nROK 500

Intel® Atom™ D525 1.8GHz Fanless Railway System

Main Features

- On-board Intel® Atom™ Dual Core D525 processor
- One DDR2 SO-DIMM socket, DDR2 800 2G memory module support max.
- 1 x M12 LAN port
- 2 x USB2.0/ 1 x VGA/ 2 x RS-232
- 1 x external CF socket and one external SIM card holder
- 24V DC input with 500V isolated protection
- Support ignition signal for delay-time control
- Support WoL & PXE function

Product Overview

nROK 500 fanless computer with EN50155 certified is specially designed for transportation computing solution especially in railway related applications. Based on Intel® Atom™ D525 processor, nROK 500 is designed with isolated DC input protection to ensure stable operation in harsh environments. Adopting lock concept, all connectors, for example M12 Ethernet connector, on nROK 500 are designed against vibration. Equipped with a SIM card holder, CF socket and mini-PCIe socket for optional 3G wireless module, nROK 500 allows data to be transmitted over network and stored in a convenient SSD (Solid-State Drive) or CF card for better vibration and shock protection. EN50155 certified nROK 500 is a reliable accredited solution for railway applications.

Specifications

Main Board
- Onboard Intel® Atom™ Dual Core D525 1.8GHz processor, 1M Cache
- Chipset: Intel® ICH8M chipsets

Main Memory
- 1 x DDR2 SO-DIMM socket, support 2G DDR2 667 and 800 MHz memory max., unbuffered and non-ECC
- Pre-Install with one DDR2 667 2G SO-DIMM memory in nROK500 system

Storage
- CF Card socket: External accessible type, screwed with CF card cover
- 1 x 2.5" SSD drive bay for optional SSD

Expansion
- 1 x Mini-PCIe socket (for optional 3G/ 3.5G Mobile wireless module)
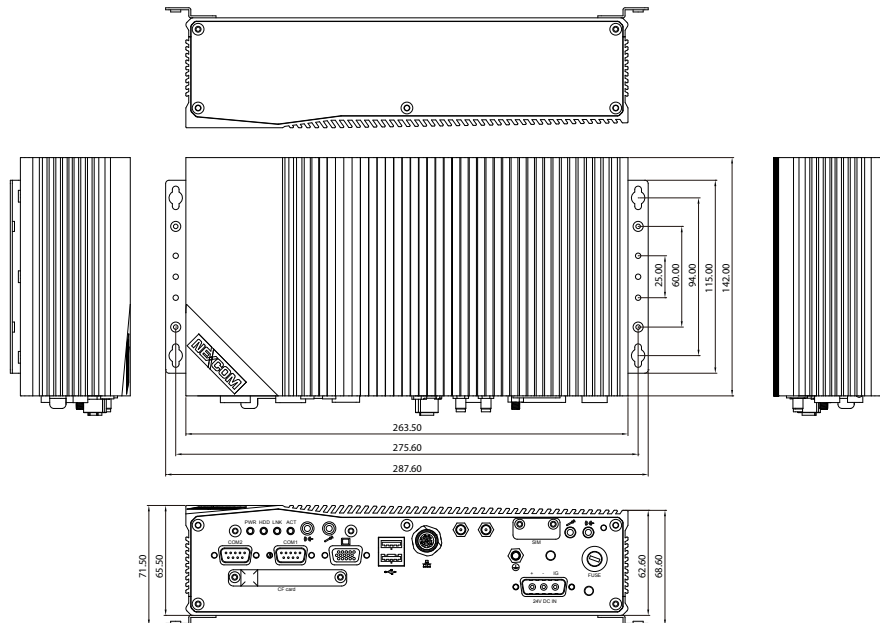
I/O Interface-Front
- 1 x VGA Output
  DB15 x 1, support analog monitor with pixel resolution up to 2048 x 1536@75 Hz
- 2 x RS-232 COM Port
  DB9 x 2, support 115.2 Kbps baud rate
- 2 x USB Port
  2 x USB 2.0 ports, 500mA per port, covered with plastic cover to against the dust

- 1 x Mic-in & 1 x Speaker-out
  · Audio controller: High definition audio controller, Realtek: ALC888-GR
  · 1 x Speaker-out, Dia. 3.5mm phone jack, covered with plastic cover to against the dust
  · 1 x Mic-in, Dia. 3.5mm phone jack, covered with plastic cover to against the dust
- 1 x 10/ 100 M12 LAN Port
  · LAN Controller: Intel® WG82574L LAN controller x 1
  · Support wake on LAN and boot from LAN function
- Wireless communication
  · 1 x External accessible SIM card socket
  · 1 x Mic-in for wireless communication use
  · 1 x Speaker-out for wireless communication use
  · 2 x Antenna holes (for 3G/ 3.5G mobile wireless module)
- LEDs
  · 1 x LED for power status
  · 1 x LED for HDD status
  · 1 x LED for 10/ 100 LAN link
  · 1 x LED for 10/ 100 LAN active
- DC Input
  · Nominal Voltage: 24V (Range: 16.8V ~ 30V)
  · Ignition signal input (24V, nominal; 0~10.5V = off, rest = on)
  · 500V Isolated design on DC Input
  · 1 x External fuse

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Dimension Drawing

Validated Embedded OS
* Windows Embedded Standard 2009
* Windows Embedded Standard 7

System Dimension
* 264mm (W) x 142mm (D) x 65.5mm (H)

Environment
* Operating temperature
  Ambient with air: -25°C to 55°C (EN50155 Class T1)
* Storage temperature: -40°C to 80°C
* Damp heat test: 95% at 55 °C, compliance with EN50155
* 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
* IP52

Certifications
* CE
* EN50155

Ordering Information

* **nROK 500 (P/N: 10A00050000X0)**
  Intel® Atom™ D525 1.8GHz Fanless Railway Computer with 2G memory pre-installed and Isolated 24VDC Input

Train Computer

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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