

TRACe HMID104



EN50155^(*) FANLESS RAILWAY DRIVER CONSOLE

- ▶ Intel® Atom™ E3845 Bay Trail
- ▶ Health Management: Continuous independent Monitoring
- ▶ Upgradable and Scalable (mini PCI-E card slots)
- ▶ IP65 Dust and Water Jet on Front Plate / IP54 sides and rear
- ▶ EN50155 Class Tx (-40°C to +70°C / 10 min @ +85°C)

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

POSSIBILITIES START HERE



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► PRODUCT OVERVIEW

Kontron TRACe-HMID104 is an EN50155 compliant⁽¹⁾ fanless operational panel display. This HMI for transportation is typically used to keep the train driver informed about status regarding the train functionalities.

This fanless maintenance free panel display computer features a performance class Intel® Atom™ Bay Trail ensuring excellent processing power, low power consumption and the ability to operate in extended temperature ranges. The complete system is certified according to the EN50155 ensuring safe deployment in trains.

The D104 version is based on an Intel® Atom E3845 quad core @ 1.91 GHz Bay Trail processor. Featuring a 10,4" TFT display with touch panel, UIC612-01 hardkeys and IP65 (splash guard), TRACe-HMID104 is a perfect choice for Human Machine Interfaces (HMI) applications in harsh environments. TRACe-HMID104 offers a comprehensive feature set with two Gigabit Ethernet ports, serial interfaces, USB ports, Audio and GPIOs: all necessary interfaces are available.

The TRACe-HMID104 features a wide range power supply (from 24 VDC to 110 VDC). Rear connectors are certified I/O according to EN50155 standard (Ethernet, Serial ports), whereas the bottom plate hosts maintenance connectors (DisplayPort, USB, Serial, Ethernet) plus 2x SIM sockets (dual SIM support). It also offers 3 pre-holes for SMA allowing the routing of non-provided Mini PCI-Express wireless cards I/O signals (GSM/UMTS/LTE/GNSS, Wi-Fi, Bluetooth).

TRACe™ products have been designed to support a comprehensive health management capability, thanks to sensors and a micro-controller for system health monitoring.

The integrated micro-controller monitors boards and in-box 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-HMID104 to report, log, and transmit any out of specs parameters and/or any failures at power-on and during operations of TRACe-HMID104.

⁽¹⁾ 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 SLC Flash
MASS STORAGE		2x SATA connections (1 for SATA SSD and 1 for optional mSATA)
GRAPHIC CONTROLLER		Integrated 1D/3D Graphics Engine, GMA 3650/3600, Gfx clock 640/400 MHz, DirectX®9.1, Video De-code: MPEG2, Blu-Ray Disk 2.0, VC-1, H.264, WMV9 up to 1080p Display Port / 1366x768@112 MHz
DISPLAY / TOUCH PANEL	Interface/resolution	10.4" TFT color display, SVGA 800x600, Viewing angle : Horizontal : typ +/- 80° / Vertical : typ +/- 70°, Colors: 16.2M - LED backlight, automatic backlight control, Luminance : typ 400 cd/m², Ambient Light Sensor to automatically adapt display brightness, Projected Capacitive Touch (PCAP) screen, Hard Glass protection for TFT-LCD : IK 07 impact test, Optional : Anti-glare treatment
FRONT BEZEL		Optional Hardkeys, layout according to UIC612-01, Keys for pre-defined functions, Dimmable key backlighting, Front panel status LEDs
BUZZER		Acoustical warning device, Acoustical indication that key input recognized, 2.406 KHz, Sound Pressure Level: max 60 dB @ 10cm
SYSTEM I/O	Ethernet Serial Audio controller Audio Interface Digital Input Digital Output USB Input Power	2x Ethernet 10/100/1000 Mb/s, M12 X-coded 8-pole female connectors (insulated) 2x DSUB9 serial ports (RS-232/RS-422/RS-485), software configurable (insulated) Intel® High Definition Audio w/ HDMI 1.3a support Stereo Line In, Stereo Line Out 4x Inputs (Sink current, 10mA) 4x Outputs (Open drain, 10mA) 1x USB2.0 , M12 A-coded 5-pin female connector (insulated) 1x DC IN power (1.5 kV insulation), M12 A-coded 4 Pin Male connector (with Ignition Pin for Power Control)
MAINTENANCE I/O	Serial port USB Ethernet Display LEDs	1x serial port , RJ-12 connector 1x USB 3.0 (Super Speed 4 Gb/s), 1 USB 2.0 (Hi Speed 480 Mb/s), USB female Type A connectors 1x Ethernet 10/100/1000 Mb/s, RJ-45 connector 1x DisplayPort 2x User, 2x Power, 1x Alarm, 1x System
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 slots (Dual SIM support) 1x SATA Slim Disk Holder 1x mSATA using Mini PCI-Express card slot
DUST & WATER PROTECTION		IP level on front plate IP65 / IP level on rear plates IP54
MECHANICAL IMPACTS PROTECTION		TFT-LCD protected with IK07 glass
OPERATING TEMPERATURE		-40°C up to +70°C (with 10 min at +85°C) EN50155 Class Tx (electronic parts) (screen: -30°C to +70 °C)
DIMENSIONS		310 W x 214 H x 60 D mm
SUPPORTED OS		Linux (Red Hat Fedora 23) 64 bits ; pre-installed by default on 8 GB SLC Flash / Windows Embedded Standard 7 / Windows Embedded Standard 8 / Windows 7
OPTIONS	Conformal Coating 2.5" SSD	Industrial Grade MLC SSD 32 GB to 128 GB

► ORDERING INFORMATION

ARTICLE / ORDER CODE	DESCRIPTION
TRACE-HMID104-CK	EN50155 ⁽¹⁾ TRACe-HMI 10"4 PanelPC for Train Driver, PCAPTtouch screen, UIC612-01 Hardkeys , SVGA (800x600) , Anti Vandalism Glass IK07, Atom E3845 Bay Trail (quad core @ 1.91 GHz) COMe CPU, 2 GB DDR3 with ECC, 8 GB SLC eMMC soldered Flash, EN50155 class S2 Ultra Widerange PSU 24 VDC-110 VDC, 64 GB MLC SSD, IP65 front /IP54 rear, Pre-installed Linux Fedora 23 (64 bits) ⁽¹⁾ conformal coating of internal components is optional

► COMPANY ADDRESS

Kontron UK Limited

Units 3, 4, 5, 9 & 10 New bury Park
Marsh Lane, Easthamprnett
United Kingdom
Tel.: + 44 01243 380780

uksales@kontron.com