

# IVH-9200 Series

Quad Core Intel® Xeon®/Core™ i7/i5/i3 (Skylake/Kaby Lake) In-Vehicle Fanless Embedded System with Intel® C236, 6 GigE LAN with 4 M12 PoE+, 4 Front-access SSD Tray, 8 USB 3.0, 3 SIM, 32 Isolated DIO, High Performance, Rugged, -40°C to 75°C Extended Temperature

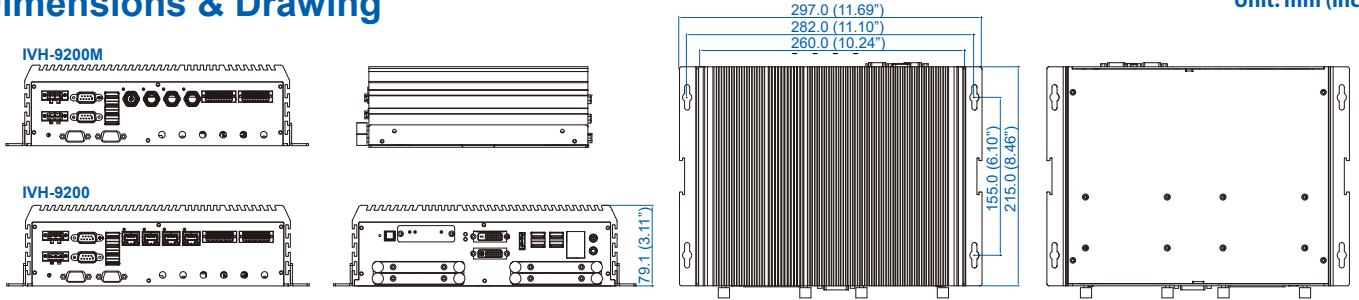


- LGA 1151 Socket supports workstation-grade Intel® Xeon®/Core™ i7/i5/i3 Processor with C236
- 2 DDR4 2133MHz SO-DIMM, up to 32GB (ECC/Non-ECC)
- DVI-I, DVI-D & DisplayPort interfaces, up to 4K display
- 6V to 36V DC Power Input with 80V Surge Protection
- Configurable Ignition Power Control
- 6 Independent GigE LAN with 4 M12 IEEE 802.3at PoE+
- Fanless, -40°C to 75°C Extended Temperature
- 32 Isolated DIO, 8 USB 3.0, 4 COM, 3 Mini PCIe
- 4 Front-access SSD Tray, 1 CFAST, 4 SATA III
- 3 External SIM Socket for 3G/4G/LTE/WiFi/GPRS/UMTS
- UPS supported (Optional)



# Dimensions & Drawing

Unit: mm (inch)



## Specifications

### System

Processor	Quad Core Intel® Xeon®/Core™ i7/i5/i3 Processor (Skylake-S/Kaby Lake-S)
Chipset	Intel® C236
BIOS	AMI
SIO	IT8786E
Memory	2 DDR4 2400/2133 MHz SO-DIMM, up to 64GB (ECC/Non-ECC)

### I/O Interface

Serial	4 COM RS-232/422/485 (ESD 8KV)
USB	<ul style="list-style-type: none"> <li>8 USB 3.0 (4 Front, 4 Rear)</li> <li>1 USB 2.0 (Internal)</li> </ul>
Isolated DIO	32 Isolated DIO : 16 DI, 16 DO
LED	Power, HDD, Wireless, PoE
SIM Card	3 External SIM Card Socket

### Expansion

Mini PCIe	3 Full-size for PCIe/USB/External SIM Card/mSATA
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### Graphics

Processor Interface	Intel® HD Graphics P630/630/P530/530 <ul style="list-style-type: none"> <li>DVI-I : Up to 1920 x 1200 @ 60Hz</li> <li>DVI-D : Up to 1920 x 1200 @ 60Hz</li> <li>DisplayPort : Up to 4096 x 2304 @ 60Hz</li> </ul>
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### Storage

SATA	4 SATA III (6Gbps) support S/W RAID 0, 1, 5, 10
mSATA	3 SATA III (Mini PCIe Type, 6Gbps, Optional)
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 ALC888S-VD, 7.1 Channel HD Audio
Audio Interface	1 Mic-in, 1 Line-out

### Power

Power Input	6V to 36V, DC-in
Power Interface	3-pin Terminal Block : V+, V-, Frame Ground
Ignition Control	16 Mode (Internal)
Remote Switch	3-pin Terminal Block
Surge Protection	Up to 80V/1ms Transient Power

### Ethernet

LAN 1	Intel® I219LM GigE LAN supports iAMT 11.0
LAN 2	Intel® I210 GigE LAN

### PoE (M12)

LAN 3	GigE IEEE 802.3at (25.5W/48V) PoE* by Intel® I210 with Power On/Off Control
LAN 4	GigE IEEE 802.3at (25.5W/48V) PoE* by Intel® I210 with Power On/Off Control
LAN 5	GigE IEEE 802.3at (25.5W/48V) PoE* by Intel® I210 with Power On/Off Control
LAN 6	GigE IEEE 802.3at (25.5W/48V) PoE* by Intel® I210 with Power On/Off Control

\* 4 M12 Connectors (IVH-9200M)

### Software Support

OS	Windows 10, Windows 8.1, Windows 7, Linux
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### 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.

