

# IVH-9016-PoER

Quad Core 6th Generation Intel® Xeon®/ Core™ i7/ i5/ i3 (Skylake-H) In-Vehicle Fanless Embedded System with Intel® CM236, 18 Gigabit LAN with 16 PoE+, 4 Front-access SSD Tray, Isolated DIO, High Performance, Rugged, Extended Temperature



## Features

- Quad Core 6th Generation Intel® Xeon®/ Core™ i7/ i5/ i3 Processor (Skylake-H) with CM236 Chipset supports up to 3 independent 4K displays
- Fanless, -25°C to 70°C Operating Temperature
- 18 Gigabit LAN with 16 IEEE 802.3at PoE+ compliant
- 4 Mini PCIe, 4 SIM Card Socket (3 External)
- 4 Front-access 2.5" SSD, 5 External USB
- Supports 3G/ 4G/ LTE/ WiFi/ GPRS/ UMTS
- 16 Isolated DIO, 16 GPIO
- Configurable Ignition Power Control
- 6V to 78V DC-in, 200V Surge Protection
- UPS Supported (Optional)



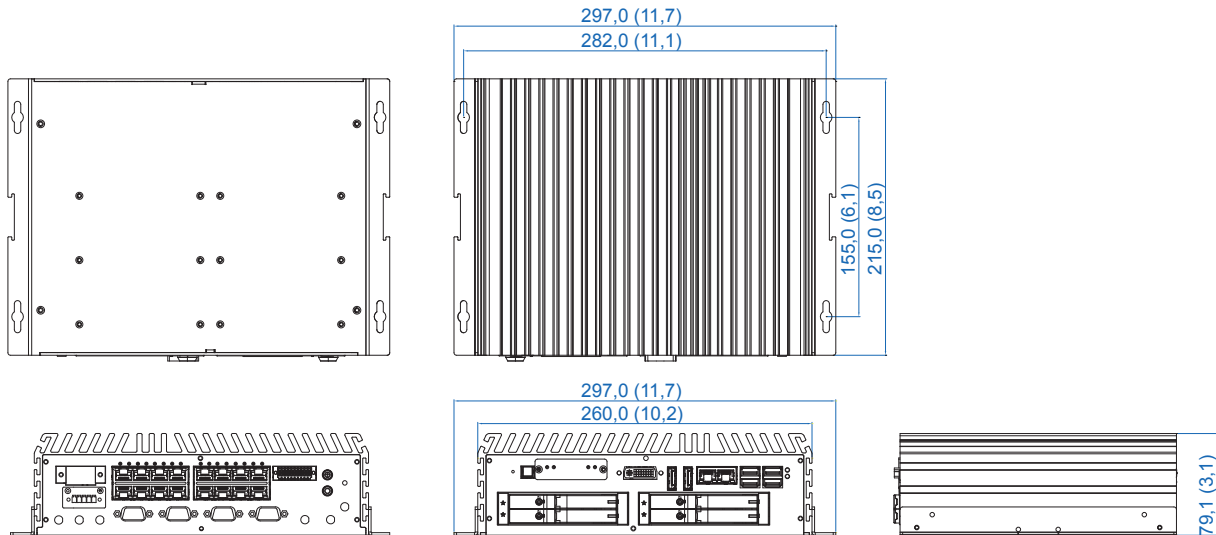
## Specifications

System	
Processor	Intel® Xeon® E3-1505M v5/ Core™ i7-6820EQ/ i5-6440EQ Processor (Skylake-H)
Chipset	Intel® CM236
BIOS	AMI
SIO	IT8786E
Memory	2 DDR4 2133MHz SO-DIMM, up to 32GB
I/O Interface	
Serial	4 COM RS-232/ 422/ 485
USB	<ul style="list-style-type: none"> <li>▪ 4 USB 3.0 (External)</li> <li>▪ 1 USB 2.0 (Internal)</li> </ul>
Isolated DIO	16 Isolated DIO : 8 DI, 8 DO
GPIO	16 GPIO
LED	Power, HDD, Wireless, PoE
SIM Card	4 SIM Card Socket (3 External, 1 Internal)
Expansion	
Mini PCIe	<ul style="list-style-type: none"> <li>▪ 1 Mini PCIe Socket for PCIe/ USB/ Internal SIM Card/ Optional mSATA</li> <li>▪ 3 Mini PCIe Socket for PCIe/ USB/ External SIM Card</li> </ul>
SUMIT A, B	2 SUMIT Slot (Optional)
Graphics	
Graphics Processor	Intel® HD Graphics P530/ 530
Display Memory	Shared Memory, up to 1.7GB
Interface	<ul style="list-style-type: none"> <li>▪ DVI-D : Up to 1920 x 1200 @ 60Hz</li> <li>▪ DisplayPort 1 : Up to 4096 x 2304 @ 60Hz</li> <li>▪ DisplayPort 2 : Up to 4096 x 2304 @ 60Hz</li> </ul>
