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Find the *Kontron TRACe B304-TR* at our website: ***Click HERE***

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.

(*) Conformal coating of internal components is optional.

▶ TECHNICAL INFORMATION

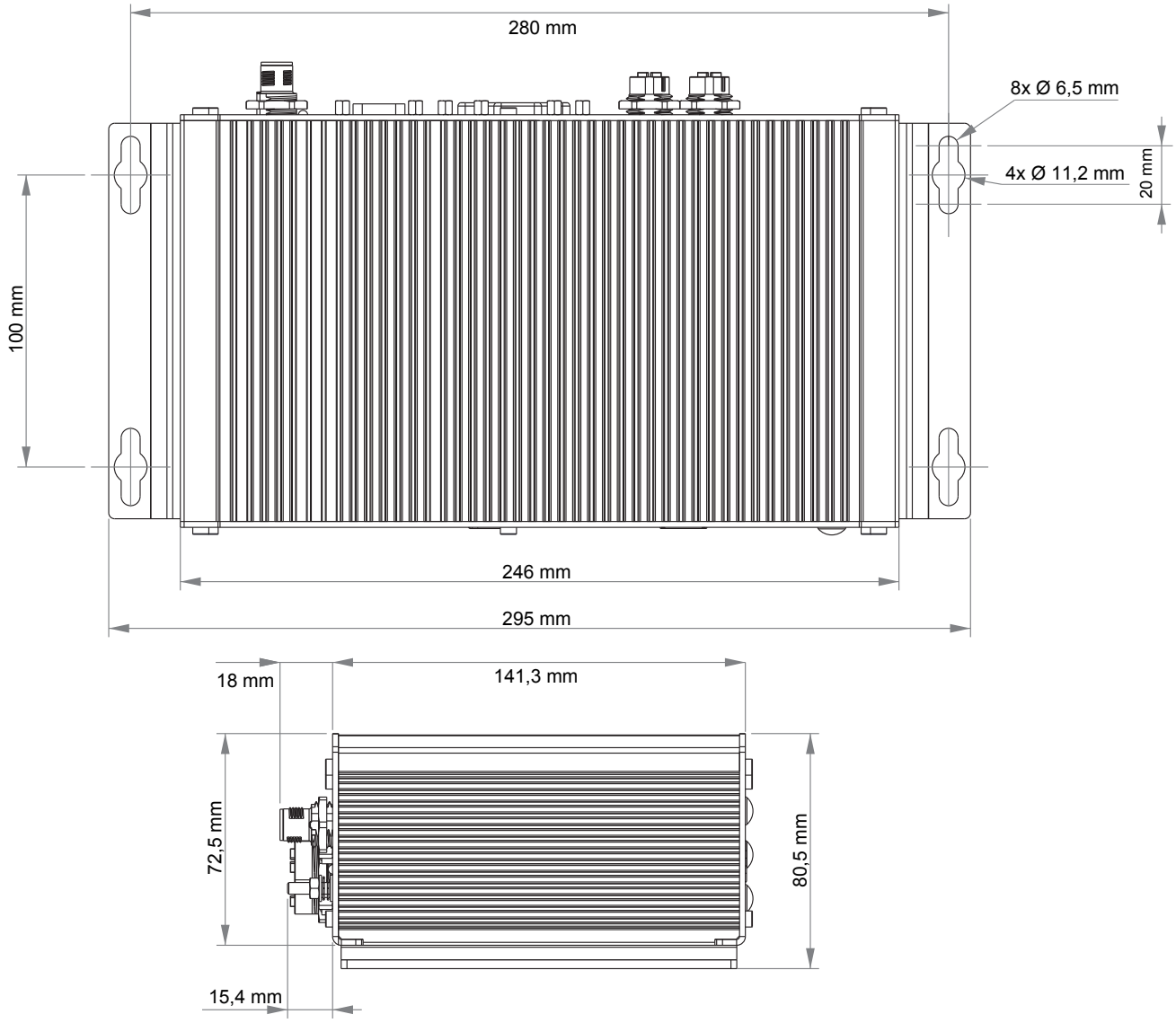
PROCESSOR		Intel® Atom™ E3845 quad-core @ 1.91 GHz (Bay Trail-I Platform)
MEMORY	System Memory Flash	2 GB DDR3 with ECC 8 GB soldered SLC Flash (eMMC)
MASS STORAGE		2x SATA disk holders –for 2.5" HDD or SSD
GRAPHIC CONTROLLER	 Interface/resolution	Integrated 1D/3D Graphics Engine, GMA 3650/3600, Gfx 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	EN 60950-1: 2006 +A1: 2010 +A2: 2013 + A11: 2009 +A12: 2011 . Safety Europe Directive
	Railway Safety	Supply Voltage: EN 50155: 2007. Railway
	Thermal Operating	Class Tx EN 50155 / NF EN 60068-2-1: 2007 / NF EN 60068-2-2: 2007 . Railway
	Climatic Test	Damp heat (55°C , 95% Relative Humidity), cyclic EN 50155 / NF EN 60068-2-30 Railway
	Random Vibration	Operating, Long life testing EN 50155 / NF EN 61373: 2011-04 / NF EN 60068-2-64: 2008
	Shock	EN 50155 / NF EN 61373: 2011-04 / NF EN 60068-2-27: 2009. Railway Class 1B
	EMC Emission	EN 50155 / NF EN50121-3-2 / EN 55011 (*)
	EMC Immunity	EN 50155 / NF EN50121-3-2 / EN 61000-4-2 / -4-3 / -4-4 / -4-5 / -4-6
	Others	CE. UL, WEEE, RoHS
	Environmental Protection	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