### Mechanical

Dimensions	260mm x 215mm x 79mm (10.2" x 8.5" x 3.1")
Weight	4.5 kg (9.92 lb)
Mounting	<ul style="list-style-type: none"> <li>Wallmount by mounting bracket</li> <li>DIN Rail Mount (Optional)</li> <li>2U Rackmount (Optional)</li> </ul>

### Environment

Operating Temp.	<b>35W TDP CPU :</b>
	• Core™ i7, i5, i3 : -40°C to 75°C (-40°F to 167°F)
	• Xeon® E3-1268L v5 : -40°C to 70°C (-40°F to 158°F)
Storage Temperature	<b>65W TDP CPU :</b>
	Core™ i7, i5, i3 : -40°C to 55°C (-40°F to 131°F)
Humidity	<b>80W TDP CPU :</b>
	Xeon® E3-1275 v6, E3-1275 v5, E3-1225 v5 : -40°C to 45°C (-40°F to 113°F)
Relative Humidity	-40°C to 85°C (-40°F to 185°F)
	5% to 95% Humidity, non-condensing
Shock	95% @ 75°C
	• IEC 60068-2-27
Vibration	• SSD : 50G @ wallmount, Half-sine, 11ms
	• IEC 60068-2-64
EMC	• SSD : 5Grms, 5Hz to 500Hz, 3 Axis
	CE, FCC, EN50155, EN50121-3-2

## Order Information

IVH-9200M	<ul style="list-style-type: none"> <li>IVH-9200, 6 GigE LAN w/4 A-coded M12 PoE*, 4 SSD Tray, 8 USB 3.0, 4 COM, 3 SIM, 32 Isolated DIO</li> </ul>
IVH-9200	<ul style="list-style-type: none"> <li>IVH-9200, 6 GigE LAN w/4 PoE*, 4 SSD Tray, 8 USB 3.0, 4 COM, 3 SIM, 32 Isolated DIO</li> </ul>
DDR4 32G	• Certified DDR4 32GB 2666MHz RAM
DDR4 16G	• Certified DDR4 16GB 2400/213 MHz RAM
DDR4 8G	• Certified DDR4 8GB 2400/213 MHz RAM
DDR4 4G	• Certified DDR4 4GB 2400/213 MHz RAM
PWA-280W-WT	<ul style="list-style-type: none"> <li>280W, 24V, 85V AC to 264V AC Power Adapter with 3-pin Terminal Block, Wide Temperature -30°C to +70°C</li> </ul>
PWA-160W-WT	<ul style="list-style-type: none"> <li>160W, 24V, 85V AC to 264V AC Power Adapter with 3-pin Terminal Block, Wide Temperature -30°C to +70°C</li> </ul>
VESA Mount	• VESA Mounting Kit
DIN-RAIL Kit	• DIN Rail and VESA Mounting Kit
Rack Mount	• 2U Rackmount Kit
TMK2-20P-100	• Terminal Block 20-pin to Terminal Block 20-pin Cable, 100cm
TMK2-20P-500	• Terminal Block 20-pin to Terminal Block 20-pin Cable, 500cm
TMB-TMBK-20P	• Terminal Board with One 20-pin Terminal Block Connector and DIN-Rail Mounting
4G Module	• Mini PCIe 4G/GPS Module with Antenna
WiFi & Bluetooth	• WiFi & Bluetooth Module with Antenna

### CPU List

Series	CPU	Cache (MB)	Turbo Freq. (GHz)	TDP (W)	ECC Memory
Intel® Xeon®	E3-1275 v6	8	4.2	80	Y
	E3-1275 v5		4	80	
	E3-1225 v5		3.7	80	
	E3-1268L v5		3.4	35	
Intel® Core™	i7-7700	8	4.2	65	NA
	i7-7700T		3.8	35	
	i7-6700		4	65	
	i7-6700TE		3.4	35	
	i5-7500	6	3.8	65	NA
	i5-7500T		3.3	35	
	i5-6500		3.6	65	
	i5-6500TE	3	3.3	35	Y
	i3-7101E		3.9	65	
	i3-7101TE	4	3.4	35	Y
i3-6100	3.7		65		
i3-6100TE	2.7		35		

IVH-9200-20210322

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