

TRACe B304-TR



EN50155^(*) FANLESS RAILWAY COMPUTER BASELINE

- ▶ Easy Customization: front plate area for connectors, mini PCI-e card slots
- ▶ Intel® Atom™ Bay Trail
- ▶ Health Management: Continuous Independent Monitoring
- ▶ IP50 (Desktop) / IP51 (Wall Mount) Ingress Protections from all directions, optional IP54
- ▶ EN50155 Class Tx (-40°C to +70°C / 10 min @ +85°C)

^(*) Conformal coating of internal components is optional.

► PRODUCT OVERVIEW

Kontron TRACe B304-TR is an EN50155 compliant^(*) fanless Operational Computer. This "B" version is specifically designed to ease customization thanks to MiniPCIe slots and multiple configuration extensions to help integrators meet application-specific requirements. The B304-TR version is based on an Intel® Atom E3845 quad core @ 1.91 GHz Bay Trail processor. The TRACe B304-TR is designed to ensure stable operation in harsh environments.

The Kontron TRACe B304-TR features a wide range power supply (from 24 VDC to 110 VDC). Its front plate is dedicated to the operational connectors (certified I/O according to EN50155 standard: Ethernet, Serial ports, Audio, Digital Inputs and Outputs) whereas the rear plate hosts maintenance connectors (DisplayPort, USB, Serial, Ethernet). On this plate, a reserved area with 3 pre-holes allows the routing of non-provided Mini PCI-Express cards I/O signals (GSM/GPRS/3G/LTE/4G, GPS, WiFi, Bluetooth).

Kontron TRACe B304-TR extensible and modular design allows custom configuration. On operational front plate, an option plate is available for additional interfaces (MVB, CAN Layer2, CAN Open, Profibus...).

TRACe B304-TR has been designed to support a comprehensive health management capability, thanks to sensors and a microcontroller for system health monitoring.

The integrated microcontroller monitors boards and inbox ambient temperature, voltages, current and even manages Vital Product Data (P/N, S/N, EC Lvl...) of main components.

Health management middleware by Kontron covers all the vital resources of TRACe™ to report, log, and transmit any out of specs parameters and/or any failures at power-on and during operations of TRACe B304-TR.

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► TECHNICAL INFORMATION

PROCESSOR		Intel® Atom™ E3845 quad-core @ 1.91 GHz (Bay Trail-I Platform)
MEMORY	System Memory Flash	2 GB DDR3 with ECC 8 GB soldered SLC Flash (eMMC)
MASS STORAGE		2x SATA disk holders –for 2.5" HDD or SSD
GRAPHIC CONTROLLER	Interface/resolution	Integrated 1D/3D Graphics Engine, GMA 3650/3600, Gfx clock 640/400 MHz, DirectX®9.1, Video Decode: MPEG2, Blu-Ray Disk 2.0, VC-1, H.264, WMV9 up to 1080p DisplayPort / 1366x768@112 MHz
OPERATIONAL PLATE	Serial Ethernet Audio Controller Audio Interface Digital Input Digital Output LED Input Power	2x serial ports (RS232-RS422-RS485), software configurable (insulated) 2x Ethernet 10/100/1000 Mb/s, M12 X-coded 8-poles Female connectors (insulated) Intel® High Definition Audio w/ HDMI 1.3a support Stereo Line In, Stereo Line Out 4x Inputs (sink current 10 mA, 1.5 Kv insulation) 4x Outputs (open drain 24 VDC/10 mA, 1.5 Kv insulation) 1x Power LED 1x DC IN power (1.5kV insulation), M12 A-coded 4 Pin Male connector (with Ignition Pin for Power Control)
MAINTENANCE PLATE	Serial port USB Ethernet Display LEDs	1x serial port 1x USB 3.0 (Super Speed 4 Gb/s), 1x USB 2.0 (Hi Speed 480 Mb/s) 1x Ethernet 10/100/1000 Mb/s 1x DisplayPort 2x User LEDs, 1x Power LED, 1x Alarm LED, 1x System LED
POWER SUPPLY		Input Voltage wide range 24 VDC...110 VDC (Class S2, 10 ms interruption)
EXTENSION		3x Mini PCI-Express sockets (PCIe + USB), 2x SIM card holders (Dual SIM support), 2x SATA connections, 1x mSATA using Mini PCI-Express card slot (shared with one 2.5" SATA)
SUPPORTED OS		Linux, Windows 7, Windows Embedded Standard 7, Windows Embedded Standard 8
OPTIONS		Conformal coating 3 additional pre-holes for RP-SMA antennas Additional USB 2.0 on M12 connector (TRACe-B314-TR) IP54 (TRACe-B314-TR) 4 GB DDR3 with ECC / 16 GB MLC eMMC Flash variant (TRACe-B306-TR)

► ENVIRONMENTAL SPECIFICATIONS

OPERATING TEMPERATURE		-40°C up to +70°C (with 10 min at +85°C) EN50155 Class Tx
STORAGE TEMPERATURE		-40°C to +85°C
ENVIRONMENT / CERTIFICATIONS	ITE Safety Europe Railway Safety Thermal Operating Climatic Test Random Vibration Shock EMC Emission EMC Immunity Others Environmental Protection	EN 60950-1: 2006 +A1: 2010 +A2: 2013 + A11: 2009 +A12: 2011 . Safety Europe Directive Supply Voltage: EN 50155: 2007. Railway Class Tx EN 50155 / NF EN 60068-2-1: 2007 / NF EN 60068-2-2: 2007 . Railway Damp heat (55°C , 95% Relative Humidity), cyclic EN 50155 / NF EN 60068-2-30 Railway Operating, Long life testing EN 50155 / NF EN 61373: 2011-04 / NF EN 60068-2-64: 2008 EN 50155 / NF EN 61373: 2011-04 / NF EN 60068-2-27: 2009. Railway Class 1B EN 50155 / NF EN50121-3-2 / EN 55011 ^(*) EN 50155 / NF EN50121-3-2 / EN 61000-4-2 / -4-3 / -4-4 / -4-5 / -4-6 CE. UL, WEEE, RoHS IP50 in Desktop position / IP51 in Wall Mounting position (NF EN 60529: 2000) ^(*)

^(*) Tests validated with optional Cover Plate P/N TRACE-KITMT-1-V01 on Maintenance side.

► DIMENSIONS

