



VMS-RPPS

Rugged Fanless Vehicle Telematics System, 13th Gen Intel® Core™ 7/5/3/Celeron® Platform



Features

- 13th Gen Intel® Core™ 7/5/3/Celeron® Processor, PS-series Platform
- Integrated Intel® Iris® Xe/UHD Graphics (CPU Dependent)
- 2 x 262-pin SO-DIMM sockets support up to 64GB DDR5 5200MHz
- Onboard GPS module, Support RAID 0/1, TPM 2.0, iAMT
- 4 x Intel® Ethernet Controller I226-IT (2.5 Gigabit), 4 x RJ45 LAN Ports
- Supports 4 Independent Displays via 2 x SP++ 1.4 and 2 x HDMI 2.0
- 9~60Vdc Input, with Ignition Control & Vehicle Power Management
- 3 x Expansion, 1 x Full Size mini-PCIe, 1 x M.2 E-Key, 1 x M.2 B-Key
- 3 x Storage, 1 x M.2 M-Key, 2 x 2.5" External Drive Bay
- 2 x SIM Card Slots (External Accessible with Dust Protection Cover)
- 1 x 10-bits GPIO, 2 x COM Ports
- 8 x Antenna Mounting with Dust Protection Covers
- E-Mark, ISO7637-2, CE, FCC A Certified



E24 Mark



ISO 7637-2



MIL-STD 810H Certified



Wide Temp. -40~65°C



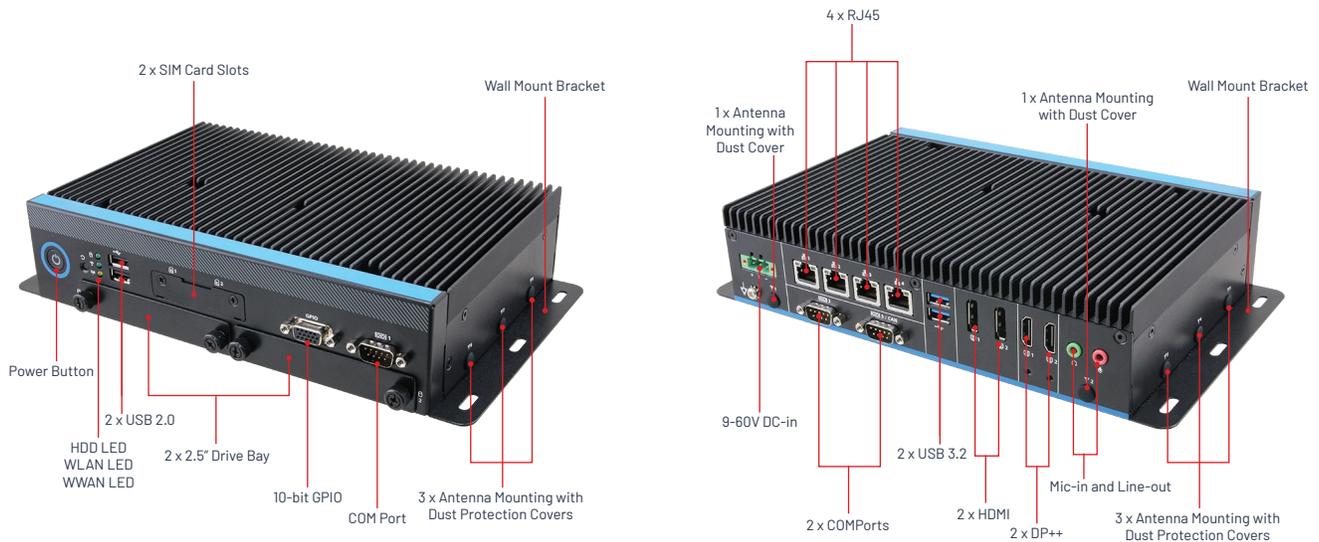
Wide Voltage Input 9~60Vdc

SPECIFICATIONS

System	
Processor	13th Gen Intel® Core™ 7/5/3/Celeron® Raptor Lake PS-series Processor: Intel® Core™ 7-150UL Processor Intel® Core™ 5-120UL Processor Intel® Core™ 3-100UL Processor Intel® U300L Processor Intel® Core™ 7-150UL Processor Intel® Core™ 5-120UL Processor Intel® Core™ 3-100UL Processor Intel® U300L Processor
Memory	2 x 262-pin SO-DIMM Sockets support up to 64GB DDR5 4800MHz (non ECC only)
BIOS	AMI UEFI BIOS, 256Mbit SPI Flash ROM
Ethernet	4 x Intel® Ethernet Controller I226-IT (2.5 Gigabit), 10/100/1000/2.5G Base-Tx GbE compatible
Audio Codec	Realtek HD Audio
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	CPU Dependent
Supported OS	Win 10, Win 11, Linux
Expansion	
PCIe	1 x Full Size Mini PCIe (1 x PCIe x1 + USB2.0) w/ SIM card slot 1 (external)
M.2	1 x M.2 E-Key 2230 (1 x PCIe x1 + USB2.0) supports Wi-Fi & BT Module 1 x M.2 B-Key 3042/3052 (1 x PCIe x1 + USB 3.2) with SIM card slot 2 (external)

