nROK 3000

Intel® Atom™ D525 Fanless Railway Computer

Main Features

- Built-in Intel® Atom™ D525 Dual Core 1.8GHz processor
- Fanless and rugged design
- Easy maintenance
- Rich I/O interface with secure lock
- Removable 2.5" SSD tray
- Isolation RS-232/ 422/ 485 and GPIO
- Optional 24V/ 110V DC input with isolated protection
- Compliant with IP65 design
- Certified by EN50155

Product Overview

The latest transportation computing solution nROK 3000 fanless computer certified with EN50155 is specially designed for railway related applications. Based on Intel® Atom™ D525 processor, nROK 3000 is designed with isolated DC input protection to ensure stable operation in harsh environments. Adopting lock concept, all connectors, such as M12 Ethernet connector on nROK 3000, are designed for anti-vibration. Equipped with a SIM card holder, CFast socket and mini-PCIe socket for optional 3G wireless module, nROK 3000 allows data to be transmitted over network and stored in a convenient SSD (Solid-State Drive) or CFast card for better vibration and shock protection. The EN50155-certified nROK 3000 is a reliable solution for railway applications.

Specifications

Main Chipset
- ICH-8M

CPU
- Intel® Atom™ D525 Dual Core 1.8GHz

Memory
- 1GB DDR3 1333MHz SODIMM (up to 4GB)

Expansion
- 1 x Mini-PCIe socket (PCIe + USB) for WLAN option
- 1 x Mini-PCIe socket (USB) for 3.5G module option
- 1 x GPS module

I/O Interface-Front
- 1 x DVI-I connector with DVI-D and VGA output
- 1 x 26-pin circular connector in support of RS232/ 422/ 485 with isolation, 4-channel digital input and 4-channel digital output
- 1 x USB 2.0 with M12 connector
- 1 x Mic-in & 1 x Line-out
- 3 x 10/ 100 Ethernet with M12 connector
- Wireless communication
  1 x External accessible SIM card socket
  3 x Antenna holes for WWAN/ WLAN/ GPS
- 4 x LED for power, SSD, WWAN and WLAN
- DC Input
  24V with 500V isolated (range: 16.8V ~ 30V)
  Optional: 110V with 1.5KV isolation (range: 66V ~ 154V)

I/O Interface-Rear
- SSD accessible
- 2 x USB 2.0

Expandable Storage
- 1 x 2.5" SATA SSD tray
- 1 x CFast slot with protection cover

Power Management
- Selectable boot-up & shut-down voltage for low power protection by software
- Setting 8-level on/off delay time by software
- Status of ignition and low voltage status can be detected by software

Validated Embedded OS
- Windows Embedded Standard 2009
- Windows Embedded Standard 7
- Linux (kernel 2.6.X)

