



### ■ Features

- Intel® Atom™ x7-E3950 Processor (Codenamed Apollo Lake)
- Vehicle Surveillance NVR with 6x RJ-45 ports (4 with PoE / 2 with PoE+), DIO, Optional CAN bus port, Dual COM and DVI-D ports
- 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 x3
Interface	RJ-45
PoE	IEEE 802.3af PoE ports x4 / at PoE+ ports x2 (SKU B); under maximum 60W power budget

#### Audio

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

#### Storage

Type	SATA
Installation	Removable 2.5" drive bay x1 (HDD/SSD is not included)
Type	mSATA
Installation	mSATA socket x1, pre-installed 128GB

#### I/O

Display	DVI-Dx2, resolution up to 1920x1200
LAN	6x RJ-45 ports (4 with PoE / 2 with PoE+)
CAN	Optional CAN Bus x1 @ J1939/ J1708 x1
COM	RS-232/422/485 x2
USB	USB 2.0 Type A x2
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	SMA antenna hole x7 (includes GPS+GLONASS x1)

#### 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	-40~70°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

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	Wall mount 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	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

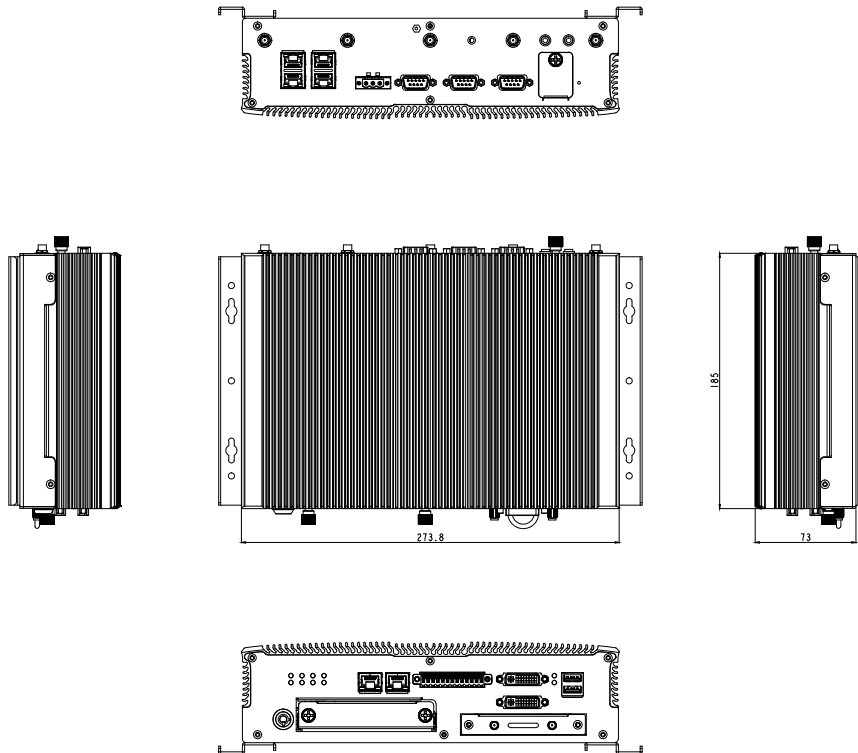
Vibration	MIL-STD-810G, Method 514.6
Shock	MIL-STD-810G, Method 516.6

## ■ Product I/O View



- |                            |                              |                           |                         |                   |
|----------------------------|------------------------------|---------------------------|-------------------------|-------------------|
| <b>A</b> GbE LAN ports x 2 | <b>D</b> USB ports           | <b>G</b> SIM slot         | <b>J</b> DC IN          | <b>M</b> Antennas |
| <b>B</b> DIO               | <b>E</b> Removable Drive Bay | <b>H</b> Optional CAN Bus | <b>K</b> PoE/PoE+ ports |                   |
| <b>C</b> DVI-D x 2         | <b>F</b> Removable PGN Caddy | <b>I</b> COM ports x 2    | <b>L</b> Audio ports    |                   |

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



## ■ Ordering Information

- |                |  |
|----------------|--|
| <b>V3SA</b>    | Fanless In-vehicle Surveillance Computer with Intel® Atom™ x7-E3950 Processor, IEEE 802.3af PoE ports RJ45 x4                                    |
| <b>V3SB</b>    | Fanless In-vehicle Surveillance Computer with Intel® Atom™ x7-E3950 Processor, IEEE 802.3af PoE ports RJ45 x4 / at PoE+ ports RJ45 x2 (max. 60W) |
| <b>PGN-300</b> | 4G LTE Radio Modem with LTE Cat-6 embedded module, certified with PTCRB, AT&T, Verizon.  |
| <b>PGN-600</b> | 4G LTE-Advanced Pro Radio Modem with LTE Cat-12 embedded module, certified with PTCRB, AT&T.   |

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