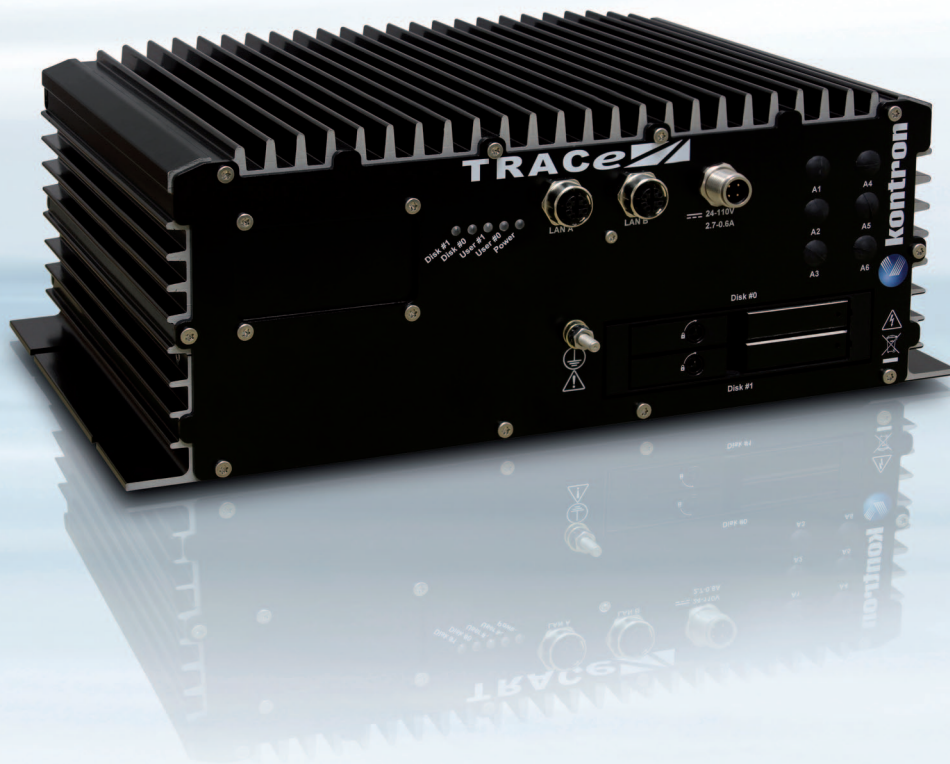


TRACe V40x-TR



EN50155 PERFORMANCE CLASS NETWORK VIDEO RECORDER

- ▶ Fanless Box Computer for rolling stock applications
- ▶ 6th Gen Skylake Intel® Core™i7/i3 or Intel® Atom™ Apollo Lake E3900 series
- ▶ Up to 4x hot-pluggable drive bays with key locks
- ▶ 2x LAN for IP cameras video recording
- ▶ Kontron Health Monitoring & Security solutions

POSSIBILITIES START HERE



▶ PRODUCT OVERVIEW

Kontron TRACe V40x-TR is an EN50155(*) compliant fanless Transportation computer, specifically designed for rolling stock application where video processing and real time analysis, video streaming, video storage are requested to match your system requirements, like IP video surveillance.

Different variants are available depending on required performance. The Kontron TRACe-V407-TR is based on 6th Gen Skylake Intel® Core™i7-6600U (dual-core @ 2.6 GHz) processor whereas TRACe-V403-TR is based on 6th Gen Skylake Intel® Core™i3-6100U (dual-core @ 2.3 GHz) processor.

Other variants TRACe-V402-TR or TRACe-V404-TR are also available based on Intel® Atom™ Apollo Lake E3900 series: x5-E3930 dual-core @ 1.3 GHz up to 1.8 GHz, x5-E3940 quad-core @ 1.6 GHz up to 1.8 GHz or x7-E3950 quad-core @ 1.6 GHz up to 2 GHz.

Kontron TRACe V40x-TR is a robust and compact fanless computer providing high performance, high reliability and high capacity data storage in demanding railway environments.

