL-i5-DIO-TVDC-CAN 2018 Q2 available	Fanless vehicle grade 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 ~ 36 VDC, ACC ignition and TB DC-in

Specifications

Standard Color	Silver black				
Construction	Aluminum extrusion and heavy-duty steel				
CPU	7th generation Intel® Core™ i7-7600U 2C @ 2.8 ~ 3.9 GHz 7th generation Intel® Core™ i5-7300U 2C @ 2.6 ~ 3.5 GHz 7th generation 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>1 x M12 5P/TB 3P power connector 1 x Isolated COM 1 x DB9 isolated COM or CANbus (optional) 2 x 2 x5P TB isolated RS-232/422/485 1 x 2 x6P TB isolated DIO 4-in/4-out (optional) 1 x DVI-I 1 x VGA 1 x Remote switch 2 x Audio, mic-in/line-out 4 x M12 A-coded GbE LAN 3 x Antenna opening</td> </tr> <tr> <td>Front Side</td> <td>8 x LED indicator for LAN link/activity 1 x LED indicator for HDD activity 1 x LED indicator for power 4 x USB 3.0 1 x CFast™ 1 x Reset button 2 x 2.5" SATA drive tray</td> </tr> </table>	Rear Side	1 x M12 5P/TB 3P power connector 1 x Isolated COM 1 x DB9 isolated COM or CANbus (optional) 2 x 2 x5P TB isolated RS-232/422/485 1 x 2 x6P TB isolated DIO 4-in/4-out (optional) 1 x DVI-I 1 x VGA 1 x Remote switch 2 x Audio, mic-in/line-out 4 x M12 A-coded GbE LAN 3 x Antenna opening	Front Side	8 x LED indicator for LAN link/activity 1 x LED indicator for HDD activity 1 x LED indicator for power 4 x USB 3.0 1 x CFast™ 1 x Reset button 2 x 2.5" SATA drive tray
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Front Side	8 x LED indicator for LAN link/activity 1 x LED indicator for HDD activity 1 x LED indicator for power 4 x USB 3.0 1 x CFast™ 1 x Reset button 2 x 2.5" SATA drive tray				
Watchdog Timer	255 levels, 0 ~ 255 secs./mins.				
Storage	2 x 2.5" 7/9.5mm SATA drive 1 x CFast™				
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 HDD active 4 x LED indicator for LAN activated 4 x LED indicator for LAN linked				
Power Supply	Power input: 9 ~ 36 VDC, typical: 12/24 VDC (E-Mark) Power input: 14 ~ 32 VDC, typical: 24 VDC (EN 50155, DNV 2.4) Power input: 77 ~ 137.5 VDC, typical: 110 VDC (EN 50155)				
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 ~ 500 Hz, X/Y/Z direction; random) 1 Grms w/ HDD (5 ~ 500 Hz, X/Y/Z direction; random)				

tBOX324-894-FL-i7-DIO-TVDC-CAN 2018 Q2 available	Fanless vehicle grade 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 ~ 36 VDC, ACC ignition and TB DC-in
tBOX324-894-FL-Celeron-DIO-110MRDC-CAN 2018 Q3 available	Fanless railway grade embedded system with Intel® Celeron® 3965U 2.2 GHz processor, 4 USB, VGA+DVI, 4 GbE LANs (M12), 3 COM, CAN, DIO, 77 ~ 137.5 VDC and M12 DC-in
tBOX324-894-FL-i3-DIO-110MRDC-CAN 2018 Q3 available	Fanless railway grade embedded system with Intel® Core™ i3-7100U 2.4 GHz processor, 4 USB, VGA+DVI, 4 GbE LANs (M12), 3 COM, CAN, DIO, 77 ~ 137.5 VDC and M12 DC-in
tBOX324-894-FL-i5-DIO-110MRDC-CAN 2018 Q3 available	Fanless railway grade 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 ~ 137.5 VDC and M12 DC-in