Storage	
M.2	1 x M.2 M-Key 2280 (1 x PCIe x4) NVMe
2.5 Drive Bay	2 x 2.5" Drive Bay (SATA III, support up to 15mm Height Storage), RAID 0/1 supported
GPS	
Chipset	u-blox NEO-M9N GNSS module
Protocol	BeiDou, Galileo, GLONASS, GPS / QZSS
Display	
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: Max. resolution 4096x2304 @ 60Hz (DP to HDMI cable can't support 4K @ 60Hz, Max. up to 1920x1080 (60Hz))
Multiple Display	Supports 4 Independent Displays
External I/O - Front	
USB	2 x USB 2.0
COM	1 x RS232/422/485(Jumper + DIP switch), support auto-flow
SIM Card Slot	2 x SIM Card Slots (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
Power Button	1 x Push Button for Power on/off w/ LED(Blue)
Reset Button	1 x Push Button for Reset
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

SPECIFICATIONS / ADDITIONAL PRODUCT PHOTOS



External I/O - Rear

Display	2 x DP++ 1.4 2 x HDMI 2.0
USB	2 x USB 3.2 Gen.2
LAN	4 x RJ-45 (Optional PoE support)
Audio	1 x Line-out, 1 x Mic-in
Antenna	2 x Antenna Mounting with Dust Protection Covers
Weight	4 lbs (1.8 kgs)

External I/O - Left

Antenna	3 x Antenna Mounting with Dust Protection Covers
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External I/O - Right

Antenna	3 x Antenna Mounting with Dust Protection Covers
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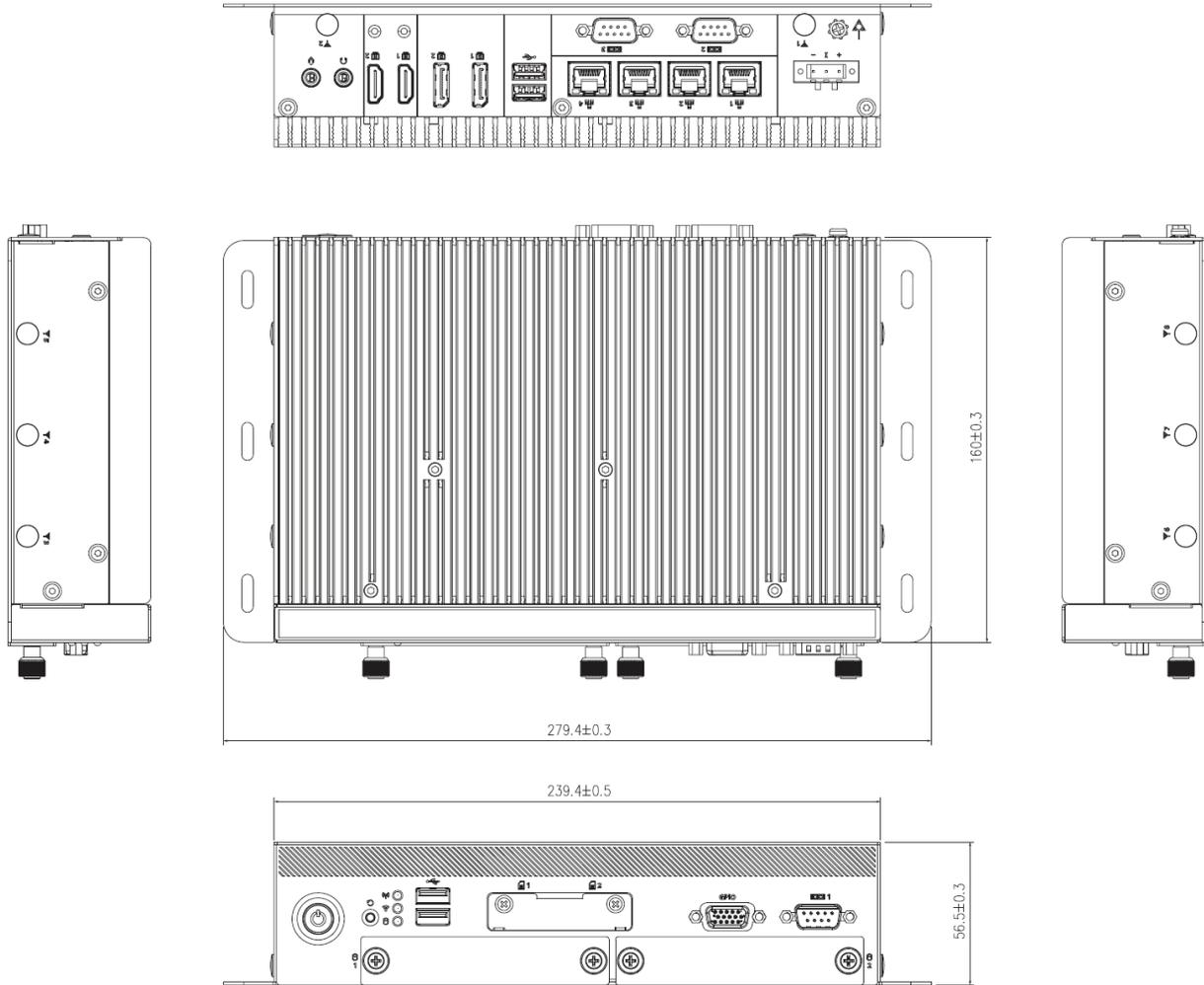
Power Requirement