Storage	
SATA	6 SATA III (6Gbps)
mSATA	1 SATA III (Mini PCIe Type, 6Gbps)
Storage Device	<ul style="list-style-type: none"> <li>▪ 1 CFast Socket, Push-in/ Push-out Ejector</li> <li>▪ 4 Front-access 2.5" SSD/ HDD Tray</li> </ul>
Audio	
Audio Codec	Realtek ALC892, 5.1 Channel HD Audio
Audio Interface	1 Mic-in, 1 Line-out
Ethernet	
LAN 1	Intel® I219 Gigabit LAN supports iAMT
LAN 2	Intel® I210 Gigabit LAN
PoE	
LAN 3 to 18	Gigabit IEEE 802.3at (25.5W/48V) PoE+ by Intel® I350

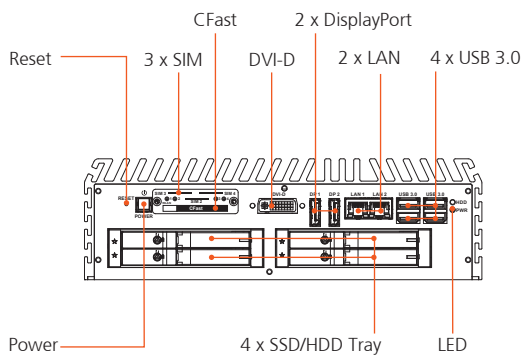
Power	
Power Input	6V to 78V, DC-in
Power Interface	3-pin Terminal Block : V+, V-, Frame Ground
Ignition Control	16 Mode
Remote Switch	5-pin Terminal Block : On, Off, IGN, LED+, LED-
Surge Protection	Up to 200V/1ms Transient Power
UPS	Supported (Optional)
Others	
TPM	Optional Infineon SLB9665 supports TPM 2.0, LPC Interface
Watchdog Timer	Reset : 1 to 255 sec./min. per step
Smart Management	Wake on LAN, PXE supported
HW Monitor	Monitoring temperature, voltages. Auto throttling control when CPU overheats.
GPS	Onboard GPS Module (Optional)
Software Support	
OS	Windows 10, Windows 8, Windows 7, Linux
Mechanical	
Dimensions (W x L x H)	260mm x 215mm x 79mm (10.2" x 8.5" x 3.1")
Weight	4.2 kg (9.26 lb)
Mounting	<ul style="list-style-type: none"> <li>▪ Wallmount by mounting bracket</li> <li>▪ 2U Rackmount (Optional)</li> </ul>
Environment	
Operating Temperature	-25°C to 70°C (-13°F to 158°F)
Storage Temperature	-40°C to 85°C (-40°F to 185°F)
Humidity	5% to 95% Humidity, non-condensing
Relative Humidity	95% @ 70°C
Shock	<ul style="list-style-type: none"> <li>▪ IEC 60068-2-27</li> <li>▪ SSD : 50G @ wallmount, Half-sine, 11ms</li> </ul>
Vibration	<ul style="list-style-type: none"> <li>▪ IEC 60068-2-64</li> <li>▪ SSD : 5Grms, 5Hz to 500Hz, 3 Axis</li> </ul>
EMC	CE, FCC, EN 50155, EN 50121-3-2

