

ECS-9601

Quad Core Intel® Xeon®/ Core™ i7/ i5 (Skylake-H) Fanless Embedded System with Intel® CM236, 2 GigE LAN, 2 Front-access SSD Tray, 1 PCI, 4 SIM, 6 USB 3.0, 16 Isolated DIO, High Performance, Rugged, Extended Temperature



Features

- Quad Core Intel® Xeon®/ Core™ i7/ i5 Processor (Skylake-H) with CM236 Chipset supports up to 4K displays
- Fanless, -25°C to 70°C Operating Temperature
- 2 Independent GigE LAN, iAMT 11.0 supported
- 1 PCI Expansion Slot, 4 Mini PCIe/ mSATA
- Front-access : 2 2.5" SSD Tray, 3 SIM Socket, 4 USB 3.0
- 4 SIM Card Socket for 3G/ 4G/ LTE/ WiFi/ GPRS/ UMTS
- 6V to 36V DC Power Input with 80V Surge Protection
- Configurable Ignition Power Control
- 16 Isolated DIO, 6 USB 3.0, 4 COM
- Optional supports full function SUMIT A, B



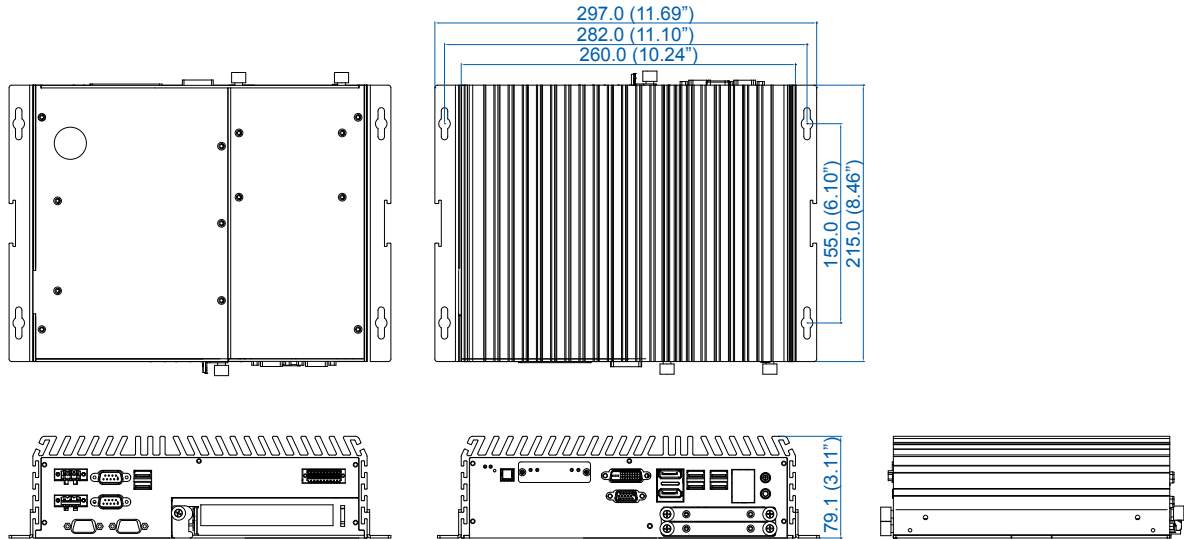
Specifications

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"> ▪ 6 USB 3.0 (External : 4 Front, 4 Rear) ▪ 1 USB 2.0 (Internal)
Isolated DIO	16 Isolated DIO : 8 DI, 8 DO
LED	Power, HDD, Wireless
SIM Card	4 SIM Card Socket (3 External, 1 Internal)
Expansion	
Mini PCIe	4 Mini PCIe Socket : <ul style="list-style-type: none"> ▪ 3 Full-size for PCIe/ USB/ External SIM Card/ mSATA ▪ 1 Full-size for PCIe/ Internal SIM Card/ mSATA
PCI/ PCIe	1 PCI Slot
SUMIT A, B	2 SUMIT Slot (Optional)
Graphics	
Graphics Processor	Intel® HD Graphics P530/ 530
Interface	<ul style="list-style-type: none"> ▪ VGA : Up to 1920 x 1200 @ 60Hz ▪ DVI-D : Up to 1920 x 1200 @ 60Hz ▪ DisplayPort 1 : Up to 4096 x 2304 @ 60Hz ▪ DisplayPort 2 : Up to 4096 x 2304 @ 60Hz
Storage	
SATA	4 SATA III support Software RAID 0, 1, 5, 10 : <ul style="list-style-type: none"> ▪ 3 SATA III (6Gbps) ▪ 1 SATA III Co-Lay with SATA (Mini PCIe Type, 6Gbps)
mSATA	4 mSATA : <ul style="list-style-type: none"> ▪ 3 SATA III (Mini PCIe Type, 6Gbps) ▪ 1 SATA III Co-Lay with SATA (Mini PCIe Type, 6Gbps)
Storage Device	<ul style="list-style-type: none"> ▪ 1 CFast Socket, Push-in/ Push-out Ejector ▪ 2 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

