

TRACe HMID104



EN50155 CERTIFIED FANLESS RAILWAY DRIVER CONSOLE

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

POSSIBILITIES START HERE



▶ PRODUCT OVERVIEW

Kontron TRACe-HMID104 is an EN50155 certified 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 a COMExpress® CPU module featuring Intel® Atom E3845 Bay Trail (quad core @ 1.91 GHz). 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. Thanks to the flexible I/O (3x MiniPCIe slots) and modular design, TRACe-HMI can be fully featured with field buses (MVB, TRDP, ICom, Profibus, CAN Open...).

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). Last but not least, TRACe-HMID104 comes with pre-installed 64 GB Slim SATA SSD for storage.

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.

▶ 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 | 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 Display Port / 1366x768@112 MHz |
| FLAT PANEL | | 10,4" TFT color display, 800 x 600 LED backlight, automatic backlight control, Buzzer Typ. 400 cd/m² Projected Capacitive Touch and 32 hardkeys according to UIC 612-01 (Default) 5 wires Resistive Touch and/or 32 hardkeys according to UIC 612-01 (Alternative) Optional: heating foils |
| SYSTEM I/O | Ethernet Serial Audio controller Audio Interface Digital Input Digital Output USB | 2x Ethernet 10/100/1000 Mb/s, M12 X-coded 8-pole female connectors 2x DSUBB9 serial ports (RS-232/RS-422/RS-485), software configurable 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) |
| 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 IK7 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 |
| OPERATING SYSTEM | | Linux (Red Hat Fedora 22) / Windows Embedded Standard 8 |
| OPTIONS | Field Bus CAN Conformal Coating | MVB on EMD interface CANOpen dual |

▶ ORDERING INFORMATION

| ARTICLE / ORDER CODE | DESCRIPTION |
|----------------------|---|
| TRACE-HMID104-CK | Projected Capacitive Touch (PCAP) with UIC612-01 hard keys, full equipped I/Os, SSD 64GB, Pre-installed Linux Fedora 22 |

▶ CORPORATE OFFICES

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