



■ Features

- Intel® Atom™ x7-E3950 Processor (Apollo Lake)
- Vehicle Surveillance NVR with 6x RJ45 ports (4x PoE/2x PoE+)
- DIO, Optional CAN bus, 2x COM and 2x DVI-D
- Optional removable PGN Caddy for 4G/LTE module
- Wide range operating temperature from -40 to 70°C
- Removable 2.5" Drive Bay for HDD/SSD
- 1x Full-size Mini-PCIe with dual SIM card reader, 1x Half-size Mini-PCIe
- Compliant with E13 standard

■ Specifications

Processor System

CPU	Intel® Atom™ x7-E3950
Frequency	1.60 GHz
Core Number	Quad-core
BIOS	AMI SPI Flash BIOS
Chipset	N/A
Graphic Processor	Intel® Integrated HD Graphics 505

Fanless

Yes

Memory

Technology	DDR3L 1866 SO-DIMM Socket x1
Max. Capacity	Up to 8GB, pre-installed 4GB
Socket	1 x 204-pin SODIMM

Ethernet

Controller	Intel® i210IT
Interface	6x RJ45
PoE	4x IEEE 802.3af PoE ports/2x at PoE+ ports (SKU B); under maximum 60W power budget

Audio

Controller	Realtek ALC886 HD codec
Interface	Mic-in/Line-out

Storage

Type	SATA
Installation	1x Removable 2.5" drive bay (not include HDD/SSD)
Type	mSATA
Installation	1x mSATA socket, pre-installed 128GB

I/O

Display	2x DVI-D, up to 1920 x 1200
CAN	1x Optional CAN Bus @J1939/J1708
COM	2x RS-232/422/485
USB	2x USB 2.0 Type A
GPS/G-sensor	u-blox NEO-M8N/ADXL 345
Digital I/O	8x DI 5V TTL and 8x DO 12V TTL 2x DI (from MCU) 3.3V TTL 1x 12V with 1A dry relay
Antenna	7x SMA antenna hole (includes 1x GPS+GLONASS)

Expansion

PCIe	1x Full-size Mini-PCIe with dual SIM card reader 1x Half-size Mini-PCIe Optional removable PGN Caddy with dual SIM card readers
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Cooling

Processor	Passive CPU heatsink
System	Fanless design with corrugated aluminum

Environment

Operating Temperature	-40°C ~ 70°C/-40~158°F
Storage Temperature	-40°C ~ 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

Dimensions (W x H x D)	273.8 x 73 x 185 mm (10.78" x 2.87" x 7.28")
Weight	4 kg
Mounting	Wallmount kit

Power

Connector	3-pin terminal block (+,-,ignition)
Input	Supports DC 9 ~36V level, ATX mode support ignition delay on/off control

Driver Support

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

Certification

EMC	CE Class A, FCC Class A, RoHS
Safety	E13 include ISO 7637-2

Compliance

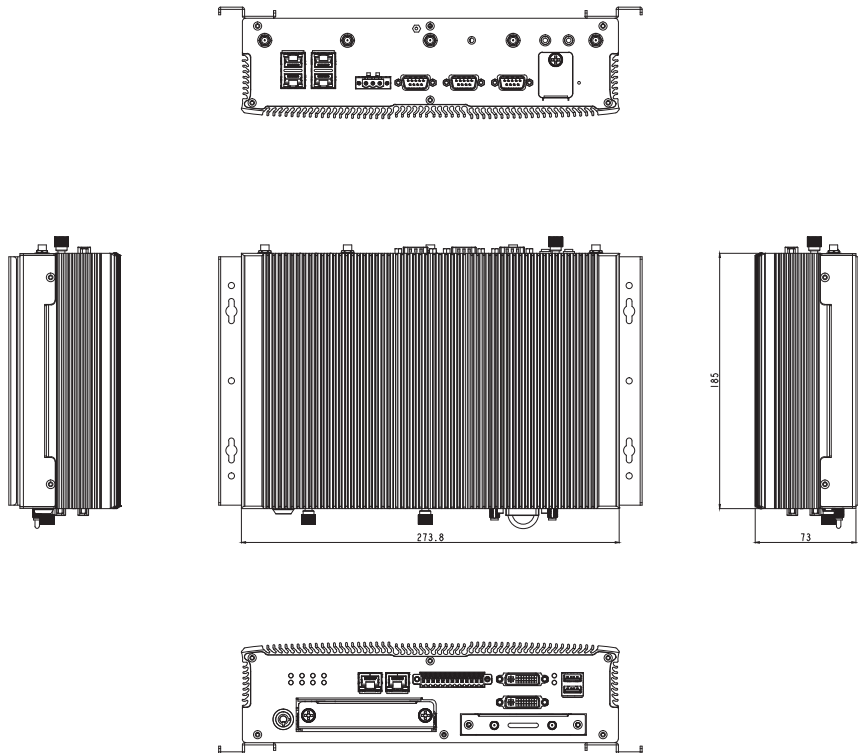
Vibration	MIL-STD-810G, Method 514.6
Shock	MIL-STD-810G, Method 516.6

Product I/O View



- | | | | | |
|------------------|------------------------------|---------------------------|-------------------|-------------------|
| A GbE LAN | D USB | G SIM slot | J DC-in | M Antennas |
| B DIO | E Removable Drive Bay | H Optional CAN Bus | K PoE/PoE+ | |
| C DVI-D | F Removable PGN Caddy | I COM | L Audio | |

Dimensions 273.8 x 73 x 185 mm (10.78" x 2.87" x 7.28")



Ordering Information

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|----------------|--------------------------------------------------------------------------------------------------------------------|
| V3SA | Fanless In-vehicle Surveillance Computer with Intel® Atom™ x7-E3950 Processor, 4x PoE RJ45 |
| V3SB | Fanless In-vehicle Surveillance Computer with Intel® Atom™ x7-E3950 Processor, 4x PoE RJ45/2x PoE+ RJ45 (max. 60W) |
| PGN-300 | 4G LTE Radio Modem with LTE Cat-6 embedded module, certified with PTCRB, AT&T, Verizon. |
| PGN-600 | 4G LTE-Advanced Pro Radio Modem with LTE Cat-12 embedded module, certified with PTCRB, AT&T. |

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