

IVH-9000 Series

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



- Quad Core 6th Generation Intel® Xeon®/ Core™ i7/ i5/ i3 Processor (Skylake-H) with CM236 Chipset supports up to 4K displays
- Fanless, -25°C to 70°C Operating Temperature
- 18 GigE LAN with 16 IEEE 802.3at PoE+ compliant
- 4 Mini PCIe, 4 SIM Card Socket (3 External)
- 4 Front-access 2.5" SSD Tray, 5 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)



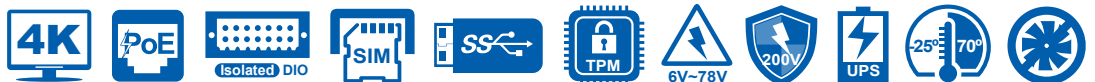
ITS (Intelligent Transportation System)

Rolling Stock System

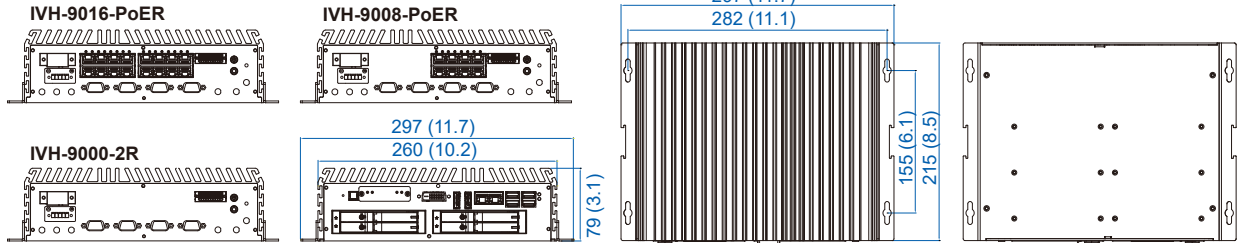
In-Vehicle Surveillance

Fleet Management

Mobile DVR/ NVR



Dimensions & Drawing Unit: mm (inch)



Specifications

System		PoE	
Processor	Intel® Xeon® E3-1505M v5/ Core™ i7-6820EQ/ i5-6440EQ Processor (Skylake-H)	IVH-9016 LAN 3 to 18	GigE IEEE 802.3at (25.5W/48V) PoE* by Intel® I350
Chipset	Intel® CM236	IVH-9008 LAN 3 to 10	GigE IEEE 802.3at (25.5W/48V) PoE* by Intel® I350
BIOS	AMI	Power	
SIO	IT8786E	Power Input	6V to 78V, DC-in
Memory	2 DDR4 2133MHz SO-DIMM, up to 32GB (ECC Function enable depends on processor support)	Power Interface	3-pin Terminal Block : V+, V-, Frame Ground
I/O Interface		Ignition Control	16 Mode (Internal)
Serial	4 COM RS-232/ 422/ 485 w/ auto flow control	Remote Switch	5-pin Terminal Block : On, Off, IGN, LED+, LED-
USB	• 4 USB 3.0 (External) • 1 USB 2.0 (Internal)	Surge Protection	Up to 200V/1ms Transient Power Supported (Optional)
Isolated DIO	16 Isolated DIO : 8 DI, 8 DO	UPS	
GPIO	16 GPIO	Others	
LED	Power, HDD, Wireless, PoE	TPM	Optional Infineon SLB9665 supports TPM 2.0, LPC Interface
SIM Card	4 SIM Card Socket (3 External, 1 Internal)	Watchdog Timer	Reset : 1 to 255 sec./min. per step
Expansion		Smart Management	Wake on LAN, PXE supported
Mini PCIe	• 1 Mini PCIe for PCIe/ USB/ Internal SIM Card/ Optional mSATA	HW Monitor	Monitoring temperature, voltages. Auto throttling control when CPU overheats.
SUMIT A, B	2 SUMIT Slot (Optional)	GPS	Onboard GPS Module supports Accelerometer, Gyroscope and Odometer (Optional)
Graphics		Software Support	
Processor	Intel® HD Graphics P530/ 530	OS	Windows 10, Windows 8.1, Windows 7, Linux
Display Memory	Shared Memory, up to 1.7GB	Mechanical	
Interface	• DVI-D : Up to 1920 x 1200 @ 60Hz • DisplayPort 1 : Up to 4096 x 2304 @ 60Hz • DisplayPort 2 : Up to 4096 x 2304 @ 60Hz	Dimensions (WxLxH)	260mm x 215mm x 79mm (10.2" x 8.5" x 3.1")
Storage		Weight	4.2 kg (9.26 lb)
SATA	6 SATA III (6Gbps) support S/W RAID 0, 1, 5, 10	Mounting	• Wallmount by mounting bracket • DIN Rail Mount (Optional) • 2U Rackmount (Optional)
mSATA	1 SATA III (Mini PCIe Type, 6Gbps)	Environment	
Storage Device	• 1 CFast Socket, Push-in/ Push-out Ejector • 4 Front-access 2.5" SSD/ HDD Tray	Operating Temp.	-25°C to 70°C (-13°F to 158°F)
Audio		Storage Temp.	-40°C to 85°C (-40°F to 185°F)
Audio Codec	Realtek ALC888S-VD, 7.1 Channel HD Audio	Humidity	5% to 95% Humidity, non-condensing
Audio Interface	1 Mic-in, 1 Line-out	Relative Humidity	95% at 70°C
Ethernet		Shock	• IEC 60068-2-27 • SSD : 50G @ Wallmount, Half-sine, 11ms • IEC 60068-2-64
LAN 1	Intel® I219 GigE LAN supports iAMT 11.0	Vibration	• SSD : 5Grms, 5Hz to 500Hz, 3 Axis
LAN 2	Intel® I210 GigE LAN	EMC	CE, FCC, EN 50155, EN 50121-3-2

