

VMS-RPPS

Intel® 12/13th Rugged Fanless Vehicle Telematics System



Product Features

- Intel® 12/13th Gen PS-series Core i7/i5/i3/Celeron® Processor
- Intel® Iris® Xe/UHD Graphics
- 2-262 Pin SODIMM Socket Max. Up to 64GB DDR5 4800MHz
- 3-Expansion, 1-Full Size Mini PCIe, 1-M.2 Key-E, 1-M.2 Key-B w/ SIM slot
- 3-Storage, 1-M.2 Key-M, 2-2.5" External Drive Bay
- Onboard GPS module, Support RAID 0/1, TPM 2.0, iAMT
- 9~60Vdc Input, with Ignition Control & Vehicle Power Management
- -40C~70C Operating Temperature
- CE, FCC A, E-Mark, ISO7637-2 Certified

Specification

System Information	
Processor	Intel® 13th Raptor Lake/12th Alder Lake PS-series Core i7/i5/i3/Celeron® Processor
System Memory	2 x 262-Pin SODIMM Socket Max. Up to 64GB DDR5 4800MHz (non ECC only)
BIOS Information	AMI UEFI BIOS, 256Mbit SPI Flash ROM
Watchdog Timer	H/W Reset, 1sec. ~ 65535sec.
H/W Status Monitor	CPU & System Temperature monitoring Voltage monitoring
RAID	Support RAID 0/1
TPM	TPM 2.0
iAMT	Depends on sku
Expansion	
M.2	1 x M.2 Key-E 2230 (1 x PCIe1 + USB2.0) supports Wi-Fi & BT Module 1 x M.2 Key-B 3042/3052 (1 x PCIe1 + USB3.2) w/ SIM slot2(external)

mPCIe 1 x Full Size Mini PCIe (1 x PCIe1 + USB2.0) w/ SIM slot2(external)

Storage

M.2 1 x M.2 Key-M 2280 (1 x PCIe4) NVMe

2.5 Drive Bay 2 x 2.5" Drive Bay (SATA III, Max. up to 15mm Height Storage), RAID 0/1 supported

Front I/O

USB 2 x USB 2.0

Power Button 1 x Push Button for Power on/off w/ LED(Blue)

Reset Button 1 x Push Button for Reset in hiding

COM Port 1 x RS232/422/485(Jumper + DIP switch), support auto-flow

LED Indicator
1 x LED indicators for Storage (Yellow) - M.2 M-key PCIe Storage
1 x LED indicators for LTE (Green) - M.2 B-key
1 x LED indicators for Wi-Fi (Green) - M.2 E-key

SIM Slot 2 x SIM Card Slot (External Accessible w/Dust Protection Cover)

Digital I/O
1 x 10-bits GPIO
(5 x DI (9~60V) and 5 x DO (30V/200mA)), SW control

Rear I/O

USB 2 x USB 3.2 Gen.2

COM Port 2 x RS232/422/485(Jumper + DIP switch), support auto-flow (COM2/3 via Cable)

LAN Port 4 x RJ-45 (4 x PoE Available for BOM option)

Audio
1 x Line-Out
1 x Mic-In

DP 2 x DP++ 1.4

HDMI 2 x HDMI 2.0

Antenna 2 x Antenna Mounting w/Dust Protection Cover

Right I/O

Antenna 3 x Antenna Mounting w/Dust Protection Cover

Left I/O

Antenna 3 x Antenna Mounting w/Dust Protection Cover

GPS

Chipset u-blox NEO-M9N GNSS LCC module with Untethered Dead Reckoning and onboard sensors.

Display

Graphic Chipset Intel® Iris® Xe Graphics (i7-1265UL/ i5-1245UL)
Intel® UHD Graphics (i3-1215UL/Celeron® 7305L)

Resolution HDMI 2.0: Max. resolution 4096 x 2304 @ 60Hz
DP++ 1.4a: 4096x2304 @ 60Hz (DP to HDMI cable can't support 4K @ 60Hz, Max. up to 1920x1080 (60Hz))

Audio

Audio Codec Realtek ALC888S co-lay ALC897 (Default: ALC888S)

Ethernet

LAN Chipset 4 x Intel® I226IT 2.5 Gigabit Ethernet

Specification 4 x 10/100/1000/2.5G Base-Tx GbE compatible

Power Requirement

Voltage Input Spec. Typical 12/24/48 Vdc (+9 ~ 60Vdc)

Voltage Input Connector 1 x 3-Pin Terminal Block for DC Power Input

ACPI Single Power ATX Support S0, S3, S4, S5
ACPI 5.0 Compliant

Power Mode Vehicle Power Mode (Default Setting)/Industrial PC Power Mode
AT / ATX mode Switchable Through Jumper

Software Support

OS Win 10/Win 11/Linux

Certification

Certification Information CE, FCC Class A, E24 Mark, ISO 7637-2, IP50

Mechanical & Environmental

Operating Temp. Standard System: -40°C ~ 70°C (-40°F ~ 158°F) with 0.5m/S air flow, extended temperature peripherals (Factory option)
System with PoE: -40°C ~ 60°C (-40°F ~ 140°F) with 0.5m/S air flow, extended temperature peripherals (Factory option)

Storage Temp. -30°C ~ 70°C (-22°F ~ 185°F)

Operating Humidity 5% ~ 90% Relative Humidity, Non-condensing

Dimension (W x L x H) 239.4 x 160 x 55 mm (TBD)

Weight 3kg (TBD)

Vibration Test	Operating with SSD : MIL-STD-810G, Method 514.6, Category 4, common carrier US highway truck vibration exposure Storage with SSD : MIL-STD-810G, Method 514.6, Category 24, minimum integrity test
Shock Test	Operating with SSD : MIL-STD-810G, Method 516.6, Procedure I, functional shock=20G Non-Operating with SSD : MIL-STD-810G, Method 516.6, Procedure V, crash hazard shock test=75G
Drop Test	Package drop test Reference ISTA 2A, Method : IEC-60068-2-32 Test : Ed Test phase : One corner, three edges, six faces
IP Rating	IP50
Mounting Kit	Wall mount kit (Standard)
