



Features

- Intel® 13th Gen PS-series Core 7/5/3 Processor
- Intel® Graphics
- 2-262 Pin SODIMM Socket Max. Up to 64GB DDR5 5200MHz
- 3-Expansion, 1-Full Size Mini PCIe, 1-M.2 Key-E, 1-M.2 Key-B
- 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
- 40 ~ 65°C Operating Temperature
- CE, FCC A, E-Mark, ISO7637-2 Certified



E24 Mark



ISO 7637-2



MIL-STD
810H



Wide Temp.
-40~65°C



Wide Voltage
Input
9-60Vdc

Specifications

System Information

Processor	Intel® 13th Raptor Lake PS-series Processor Intel® Core™ 7-150UL Processor (12M Cache, up to 5.0 GHz) Intel® Core™ 5-120UL Processor (12M Cache, up to 4.6 GHz) Intel® Core™ 3-100UL Processor (10M Cache, up to 4.5 GHz) Intel® U300L Processor (8M Cache, up to 4.4 GHz)
System Memory	2 x 262-Pin SODIMM Socket Max. Up to 64GB DDR5 5200MHz (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 slot1 (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
LAN Port	4 x RJ-45 (Support PoE as BOM option)
Audio	1 x Line-Out, 1 x Mic-In
DP	2 x DP++
HDMI	2 x HDMI
Antenna	2 x Antenna Mounting w/Dust Protection Cover

Right I/O

Antenna	3 x Antenna Mounting w/Dust Protection Cover
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Left I/O

Antenna	3 x Antenna Mounting w/Dust Protection Cover
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GPS

Chipset	u-blox NEO-M9N GNSS module
Protocol	BeiDou, Galileo, GLONASS, GPS / QZSS
Display	
Graphic Chipset	Intel® Graphics
Resolution	HDMI : Max. resolution 4096 x 2304 @ 60Hz DP++ : Max. resolution 4096 x 2304 @ 60Hz (DP to HDMI cable can't support 4K @ 60Hz, Max. up to 1920x1080 (60Hz))

Audio

Audio Codec	Realtek ALC888S
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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
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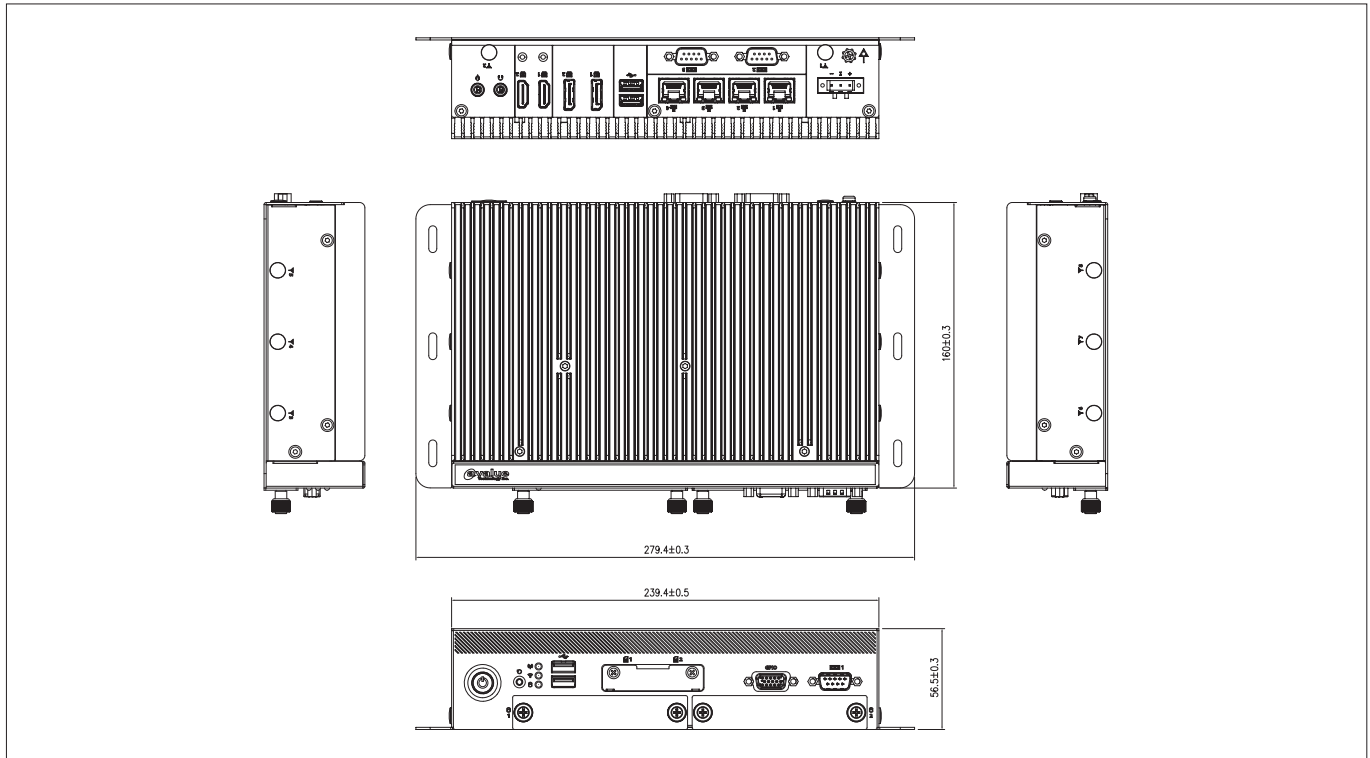
Certification

