

IVH-7700-QRDM (M12)

Quad Core Intel® Core™ i7/ i5/ i3 Fanless In-Vehicle Embedded System with Intel® QM77, 6 Gigabit LAN with 4 M12 PoE+, 4 Front-access SSD Tray, Isolated DIO, High Performance, Rugged, Extended Temperature



Features

- Quad Core Intel® Core™ i7/ i5/ i3 Processor
- Fanless, -25°C to 70°C Operating Temperature
- 6 Gigabit LAN with 4 M12 IEEE 802.3at PoE+ compliant
- 4 Mini PCIe, 4 SIM Card Socket (3 External)
- 4 Front-access 2.5" SSD Tray
- 4 Independent USB 3.0
- 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)



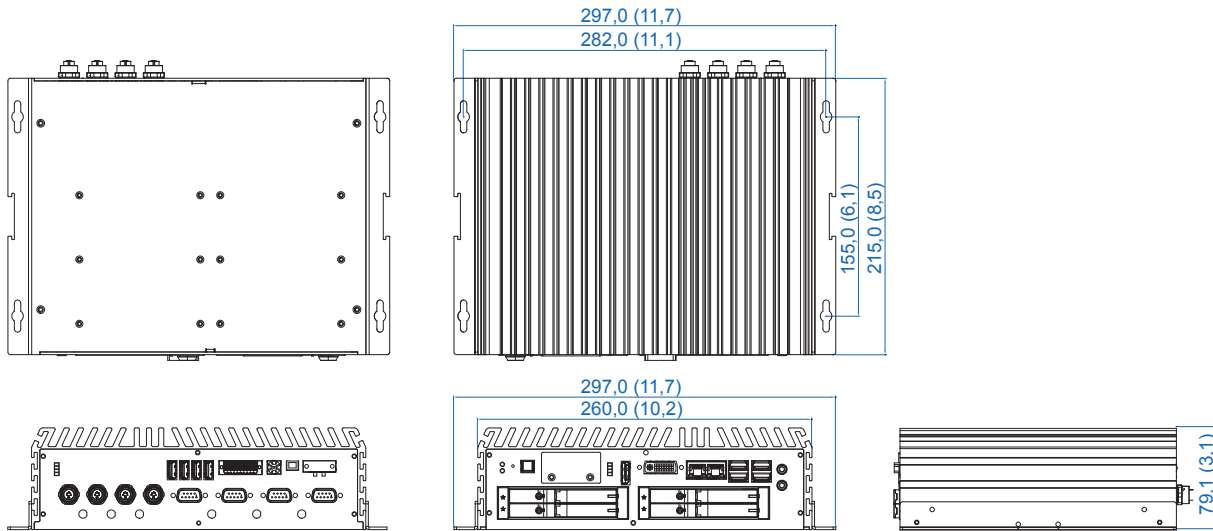
Specifications

System	
Processor	Intel® Core™ i7-3610QE/ i5-3610ME/ i3-3120ME
Chipset	Intel® QM77
BIOS	AMI
SIO	IT8783
Memory	2 DDR3 1066/ 1333/ 1600 MHz or DDR3L 1066/ 1333 MHz SO-DIMM, up to 16GB
I/O Interface	
Serial	<ul style="list-style-type: none"> ▪ 2 COM RS-232/ 422/ 485 ▪ 2 COM RS-232
USB	<ul style="list-style-type: none"> ▪ 8 USB 3.0 (External, 4 w/ independent controller) ▪ 3 USB 2.0 (Internal)
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"> ▪ 1 Mini PCIe Socket for PCIe/ USB/ Internal SIM Card/ Optional mSATA ▪ 3 Mini PCIe Socket for PCIe/ USB/ External SIM Card
Graphics	
Graphics Processor	Intel® HD Graphics 4000
Display Memory	Shared Memory, up to 1.7GB
Interface	<ul style="list-style-type: none"> ▪ DVI-I : Up to 1920 x 1200 ▪ DisplayPort : Up to 2560 x 1600 ▪ LVDS : Dual channel 24-bit, up to 1920 x 1200
Storage	
SATA	<ul style="list-style-type: none"> ▪ 2 SATA III (6Gbps) ▪ 2 SATA II (3Gbps)
mSATA	1 SATA II (Mini PCIe Type, 3Gbps)
Storage Device	<ul style="list-style-type: none"> ▪ 1 CFast Socket, Push-in/ Push-out Ejector ▪ 4 Front-access 2.5" SSD/ HDD Tray
Audio	
Audio Codec	Realtek ALC892, 5.1 Channel HD Audio
Audio Interface	1 Mic-in, 1 Line-out
Ethernet	
LAN 1	Intel® 82579LM Gigabit LAN supports iAMT 8.0
LAN 2	Intel® I210 Gigabit LAN
PoE (M12)	
LAN 3	Gigabit IEEE 802.3at (25.5W/48V) PoE+ by Intel® I210, M12 Connector