Kontron TRACe-V40x-TR features two independent networks (2x LAN with M12 connectors) for IP cameras video streams recording. It features a wide range power supply (from 24 VDC to 110 VDC nominal input voltage range) adapted to all types of railway vehicles from light rail vehicles to high speed trains. The front plate operational connectors are electrically insulated according to EN50155 standard with lockable M12 connectors. The rear plate hosts standard connectors (Display Port, USB 3.0/2.0, Serial line) for maintenance purposes. The product accommodates as well several optional wireless interfaces, field busses (RS422/485, CAN, MVB ...) and/or additional optional I/Os (DIOs, Audio, USB...) to match any railway applications such as on-board CCTV, Entertainment/Infotainment PIS, or TCMS.

The Kontron TRACe V40x-TR comes with 2x removable drive bays, providing up to 4 TB, with twice 2 TB SSD storage capacity. 8 TB (with 4 removable disks) TRACe V40x-TR variant is also available for more storage capacity. Hot-plug support, RAID 0/1/5 capability associated to secured key locks for drive bays enable 100% reliable deployment for any rolling-stock storage applications.

TRACe V40x-TR offers a unique health management unit, performing system vital monitoring, thanks to multiple sensors. An integrated microcontroller, independent from the main processor, monitors several temperature sensors, controls supply voltages & current, and with Vital Product Data traceability of major TRACe components. This Health Management Unit is fully integrated in the CMON-Line Monitoring solution by Kontron offering a turnkey, extensible and data centric solution for local or remote computer health monitoring. CMON-line module covers all the vital resources of TRACe™ to report, log, and transmit any health management information or event. All data are accessible either locally, from Ethernet/ Intranet or from Internet/Cloud, and offer an ideal support to data analytics, especially to support asset management, preventive maintenance and fleet management.

In addition, TRACe V40x-TR is ready to support the new Kontron Security Solution "Approtect", a combined hardware and software technology ensuring IP and copy protection while avoiding reverse engineering and tampering. Kontron Approtect is a holistic hardware based security solution that provides customers the ability to address security needs at the application layer. Learn more on Kontron website.

