V3S

■ 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
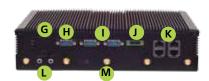- Compliant with E13 standard

■ 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

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

In-vehicle Computer

■ Product I/O View

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

M Antennas

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

■ Ordering Information

V3SA	Fanless In-vehicle Surveillance Computer with Intel® Atom™ x7-E3950 Processor, IEEE 802.3af PoE ports RJ45 x4
V3SB	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)
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.

Lanner

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