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

Operating Temp.	Standard System: -40°C ~ 65°C (-40°F ~ 149°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 x 160 x 56 mm
Weight	2.6 kg
Vibration Test	Operating with SSD : MIL-STD-810H, Method 514.8, Category 4, common carrier US highway truck vibration exposure
Shock Test	Operating with SSD : MIL-STD-810H, Method 516.8, Procedure I, functional shock=20G
IP Rating	IP50
Mounting Kit	Wall mount kit (Standard)

Mechanical Drawing



Ordering Information

P/N	Processor	Chipset	Memory	Storage	Adapter/ PSU	Mounting Kit	Temp.	PoE
VMS-RPPS-15-A1-1R	Intel® Core™ 7-150UL Processor	N/A	8GB DDR4 (Up to 64G Optional)	(Optional)	120W Adapter (Optional)	Wall Mount	-40°C ~ 65°C	N/A
VMS-RPPS-12-A1-1R	Intel® Core™ 5-120UL Processor	N/A	8GB DDR4 (Up to 64G Optional)	(Optional)	120W Adapter (Optional)	Wall Mount	-40°C ~ 65°C	N/A
VMS-RPPS-10-A1-1R	Intel® Core™ 3-100UL Processor	N/A	8GB DDR4 (Up to 64G Optional)	(Optional)	120W Adapter (Optional)	Wall Mount	-40°C ~ 65°C	N/A
VMS-RPPS-U3-A1-1R	Intel® U300L Processor	N/A	8GB DDR4 (Up to 64G Optional)	(Optional)	120W Adapter (Optional)	Wall Mount	-40°C ~ 65°C	N/A
VMS-RPPS-15P-A1-1R	Intel® Core™ 7-150UL Processor	N/A	8GB DDR4 (Up to 64G Optional)	(Optional)	120W Adapter (Optional)	Wall Mount	-40°C ~ 60°C	4 x PoE
VMS-RPPS-12P-A1-1R	Intel® Core™ 5-120UL Processor	N/A	8GB DDR4 (Up to 64G Optional)	(Optional)	120W Adapter (Optional)	Wall Mount	-40°C ~ 60°C	4 x PoE
VMS-RPPS-10P-A1-1R	Intel® Core™ 3-100UL Processor	N/A	8GB DDR4 (Up to 64G Optional)	(Optional)	120W Adapter (Optional)	Wall Mount	-40°C ~ 60°C	4 x PoE
VMS-RPPS-U3P-A1-1R	Intel® U300L Processor	N/A	8GB DDR4 (Up to 64G Optional)	(Optional)	120W Adapter (Optional)	Wall Mount	-40°C ~ 60°C	4 x PoE

Packing List

Item	Quantity
Intel® 13th Rugged Fanless Vehicle Telematics System	1
DP to VGA converter	1
Wire tie for HDMI	2
Screw driver for chassis	2
Thermal pad for NVMe & Memory	2
Screw kits for peripheral	1
Rubber foot kits	1

Optional Items

Item	P/N
AC/DC adapter 12V/10A 90 Screw Type	ACC-ADP-120N-07R
Terminal block to lockable DC Jack cable	E170P040031R
Power Cord 3P (F)-3P (M) 183cm, USA type	E1702031833R
Power Cord SL-6+SL-3 183cm, EU type	E1702031000R
Power Cord 3P (F)-3P (M) 183cm, Japan w/PSE type	E1702031834R
Power Cord QP-026+SL-3 183cm, UK type	E170P060380R
Power Cord 3P (F)-3P (M) 183cm, Australia type	E1702031831R

I/O Overview

