

IVH-9204MXC RUGGED EMBEDDED COMPUTER

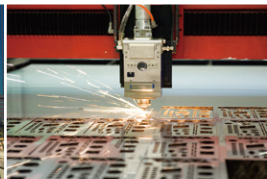
7th Generation Intel® Xeon®/Core™ i7/i5/i3 Processor (Kaby Lake) In-Vehicle Fanless Embedded System with Intel® C236, 6 GigE LAN w/4 X-coded M12 PoE+, 2 CAN Bus, 4 Front-access SSD Tray, 8 USB 3.0, M2DOM, 3 SIM, 32 Isolated DIO, High Performance, Rugged, -40°C to 75°C Extended Temperature



- LGA 1151 Socket supports workstation-grade Intel® Xeon®/Core™ i7/i5/i3 Processor (Kaby Lake/Skylake) with C236 chipset
- 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
- 32 Isolated DIO, Configurable Ignition Power Control
- 6 Independent GigE LAN with 4 X-coded M12 IEEE 802.3at PoE+
- Fanless, -40°C to 75°C Extended Temperature
- 2-port CAN Bus, 8 USB 3.0, 4 COM, 3 Mini PCIe
- 4 Front-access SSD Tray, 1 CFast, 1 M2DOM, 4 SATA III
- 3 External SIM Socket for 3G/4G/LTE/WiFi/GPRS/UMTS
- UPS supported (Optional)



Rolling Stock System



Machine Vision



Fleet Management



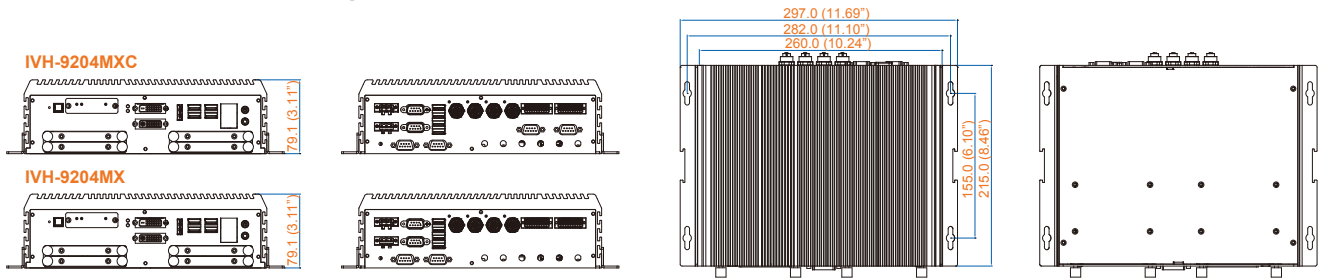
ITS (Intelligent Transportation System)



Mobile NVR/DVR



Dimensions & Drawing Unit: mm (inch)



Specifications

System	
Processor	Quad Core Intel® Xeon®/Core™ i7/i5/i3 Processor (Kaby Lake-S/Skylake-S)
Chipset	Intel® C236
BIOS	AMI
SIO	IT8786E
Memory	2 DDR4 2133MHz SO-DIMM, up to 32GB (ECC/Non-ECC)
OS	Windows 10, Windows 8.1, Windows 7, Linux
I/O Interface	
Serial	4 COM RS-232/ 422/ 485 (ESD 8KV)
USB	<ul style="list-style-type: none"> • 8 USB 3.0 (4 Front, 4 Rear) • 1 USB 2.0 (Internal)
Isolated DIO	32 Isolated DIO : 16 DI, 16 DO
LED	Power, HDD, Wireless, PoE
SIM Card	3 External SIM Card Socket (1 for CAN Bus, Optional)
CAN Bus	2-port CAN 2.0 A/B

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

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

Storage	
SATA	4 SATA III (6Gbps) support S/W RAID 0, 1, 5, 10
mSATA	3 SATA III (Mini PCIe Type, 6Gbps, Optional)
M2DOM	1 PCIe 3.0 (8GT/s)
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® I219LM GigE LAN supports iAMT 11.0
LAN 2	Intel® I210 GigE LAN