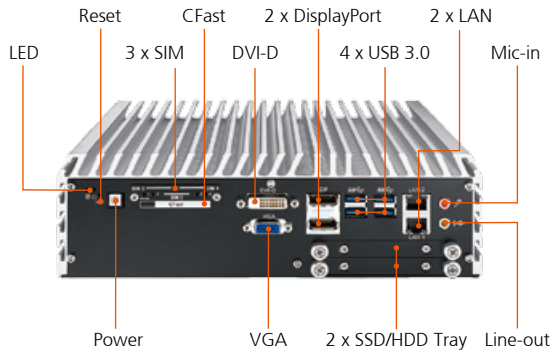
Power	
Power Input	6V to 36V, DC-in
Power Interface	3-pin Terminal Block : V+, V-, Frame Ground
Ignition Control	16 Mode (Internal)
Remote Switch	3-pin Terminal Block : On, Off, IGN
Surge Protection	Up to 80V/1ms Transient Power
Others	
TPM	Optional Infineon SLB9665 supports TPM 2.0, LPC Interface
Watchdog 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.
Software Support	
OS	Windows 10, Windows 8.1, Windows 7, Linux
Mechanical	
Dimensions (W x L x H)	260mm x 215mm x 79mm (10.24" x 8.46" x 3.11")
Weight	3.5 kg (7.72 lb)
Mounting	<ul style="list-style-type: none"> ▪ Wallmount by mounting bracket ▪ Din Rail Mount (Optional) ▪ 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
Certification	CE, FCC, EN50155, EN50121-3-2

Dimensions

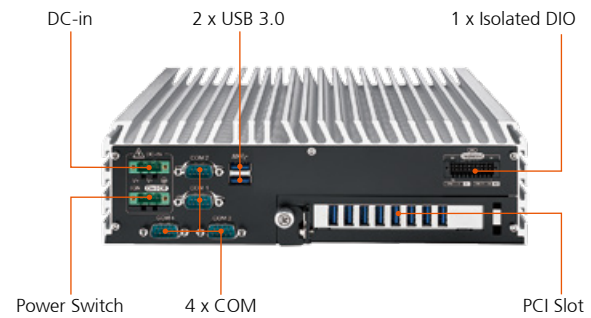
Unit : mm/ inch



Front I/O



Rear I/O



Order Information

ECS-9601-505M	ECS-9600, Quad Core Intel® Xeon® E3-1505M v5, 2 GigE LAN, 2 SSD Tray, 1 PCI, 6 USB 3.0, 4 COM, 4 SIM, 16 Isolated DIO
IVH-9601-820Q	ECS-9600, Quad Core Intel® Core™ i7-6820EQ, 2 GigE LAN, 2 SSD Tray, 1 PCI, 6 USB 3.0, 4 COM, 4 SIM, 16 Isolated DIO
IVH-9601-440Q	ECS-9600, Quad Core Intel® Core™ i5-6440EQ, 2 GigE LAN, 2 SSD Tray, 1 PCI, 6 USB 3.0, 4 COM, 4 SIM, 16 Isolated DIO
DDR4 16G	Certified DDR4 16GB 2133MHz RAM
DDR4 8G	Certified DDR4 8GB 2133MHz RAM
DDR4 4G	Certified DDR4 4GB 2133MHz RAM
PWA-280W-WT	280W, 24V, 85V AC to 264V AC Power Adapter with 3-pin Terminal Block, Wide Temperature -30°C to +70°C
PWA-160W-WT	160W, 24V, 85V AC to 264V AC Power Adapter with 3-pin Terminal Block, Wide Temperature -30°C to +70°C
PWA-120W	120W, 24V, 90V AC to 264V AC Power Adapter with 3-pin Terminal Block
VESA Mount	VESA Mounting Kit
DIN-RAIL	DIN Rail 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
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