## Dimensions

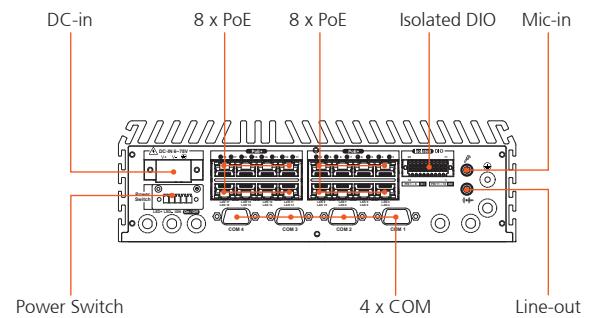
Unit : mm/ inch



## Front I/O



## Rear I/O



## Order Information

<b>IVH-9016-PoER505M</b>	IVH-9000, Quad Core Intel® Xeon® E3-1505M v5 In-Vehicle Fanless Embedded System, 18 GbE LAN with 16 PoE+, 4 Front-access SSD Tray, 4 COM, 4 USB 3.0, 4 SIM, Isolated DIO, 16 GPIO
<b>IVH-9016-PoER820Q</b>	IVH-9000, Quad Core Intel® Core™ i7-6820EQ In-Vehicle Fanless Embedded System, 18 GbE LAN with 16 PoE+, 4 Front-access SSD Tray, 4 COM, 4 USB 3.0, 4 SIM, Isolated DIO, 16 GPIO
<b>IVH-9016-PoER440Q</b>	IVH-9000, Quad Core Intel® Core™ i5-6440EQ In-Vehicle Fanless Embedded System, 18 GbE LAN with 16 PoE+, 4 Front-access SSD Tray, 4 COM, 4 USB 3.0, 4 SIM, Isolated DIO, 16 GPIO
<b>DDR4 16G</b>	Certified DDR4 16GB 2133MHz RAM
<b>DDR4 8G</b>	Certified DDR4 8GB 2133MHz RAM
<b>DDR4 4G</b>	Certified DDR4 4GB 2133MHz RAM
<b>PWA-280W-WT</b>	280W, 24V, 85V AC to 264V AC Power Adaptor with 3-pin Terminal Block, Wide Temperature -30°C to +70°C
<b>VESA Mount</b>	VESA Mounting Kit
<b>DIN-RAIL</b>	DIN Rail Kit
<b>Rack Mount</b>	2U Rackmount Kit
<b>TMBK-20P-100</b>	Terminal Block 20-pin to SCSI Cable, 100cm Terminal Block 20-pin to SCSI Cable, 100cm
<b>TMBK-20P-500</b>	Terminal Block 20-pin to SCSI Cable, 500cm Terminal Block 20-pin to SCSI Cable, 500cm
<b>TMB-SCSI-20P</b>	Terminal Board with One 20-pin SCSI Connector and DIN-Rail Mounting Terminal Board with One 20-pin SCSI Connector and DIN-Rail Mounting
<b>3G Module</b>	Mini PCIe 3G/GPS Module with Antenna
<b>4G Module</b>	Mini PCIe 4G/GPS Module with Antenna
<b>WiFi &amp; Bluetooth Module</b>	Intel® Mini PCIe WiFi & Bluetooth Module with Antenna

1

High Performance Embedded System

2

Expandable Embedded System

3

Ultra Compact Embedded System

4

Multi-Touch Computer/ Display

5

Frame Grabber