PoE (X-coded M12)	
LAN 3 to LAN 6	GigE IEEE 802.3at (25.5W/48V) PoE* by Intel® I210 with Power On/Off Control

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

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 (WxLxH)	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"> • Wallmount by mounting bracket • DIN Rail Mount (Optional) • 2U Rackmount (Optional)

Environment	
Operating Temp.	35W TDP CPU : <ul style="list-style-type: none"> • 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) 65W TDP CPU : <ul style="list-style-type: none"> • Core™ i7, i5, i3 : -40°C to 55°C (-40°F to 131°F) 80W TDP CPU : <ul style="list-style-type: none"> • Xeon® E3-1275 v6, E3-1275 v5, E3-1225 v5 : -40°C to 45°C (-40°F to 113°F)
Storage Temp.	-40°C to 85°C (-40°F to 185°F)
Humidity	5% to 95% Humidity, non-condensing
Relative Humidity	95% @ 75°C
Shock	<ul style="list-style-type: none"> • IEC 60068-2-27 • SSD : 50G @ wallmount, Half-sine, 11ms • IEC 60068-2-64
Vibration	<ul style="list-style-type: none"> • SSD : 5Grms, 5Hz to 500Hz, 3 Axis
EMC	CE, FCC, EN50155, EN50121-3-2

Order Information

IVH-9204MXC
 IVH-9204MX
 E3-1275 v6
 i7-7700
 i7-7700T
 i5-7500
 i5-7500T
 i3-7101E
 i3-7101TE
 E3-1275 v5
 E3-1225 v5
 E3-1268L v5
 i7-6700
 i7-6700TE
 i5-6500
 i5-6500TE
 i3-6100
 i3-6100TE

- IVH-9200, 6 GigE LAN w/ 4 X-coded M12 PoE*, 2 CAN Bus, 4 SSD Tray, 8 USB 3.0, 4 COM, 1 M2DOM, 2 SIM, 32 Isolated DIO
- IVH-9200, 6 GigE LAN w/ 4 X-coded M12 PoE*, 4 SSD Tray, 8 USB 3.0, 4 COM, 1 M2DOM, 3 SIM, 32 Isolated DIO
- 7th Gen Intel® Xeon® E3-1275 v6 Processor (8M Cache, up to 4.20 GHz, 80W)
- 7th Gen Intel® Core™ i7-7700 Processor (8M Cache, up to 4.20 GHz, 65W)
- 7th Gen Intel® Core™ i7-7700T Processor (8M Cache, up to 3.80 GHz, 35W)
- 7th Gen Intel® Core™ i5-7500 Processor (6M Cache, up to 3.80 GHz, 65W)
- 7th Gen Intel® Core™ i5-7500T Processor (6M Cache, up to 3.30 GHz, 35W)
- 7th Gen Intel® Core™ i3-7101E Processor (3M Cache, up to 3.90 GHz, 65W)
- 7th Gen Intel® Core™ i3-7101TE Processor (3M Cache, up to 3.40 GHz, 35W)
- 6th Gen Intel® Xeon® E3-1275 v5 Processor (8M Cache, up to 4.00 GHz, 80W)
- 6th Gen Intel® Xeon® E3-1225 v5 Processor (6M Cache, up to 3.70 GHz, 80W)
- 6th Gen Intel® Xeon® E3-1268L v5 Processor (8M Cache, up to 3.40 GHz, 35W)
- 6th Gen Intel® Core™ i7-6700 Processor (8M Cache, up to 4.00 GHz, 65W)
- 6th Gen Intel® Core™ i7-6700TE Processor (8M Cache, up to 3.40 GHz, 35W)
- 6th Gen Intel® Core™ i5-6500 Processor (6M Cache, up to 3.60 GHz, 65W)
- 6th Gen Intel® Core™ i5-6500TE Processor (6M Cache, up to 3.30 GHz, 35W)
- 6th Gen Intel® Core™ i3-6100 Processor (3M Cache, 3.70 GHz, 65W)
- 6th Gen Intel® Core™ i3-6100TE Processor (4M Cache, 2.70 GHz, 35W)

* All product information may subject to change without prior notice.

* The rights of all brand names, product names and trademarks belong to their respective owners.