

R3S Series

Fanless Rolling Stock Computer with Intel® Atom™ x7-E3950 Processor



■ Features

- Intel® Atom™ x7-E3950 Processor
- Certified with EN50155, EN50121, EN50125-3 and EN45545
- Vehicle/Rail NVR with 6x M12 PoE/PoE+ ports (max. 90W power)
- 2x M.2 Slots with up to 4x SIM card readers
- Wide range operating temperature from -40 to 70°C
- 2x HDMI, DI/DO, 3x COM/CAN BUS and 4x USB
- 1x external removable HDD/SSD drive bay
- Support 24~36 or 72~110 power input

■ Preliminary Specifications

Processor System

CPU	Atom™ x7-E3950
Frequency	1.6 GHz
Core Number	Quad-core
BIOS	AMI SPI Flash BIOS
Chipset	SoC
Processor Graphics	Intel integrated HD Graphics 505

Fanless

Yes

Memory

Technology	LPDDR4 up to 2400 MHz
Max. Capacity	Up to 8GB (Factory default: 8GB)

Ethernet

Controller	Intel i210IT x6
Speed	10/100/1000 Mbps
Interface	M12 X-coded (PoE/PoE+) x6
PoE	IEEE 802.3af / IEEE 802.3at PoE+; under maximum 90W power budget

Storage

Type	SATA
Installation	Removable 2.5" drive bay x1 (HDD/SSD is not included)
Type	mSATA, SDXC
Installation	mSATA socket x1 (default 128 GB); SDXC Socket x1

I/O

Display	HDMI x2
LAN	GbE RJ45 x1
PoE	IEEE 802.3af standard PoE ports x6 (any 3 ports support IEEE 802.3at PoE+)
Audio	DB9
Serial I/O	COM1: RS-232/422/485 COM2: RS-232/422/485 COM3: RS-232/CAN
GPS	u-blox NEO-M8N; 3 GNSS (GPS, Galileo, GLONASS, BeiDou), default @ GPS + GLONASS dual band

G-sensor	ADXL 345
CAN	Optional CAN Bus J1939 / J1708 x1
Digital I/O	11x DI 12V TTL selectable 1x DI (from MCU) 3.3V Level TTL 2x 12V with 1A dry relay
USB	USB 2.0 Type A x4
Antenna	SMA antenna hole x5 (includes GPS+GLONASS x1)

Expansion

M.2	2x M.2 3042 B Key
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Cooling

Processor	passive CPU heatsink
System	fanless design with corrugated aluminum

Environment

Operating Temperature	-40~70°C / -40~158°F
Storage Temperature	-40~85°C / -40~185°F
Relative Humidity	5%~95% @ 40°C / 104°F (Storage Level)

Miscellaneous

Hardware Monitoring	Yes
Internal RTC with Li Battery	Yes

Mechanical

Dimension (W x H x D)	272.4 x 114.3 x 228 mm (10.72" x 4.5" x 8.97")
Weight	7 kg
Mounting	Wall mount kit

Power

Connector	M12 K-coded (Ground, DC_IN, Ground, IGN, Chassis Ground)
Input	SKU B: Input Rated: 24~36Vdc, SKU C: Input Rated: 72~110Vdc
Output	12V/1A DC out

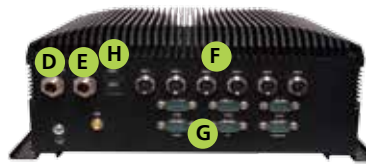
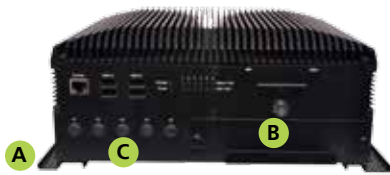
Driver Support

Microsoft Windows	Win 10 IoT
Linux	Linux: Redhat Enterprise 5, Fedora 14. Linux Kernel 2.6.18 or later

Certification

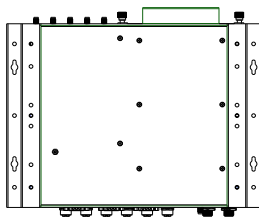
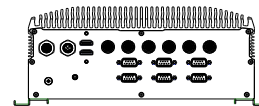
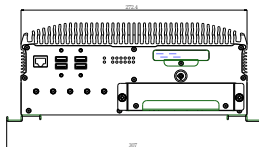
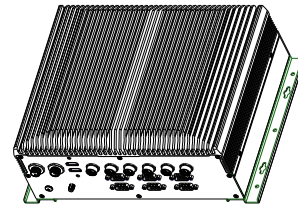
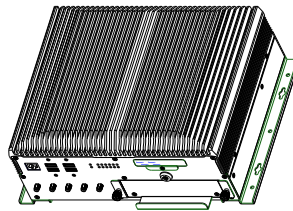
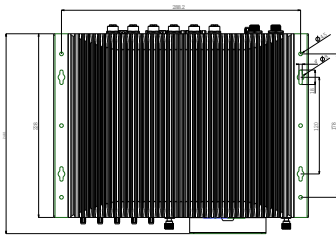
EMC	E13, CE Class A, FCC Class A, RoHS
Certified	MIL-STD-810G, EN50155, EN50121-3-2, EN50121-4, EN50125-3, EN 45545

Product I/O View



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|------------------------------|--------------------|-------------------|
| A Wall mount kit | D DC Input | G COM x 4 |
| B Swappable Drive Bay | E DC output | H HDMI x 2 |
| C Antenna Hole | F PoE x 6 | |

Dimensions 272.4 x 114.3 x 228 mm (10.72" x 4.5" x 8.97")



Ordering Information

R3SB

Intel Atom™ x7-E3950 Processor, 6x M12 X-coded IEEE 802.3af PoE port (any 3 ports support IEEE 802.3at PoE+), 2x M.2 3042 B key socket with dual SIM each, DC 24~36V power input

R3SC

Intel Atom™ x7-E3950 Processor, 6x M12 X-coded IEEE 802.3af PoE port (any 3 ports support IEEE 802.3at PoE+), 2x M.2 3042 B key socket with dual SIM each, DC 72~110V power input

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contact@lannerinc.com | www.lannerinc.com