▶ TECHNICAL INFORMATION

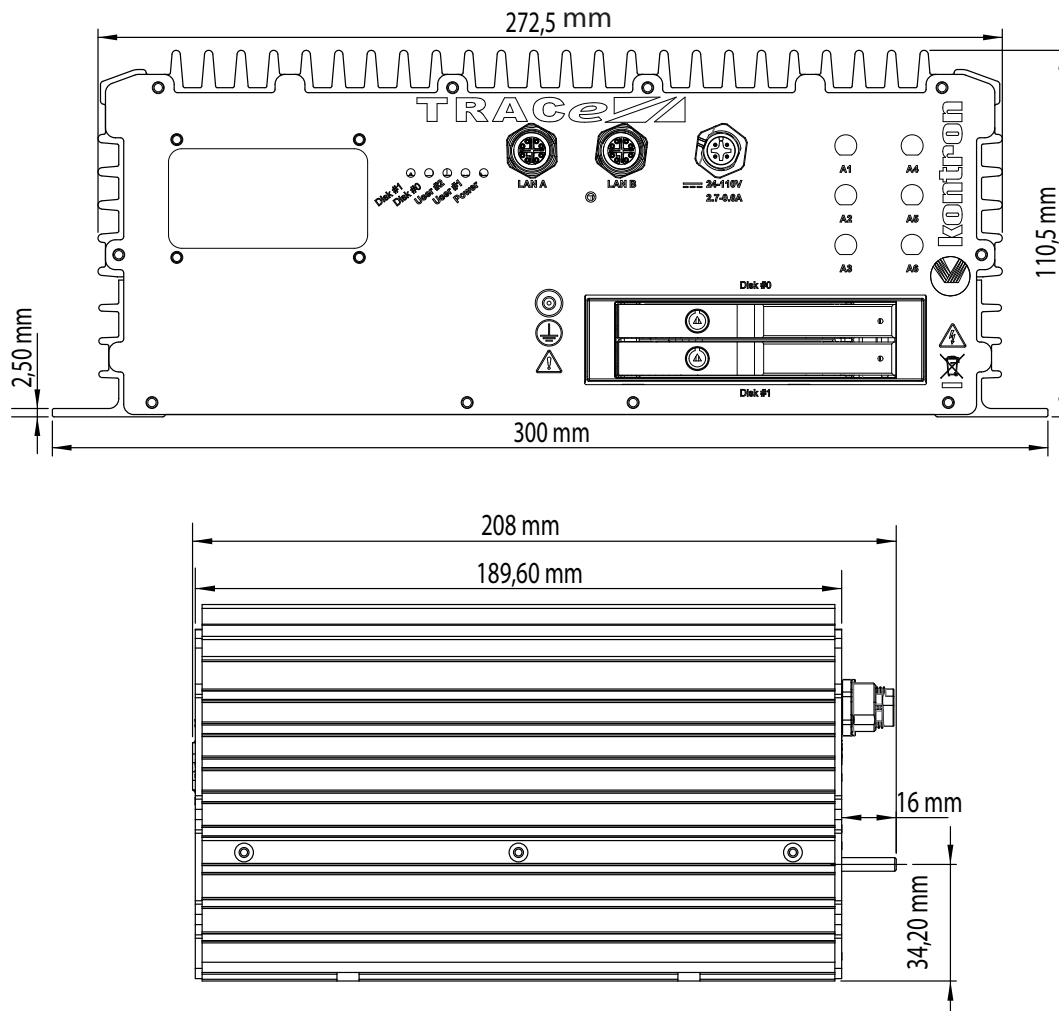
SUPPORTED PROCESSORS		Intel® Core™i7-6600U (dual-core @ 2.6 GHz) , 4 MB SmartCache Intel® Core™i3-6100U (dual-core @ 2.3 GHz) , 3 MB SmartCache Intel® Atom™ x5-E3930 dual-core @1.3 GHz , 2 MB L2 Cache Intel® Atom™ x5-E3940 quad-core @ 1.6 GHz, 2 MB L2 Cache Intel® Atom™ x7-E3950 quad-core @ 1.6 GHz, 2 MB L2 Cache
MEMORY AND FLASH	System Memory Storage Flash	8 GB DDR4 memory-down for Core™ i7/i3 variants, 8 GB DDR3L via SODIMM for Atom™ Apollo Lake variants 32 GB SLC eMMC soldered Flash
MASS STORAGE		2 SATA connections –for 2.5 inch HDD or SSD
GRAPHIC CONTROLLER	Graphic Interface/ resolution	Integrated Intel® HD Graphics 520, Display Port / 4096x2304 @ 60 Hz for Core™ i7/i3 variants Integrated Intel® HD Graphics 500, Display Port / 4096x2304 @ 60 Hz for Atom™ E3930 and E3940 Integrated Intel® HD Graphics 505, Display Port / 4096x2304 @ 60 Hz for Atom™ E3950
OPERATIONAL PLATE	Power Ethernet LEDs Drive Bays	1x DC-IN on M12 A-coded connector (1.5 kV insulation) 2x Ethernet 10/100/1000 Mb/s, M12 8-pin-Female connectors (1.5 kV insulation) 1x Power Led, 2x User Leds, 2x Disk LEDs 2x Removable and Hot-Pluggable drive bays with secured key locks for 2.5" SATA disks (maximum height 9,5mm), optional 4 removable drive bays
MAINTENANCE PLATE	Serial port USB Display LEDs	1 Serial Port 1x USB 3.0/2.0 , 1x USB 2.0 1 Display Port 2 User Leds, 1 Power Led, 1 Alarm Led, 1 Sys Led
POWER SUPPLY		Input Voltage Ultra Wide Range 24 VDC...110 VDC (Class S2-C1, 10 ms interruption)