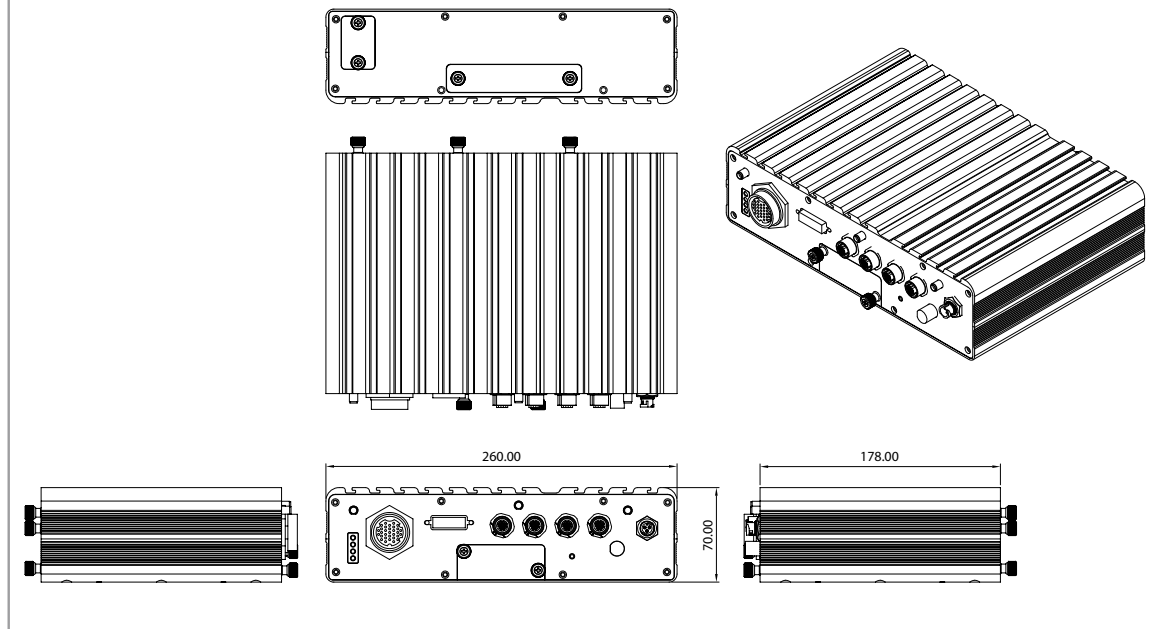**System Dimension**
- 260mm (W) x 178mm (D) x 70mm (H) (10.24" x 7" x 2.76")

Construction
- Aluminum enclosure with fanless design

Train Computer

www.nexcom.com

Dimension Drawing

260.00

178.00

70.00

Environment

- Operating temperatures
  Ambient with air: -40°C to 55°C (EN50155 Class T2)
- Storage temperatures: -40°C to 80°C
- Damp heat test: 55°C, 95% RH (non-operating, EN 50155)
- Relative humidity: 0% to 90% (non-condensing)
- Vibration (random):
  Compliance with EN61373 Category 1 Class B
- Shock:
  Compliance with EN61373 Category 1 Class B

Protection Grade

- IP65 rating

Standards/ Certifications

- CE
- FCC Class A
- Compliance with EN50155

Ordering Information

- **nROK 3000 (P/N: 10T00300000X1)**
  Intel® Atom™ D525 fanless railway computer with 24VDC isolation power input

- **Optional Accessories**

Part No.	Description
10VK0006013X0	Wireless mini card kit, Ralink 802.11b/g/n 2T2R, QCOM: Q802XKN5F, w/ antenna & cable (without assembly in NEXCOM)
10VK0006000X0	Sierra MC8790V kit, GPRS/ UMTS/ HSDPA, w/ internal cable, antenna & packing (without assembly in NEXCOM)
10VK0006007X0	Bluetooth kit, QCOM: QBTM400-01 (V7), w/ antenna & cable (without assembly in NEXCOM)
10VK0006004X0	GPS kit, GlobalSat: EM-313 w/ antenna & cable (without assembly in NEXCOM)
60233SAM03X00	Internal cable for GSM/ WLAN/ GPS antenna connection MOQ: 20 pcs
60233SAM05X00	GPS antenna/ 5m/ SMA180P
60233SAM07X00	GSM/ GPRS antenna, SMA, support 850/ 900/ 1800/ 1900
60233SMA30X00	GPS+GSM combo antenna 5M/ SMA180P
60233SAM17X00	GPRS/ UMTS/ HSDPA antenna, SMA, support 850/ 900/ 1800/ 1900/ 2100

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We reserve the right to change specifications and product descriptions at any time without prior notice.

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Assured Systems

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US

sales@assured-systems.com

Sales: +1 347 719 4508
Support: +1 347 719 4508

1309 Coffeen Ave
Ste 1200
Sheridan
WY 82801
USA

EMEA

sales@assured-systems.com

Sales: +44 (0)1785 879 050
Support: +44 (0)1785 879 050

Unit A5 Douglas Park
Stone Business Park
Stone
ST15 0YJ
United Kingdom

VAT Number: 120 9546 28
Business Registration Number: 07699660