▶ ORDERING INFORMATION

ARTICLE	ORDER CODE	DESCRIPTION
TRACe	TRACE-B304-TR	EN50155 compliant(*) fanless Operational Computer (Generic Baseline), IntelR Atom E3845 Bay Trail (quad core @ 1.91 GHz) COMe CPU, 2 GB DDR3 with ECC, 8 GB SLC eMMC soldered Flash, OS less, 3 mPCIe slots, EN50155 class S2 Ultra Wide Range PSU 24 VDC-110 VDC / EN50155 Class TX (-40° to 70° C/ 10 min @ +85° C), IP50 horizontal position (desktop), IP51 vertical position (wall mount) with optional cover plate TRACE-KITMT-1-V01 (to be purchased separately) (*) Conformal coating of internal components is optional.
TRACe	TRACE-B314-TR	EN50155(*) fanless Operational Computer (Generic Baseline), Intel® Atom E3845 Bay Trail (quad core @ 1.91 GHz) COMe CPU, 2GB DDR3 with ECC, 8 GB SLC eMMC soldered Flash, OS less , 3 mPCIe slots. EN50155 class S2 Ultra Wide Range PSU 24 VDC-110 VDC / EN50155 Class TX (-40° to 70° C/ 10min @ +85° C), IP54, additional USB 2.0 on M12 connector. (*) conformal coating of internal components is optional
TRACe	TRACE-B306-TR-0000-0-0	EN50155 compliant(*) fanless Operational Computer (Generic Baseline), Intel® Atom E3845 Bay Trail (quad core @ 1.91 GHz) COMe CPU, 4 GB DDR3 with ECC, 16 GB MLC eMMC soldered Flash, OS less, 3 mPCIe slots, EN50155 class S2 Ultra Wide Range PSU 24 VDC-110 VDC / EN50155 Class TX (-40° to 70° C/ 10 min @ +85° C), IP50 horizontal position (desktop), IP51 vertical position (wall mount) with optional cover plate TRACE-KITMT-1-V01 (to be purchased separately) (*) conformal coating of internal components is optional
CABLE	TRACE-KIT-CAB-EVAL	Set of Cables for TRACe™ evaluation, consisting of: ⇪ 1x Cable ASSY - Power (M12-A coded to free end), ⇪ 1x Ethernet (M12-X coded to RJ-45), ⇪ 1x Serial (RJ-12 to dual DB9) (see TRACe-TR Family User's Manual)
CABLE	TRACE-KITsATA-2	Set of SATA cables to install one 2,5" SSD on TRACe™, consisting of: ⇪ 1x SATA Pow cable, ⇪ 1x SATA Data cable, ⇪ 4x screws
CABLE	TRACE-sTARTERKIT-1	Complete set of cables / accessories for TRACe evaluation, consisting of: ⇪ 1x AC/DC converter cable assembly for DC-IN ⇪ 1x USB Key Fedora 22 TRACe Live Image ⇪ 1x M12 to RJ-45 Ethernet Cable ⇪ 1x DisplayPort to VGA adapter ⇪ 1x Serial cable (RJ-12 to dual DB9: CPU_A, CPU_B) : 1x KIT-2X-RJ12DB9 ⇪ 3x Wi-Fi antennas Dual Band 2,4 GHz-5 GHz , ⇪ 2x 3G/LTE antennas 5 dBi, ⇪ 1x GPS antenna
COVER PLATE	TRACE-KITMT-1-V01	Maintenance Cover Plate for Dust & Water Protection
AC/DC PsU	TRACE-PsUAssy	TRACe AC PSU / Adapter 100-240 VAC to 24 VDC with M12 DC-INConnector. FOR LAB USE
WI-FI 2T2R KIT	TRACE-KITWIFIN2x2	TRACe kit Wi-Fi 2T2R: Industrial Grade (-40° to +85°C) Wi-Fi Mini PCI Express card 802.11a/b/g/n 2T2R (2x2) MIMO (up to 300 Mbps), 2x µFL to RPSMA pigtails and 2x M2.5 screws.
WI-FI 3T3R KIT	TRACE-KITWIFIN3x3	TRACe kit Wi-Fi 3T3R including : / Industrial Grade (-40° to 85°C) Wi-Fi Mini PCI Express card 802.11 a/b/g/n 3T3R (3x3) MIMO (up to 450 Mbps), 3x µFL to RPSMA pigtails and 2x M2.5 screws
LTE KIT EU	TRACE-KITLTE	TRACe kit 3G/4G (EMEA / Australia Variant) including: Industrial Grade (-40° to 85°C) 4G/LTE Mini PCIe card featuring LTE cat4 and GNSS connectivity, 3x µFL to SMA pigtails and 2x M2.5 screws.
LTE KIT Us	TRACE-KITLTE-A	TRACe kit 4G/LTE (Americas variant) including: Industrial Grade (-40° to 85°C) LTE Mini PCIe card featuring LTE cat 4 and GNSS connectivity, 3x µFL to SMA pigtails and 2x M2.5 screws

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