Order Information

IVH-9016-PoER505M	• IVH-9000, Quad Core Intel® Xeon® E3-1505M v5, 18 GigE LAN w/16 PoE*, 4 SSD Tray, 4 COM, 4 USB 3.0, 4 SIM, Isolated DIO, 16 GPIO
IVH-9016-PoER820Q	• IVH-9000, Quad Core Intel® Core™ i7-6820EQ, 18 GigE LAN w/16 PoE*, 4 SSD Tray, 4 COM, 4 USB 3.0, 4 SIM, Isolated DIO, 16 GPIO
IVH-9016-PoER440Q	• IVH-9000, Quad Core Intel® Core™ i5-6440EQ, 18 GigE LAN w/16 PoE*, 4 SSD Tray, 4 COM, 4 USB 3.0, 4 SIM, Isolated DIO, 16 GPIO
IVH-9008-PoER505M	• IVH-9000, Quad Core Intel® Xeon® E3-1505M v5, 10 GigE LAN w/8 PoE*, 4 SSD Tray, 4 COM, 4 USB 3.0, 4 SIM, Isolated DIO, 16 GPIO
IVH-9008-PoER820Q	• IVH-9000, Quad Core Intel® Core™ i7-6820EQ, 10 GigE LAN w/8 PoE*, 4 SSD Tray, 4 COM, 4 USB 3.0, 4 SIM, Isolated DIO, 16 GPIO
IVH-9008-PoER440Q	• IVH-9000, Quad Core Intel® Core™ i5-6440EQ, 10 GigE LAN w/8 PoE*, 4 SSD Tray, 4 COM, 4 USB 3.0, 4 SIM, Isolated DIO, 16 GPIO
IVH-9000-2R505M	• IVH-9000, Quad Core Intel® Xeon® E3-1505M v5, 2 GigE LAN, 4 SSD Tray, 4 COM, 4 USB 3.0, 4 SIM, Isolated DIO, 16 GPIO
IVH-9000-2R820Q	• IVH-9000, Quad Core Intel® Core™ i7-6820EQ, 2 GigE LAN, 4 SSD Tray, 4 COM, 4 USB 3.0, 4 SIM, Isolated DIO, 16 GPIO
IVH-9000-2R440Q	• IVH-9000, Quad Core Intel® Core™ i5-6440EQ, 2 GigE LAN, 4 SSD Tray, 4 COM, 4 USB 3.0, 4 SIM, Isolated DIO, 16 GPIO
DDR4 16G	• Certified DDR4 16GB 2133MHz RAM
DDR4 8G	• Certified DDR4 8GB 2133MHz RAM
DDR4 4G	• Certified DDR4 4GB 2133MHz RAM
PWA-160WB-WT	• 160W, 24V, 85V AC to 264V AC Power Adapter with 3-pin Terminal Block (7.62mm pitch), Wide Temperature -30°C to +70°C
PWA-280WB-WT	• 280W, 24V, 85V AC to 264V AC Power Adapter with 3-pin Terminal Block (7.62mm pitch), Wide Temperature -30°C to +70°C
VESA Mount	• VESA Mounting Kit
DIN-RAIL	• DIN Rail Kit
Rack Mount	• 2U Rackmount kit
TMBK-20P-100	• Terminal Block 20-pin to SCSI Cable, 100cm
TMBK-20P-500	• Terminal Block 20-pin to SCSI Cable, 500cm
TMB-SCSI-20P	• Terminal Board with One 20-pin SCSI Connector and DIN-Rail Mounting
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