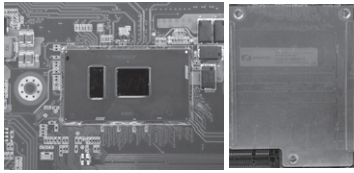
tBOX324-894-FL-i7-DIO-110MRDC-CAN 2018 Q3 available	Fanless railway grade embedded system with Intel® Core™ i7-7600U 2.8 ~ 3.9 GHz processor, 4 USB, VGA+DVI, 4 GbE LANs (M12), 3 COM, CAN, DIO, 77 ~ 137.5 VDC and M12 DC-in
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Optional

2.5" SATA HDD/SSD
mSATA SSD
3G/4G/GPS module
Wi-Fi/Bluetooth module
Audio module
CANbus module
Capture card module
I/O card module

*Specifications and certificates may vary subject to options required.

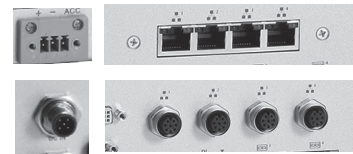
Expansion & Installation



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



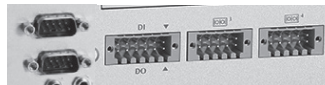
Swappable and Lockable SATA3 HDD/SSD, USB 3.0 and CFast



Optional M12 type for DC-in jack and LAN jack



DVI-I and VGA display



Isolated RS-232/422/485 ports
(Optional DIO and 2 x COM module)
(Optional CANbus / COM port)

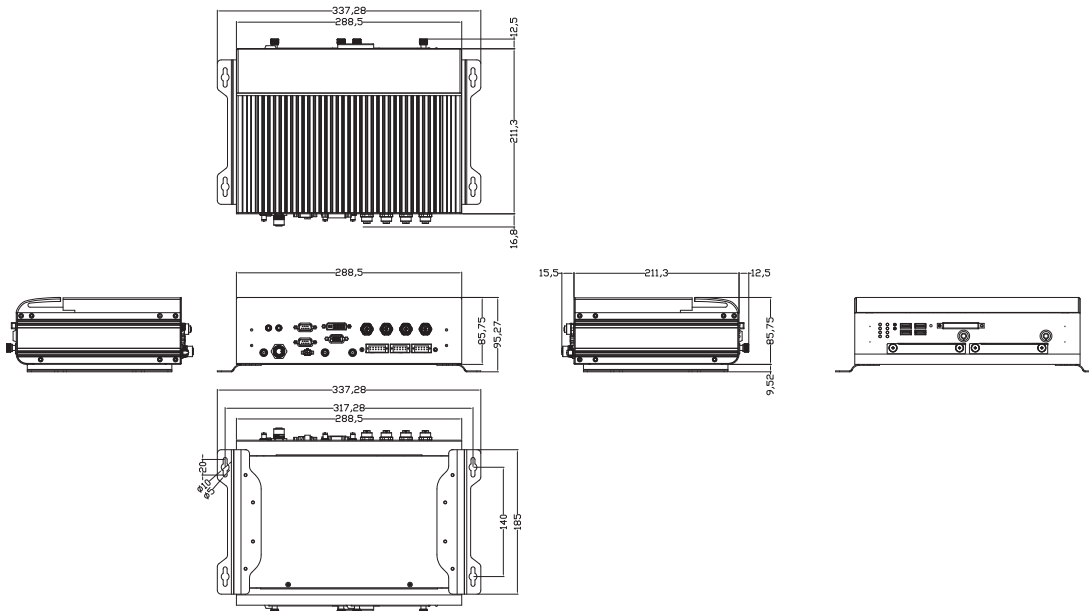


3 full-size PCI Express Mini Card slots
and 1 SIM card slot

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



Power Protection

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

Vehicle Version

- ISO 7637 pulse 1/2/3/4/5a
- Setting for battery protection: Low voltage or very low voltage
- Setting for ignition control: Low voltage counter, ACC-ON delay, Shut down delay