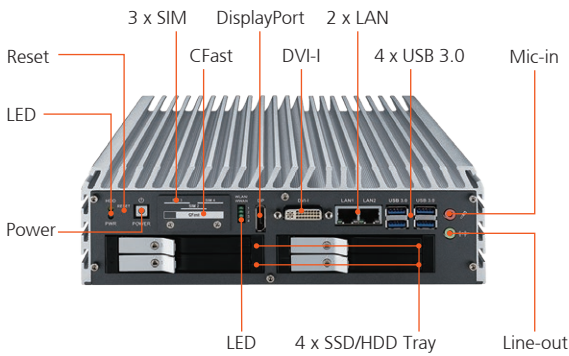
LAN 4	Gigabit IEEE 802.3at (25.5W/48V) PoE+ by Intel® I210, M12 Connector
LAN 5	Gigabit IEEE 802.3at (25.5W/48V) PoE+ by Intel® I210, M12 Connector
LAN 6	Gigabit IEEE 802.3at (25.5W/48V) PoE+ by Intel® I210, M12 Connector
Power	
Power Input	6V to 78V, DC-in
Power Interface	<ul style="list-style-type: none"> ▪ 3-pin Terminal Block : V+, V-, IGN ▪ DC-in M12 Connector (Optional)
Ignition Control	16 Mode
Remote Switch	2-pin Terminal Block
Surge Protection	Up to 200V/1ms Transient Power
UPS	Supported (Optional)
Others	
TPM	Optional Infineon SLB9635 supports TPM 1.0, 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 8, Windows 7, Windows XP, 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"> ▪ Wallmount by mounting bracket ▪ 2U Rackmount (Optional)
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"> ▪ IEC 60068-2-27 ▪ SSD : 50G @ wallmount, Half-sine, 11ms
Vibration	<ul style="list-style-type: none"> ▪ IEC 60068-2-64 ▪ SSD : 5Grms, 5Hz to 500Hz, 3 Axis
EMC	CE, FCC, EN 50155, EN 50121-3-2

Dimensions

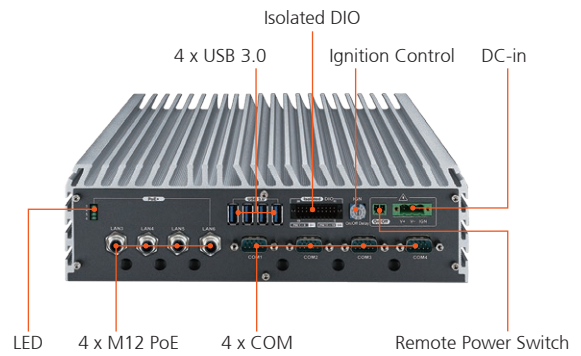
Unit : mm/ inch



Front I/O



Rear I/O



Order Information

IVH-7700-QRDM	IVH-7700 Intel® Quad Core™ In-Vehicle Fanless Embedded System, 6 GbE LAN with 4 M12 PoE+, 4 Front-access SSD Tray, 4 COM, 11 USB, 4 SIM, Isolated DIO, 16 GPIO
i7-3610QE	Ivy Bridge 3 rd Gen Intel® Mobile Quad Core™ i7 Processor
i5-3610ME	Ivy Bridge 3 rd Gen Intel® Mobile Core™ i5 Processor
i3-3120ME	Ivy Bridge 3 rd Gen Intel® Mobile Core™ i3 Processor
M340S-W28M1	Vecow DDR3 4GB 1333/ 1066 MHz RAM, Wide Temperature -40°C to +85°C
Certified DDR3 4GB RAM	Certified DDR3 4GB 1333/ 1600 MHz RAM
Certified DDR3 8GB RAM	Certified DDR3 8GB 1333/ 1600 MHz RAM
PWA-120W	120W, 24V, 90VAC to 264VAC Power Adapter with 3-pin Terminal Block
PWA-160W-WT	160W, 24V, 85VAC to 264VAC Power Adapter with 3-pin Terminal Block, Wide Temperature -30°C to +70°C
TMBK-20P-100	Terminal Block 20-pin to SCSI, 100cm
TMBK-20P-500	Terminal Block 20-pin to SCSI, 500cm
TMB-SCSI-20P	Terminal Board with One 20-pin SCSI Connector and DIN-Rail Mounting
VESA Mount	VESA Mounting Kit
DIN-RAIL	DIN Rail Kit
Rack Mount	2U Rackmount Kit
3G Module	Mini PCIe 3G/GPS Module with Antenna
4G Module	Mini PCIe 4G/GPS Module with Antenna
WiFi & Bluetooth Module	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