► TECHNICAL INFORMATION

EXTENSION		3x Mini PCI-Express sockets (PCIe and USB 2.0 by default, USB 3.0 on request) 2x SIM card holders (Dual SIM support) 1x mSATA slot (shared with one 2.5" SATA) Additional DDR4/DDR3L RAM via SODIMM (+8 or +16GB) (on request only)
PROTECTION CLASS		IP20
OPERATING TEMPERATURE		-25°C up to +55°C +10 min @ 70°C EN50155 Class T1 (with W/T SSDs) -40°C up to 70°C +10 min @ 85°C EN50155 Class Tx depending on configuration
STORAGE TEMPERATURE		-40°C up to 85°C
OPERATING SYSTEM		Pre-installed Linux Fedora 23 (default), Windows 10 support
OPTIONS		Conformal Coating of internal components, Industrial Grade SSDs (128 GB to 2 TB), Wi-Fi, LTE, GNSS, RS422/485, Audio, 4x Digital Inputs + 4x Digital Outputs, Dual CAN2.0B, MVB. Additional 2x removable drive bays for 2.5" SATA III disks with secured key locks for a total of 4x removable drive bays. Contact us for more information.
STANDARDS APPROVAL		EN50155 ⁽¹⁾ , EN45545-2, CE, FCC part 15 class A

⁽¹⁾ Conformal coating of internal components is optional.

► DIMENSIONS



► ORDERING INFORMATION

ARTICLE	ORDER CODE	DESCRIPTION
TRACe V403-TR	1061-5000 (TRACE-V403-TR-0-0000-4-V-L)	EN50155(*) class T1 (-25°C to +55°C +10 min @ 70°C) fanless Network Video Recorder, COMecSL6 6th Generation Intel® Core™ i7 6600U dual-core @ 2.6 GHz, 8 GB DDR4 memory down, 32 GB SLC soldered eMMC Flash. Ultra Wide Range 24-110 VDC EN50155 PSU class S2-C1 (with 10 ms interruption) 2x removable drive bays for 2.5" disks with key locks, no disk included Operational side: 1x DC IN on M12 (4 pin, A-coded) - 2x GbE on M12 (8 pin, X-coded) - IEC60529 IP20- Pre-installed Linux Fedora 64 bits. (*) No conformal coating
TRACe V407-TR	1061-6469 (TRACE-V407-TR-0-00000-2-V-L)	EN50155 class Tx (-40°C to +70°C +10 min @ 85°C) fanless Network Video Recorder, COMecSL6 6th Generation Intel® Core™ i3 6100U dual-core @ 2.3 GHz, 8 GB DDR4 memory down, 32 GB SLC soldered eMMC Flash. Ultra Wide Range 24-110 VDC EN50155 PSU class S2-C1 (with 10 ms interruption) 4x removable drive bays for 2.5" disks with key locks, no disk included Operational side: 1x DC IN on M12 (4 pin, A-coded) - 2x GbE on M12 (8 pin, X-coded) - IEC60529 IP20- Pre-installed Linux Fedora 64 bits. Conformal coating of internal components.
TRACe V407-TR	1061-1214 (TRACE-V407-TR-0-00000-2-0-L)	EN50155(*) class T1 (-25°C to +55°C +10min @ 70°C) fanless Network Video Recorder, COMe-cSL6 6th Generation Intel® Core™ i7 6600U dual core, 8 GB DDR4 memory down, 32 GB SLC eMMC Flash. Ultra Wide Range 24-110 VDC EN50155 PSU class S2-C1 (with 10 ms interruption) - 2x removable drive bays for 2.5" disks with key locks, no disk included Operational side: 1x DC IN on M12 (4 pin, A-coded) - 2x GbE on M12 (8 pin, X-coded) - IEC60529 IP20- Pre-installed Linux Fedora 64 bits. (*) no conformal coating; optional
TRACE V404-TR	TRACE-V404-TR-1-00000-2-V-L	EN50155 class Tx (-40°C to +70°C +10 min @ 85°C) fanless Network Video Recorder, COMe-cAL6 Intel® Atom™ x5 E3940 quad-core @ 1.6 GHz, 8 GB DDR3L, 32 GB SLC soldered eMMC Flash. Ultra Wide Range 24-110 VDC EN50155 PSU class S2-C1 (with 10 ms interruption) - 2x removable drive bays for 2.5" disks with key locks, no disk included Operational side: 1x DC IN on M12 (4 pin, A-coded) - 2x GbE on M12 (8 pin, X-coded) - IEC60529 IP20- Pre-installed Linux Fedora 64 bits. Conformal coating of internal components.

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