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

Mechanical and Environment Cont.

Operating Temperature	Standard System: -40°C ~ 65°C (-40°F ~ 158°F) with 0.5m/S air flow, extended temperature peripherals System with PoE: -40°C ~ 60°C (-40°F ~ 140°F) with 0.5m/S air flow, extended temperature peripherals
Storage Temperature	-30°C ~ 70°C (-22°F ~ 185°F)
Operating Humidity	5% ~ 90% Relative Humidity, Non-condensing
IP Rating	IP50
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
Regulatory Compliance	CE, FCC Class A, E24 Mark, ISO 7637-2, IP50
Mounting	Wall mount kit (Standard)
Dimensions	9.41" x 6." x 2.20" (239 x 160 x 56mm)
Weight	5.73 lbs (2.6 kg)
Regulatory Compliance	FCC Class B/CE RoHS Compliant
Dimensions	8.50" x 5.75" x 1.96"
Weight	4 lbs (1.8 kgs)

MECHANICAL DRAWING



SPECIFICATIONS / ADDITIONAL PRODUCT PHOTOS



ORDERING INFORMATION

Model Name	CPU/CPU Socket	Memory / Storage	Storage	Adapter/PSU	Temperature	PoE
VMS-RPPS-15-A1-1R	Intel® Core™ 7-150UL Processor	8GB DDR5 (Up to 64G, Optional)	Optional	120W Adapter (Optional)	-40°C ~ 65°C	N/A
VMS-RPPS-12-A1-1R	Intel® Core™ 5-120UL Processor	8GB DDR5 (Up to 64G, Optional)	Optional	120W Adapter (Optional)	-40°C ~ 65°C	N/A
VMS-RPPS-10-A1-1R	Intel® Core™ 3-100UL Processor	8GB DDR5 (Up to 64G, Optional)	Optional	120W Adapter (Optional)	-40°C ~ 65°C	N/A
VMS-RPPS-U3-A1-1R	Intel® U300L Processor	8GB DDR5 (Up to 64G, Optional)	Optional	120W Adapter (Optional)	-40°C ~ 65°C	N/A
VMS-RPPS-15P-A1-1R	Intel® Core™ 7-150UL Processor	8GB DDR5 (Up to 64G, Optional)	Optional	120W Adapter (Optional)	-40°C ~ 65°C	4 x PoE
VMS-RPPS-12P-A1-1R	Intel® Core™ 5-120UL Processor	8GB DDR5 (Up to 64G, Optional)	Optional	120W Adapter (Optional)	-40°C ~ 65°C	4 x PoE
VMS-RPPS-10P-A1-1R	Intel® Core™ 3-100UL Processor	8GB DDR5 (Up to 64G, Optional)	Optional	120W Adapter (Optional)	-40°C ~ 65°C	4 x PoE
VMS-RPPS-U3P-A1-1R	Intel® U300L Processor	8GB DDR5 (Up to 64G, Optional)	Optional	120W Adapter (Optional)	-40°C ~ 65°C	4 x PoE
Optional Item	Description					
ACC-ADP-120N-07R	AC/DC adapter 12V/10A 90 Screw Type					
E170P040031R	Terminal block to lockable DC Jack cable					
E1702031833R	Power Cord 3P (F)-3P (M) 183cm, USA type					
E1702031000R	Power Cord SL-6+SL-3 183cm, EU type					
E1702031834R	Power Cord 3P (F)-3P (M) 183cm, Japan w/PSE type					
E170P060380R	Power Cord QP-026+SL-3 183cm, UK type					
E1702031831R	Power Cord 3P (F)-3P (M) 183cm, Australia type					

PACKING LIST

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

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BCMSales@bcmcom.com
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11 Chrysler
Irvine, CA 92618 USA