ECS-9000-2R

Quad Core Intel® Xeon®/Core™ i7/i5/i3 (Kaby Lake) Fanless Embedded System with Intel® C236 Chipset, 2 GigE LAN, 2 Front-access SSD Tray, 3 SIM, 6 USB 3.0, High Performance, Rugged, -40°C to 75°C Extended Temperature



Features

- LGA 1151 Socket supports workstation-grade Intel® Xeon®/ Core™ i7/i5/i3 Processor with Intel® C236 Chipset
- Fanless, -40°C to 75°C Operating Temperature
- 2 Independent GigE LAN, iAMT 11.0 supported
- DVI-I, DVI-D and DisplayPort display interface, up to 4K display
- Front-access : 2 2.5" SSD Tray, 3 SIM Socket, 1 CFast, 4 USB 3.0
- 3 Mini PCIe for WiFi/4G/3G/LTE/GPRS/UMTS
- 4 COM, 6 USB 3.0, 16 GPIO
- 6V to 36V DC Power Input with 80V Surge Protection
- Configurable Ignition Power Control

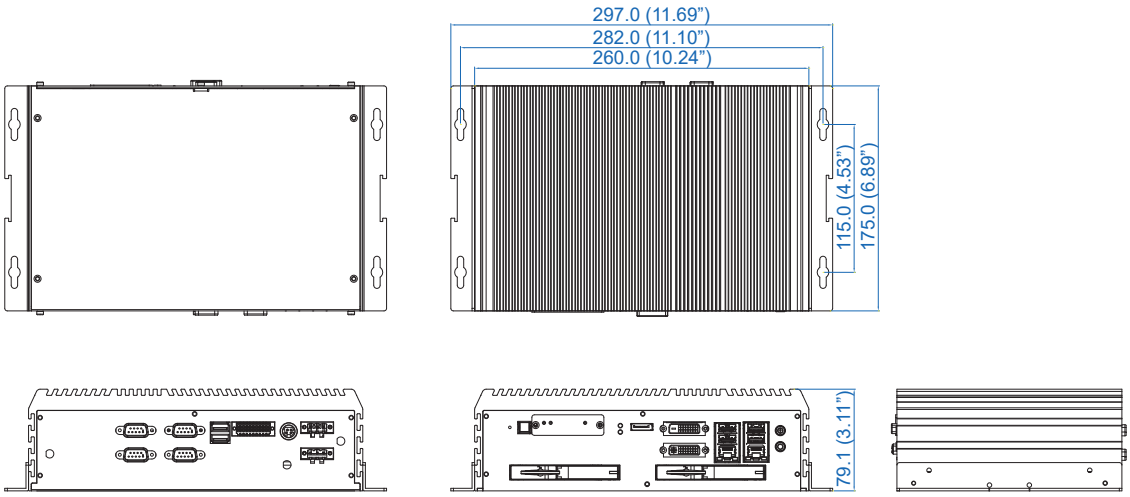
Specifications

System	
Processor	Intel® Xeon®/Core™ i7/i5/i3 Processor (Kaby Lake-S/Skylake-S)
Chipset	Intel® C236
BIOS	AMI
SIO	IT8786E
Memory	2 DDR4 2400/2133 MHz SO-DIMM, up to 64GB
I/O Interface	
Serial	4 COM RS-232/422/485
USB	▪ 6 USB 3.0 (External) ▪ 1 USB 2.0 (Internal)
GPIO	16 GPIO
LED	Power, HDD, Wireless
SIM Card	3 SIM Card Socket (External)
Expansion	
Mini PCIe	3 Mini PCIe Socket : ▪ 2 Full-size for PCIe/USB/External SIM Card/mSATA ▪ 1 Half-size for PCIe/USB 3.0/External SIM Card
SUMIT A, B	2 SUMIT Slot (Optional)
Graphics	
Graphics Processor	Intel® HD Graphics P630/630/P530/530
Display Memory	Shared Memory, up to 1.7GB
Interface	▪ 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	2 SATA III (6Gbps)
mSATA	2 SATA III (Mini PCIe Type, 6Gbps)
SATA DOM	1 SATA II (3Gbps)
Storage Device	▪ 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

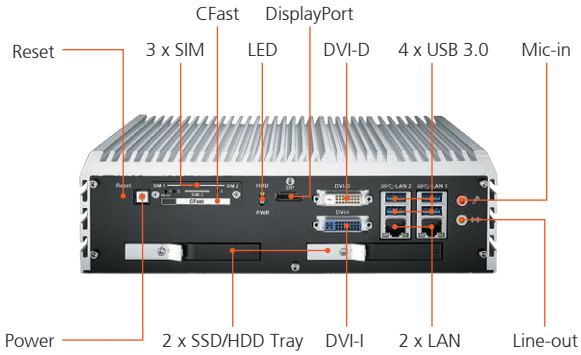
Power	
Power Input	6V to 36V, DC-in
Power Interface	▪ 3-pin Terminal Block : V+, V-, Frame Ground ▪ Mini-DIN 4-pin
Ignition Control	16 Mode (Internal)
Remote Switch	3-pin Terminal Block : On, Off, IGN
Surge Protection	Up to 80V/1ms Transient Power
Others	
TPM	Optional Infineon SLB9665 supports TPM 2.0, 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	260mm x 175mm x 79mm (10.24" x 6.89" x 3.11")
Weight	3.8 kg (8.38 lb)
Mounting	▪ Wallmount by mounting bracket ▪ DIN Rail Mount (Optional) ▪ 2U Rackmount (Optional)
Environment	
Operating Temperature	35W TDP CPU : ▪ 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 : Core™ i7, i5, i3 : -40°C to 55°C (-40°F to 131°F) 80W TDP CPU : Xeon® E3-1275 v6, E3-1275 v5, E3-1225 v5 : -40°C to 45°C (-40°F to 113°F)
Storage Temperature	-40°C to 85°C (-40°F to 185°F)
Humidity	5% to 95% Humidity, non-condensing
Relative Humidity	95% @ 75°C
Shock	▪ IEC 60068-2-27 ▪ SSD : 50G @ wallmount, Half-sine, 11ms
Vibration	▪ IEC 60068-2-64 ▪ SSD : 5Grms, 5Hz to 500Hz, 3 Axis
Certification	E13, CE, FCC, EN50155, EN50121-3-2

Dimensions

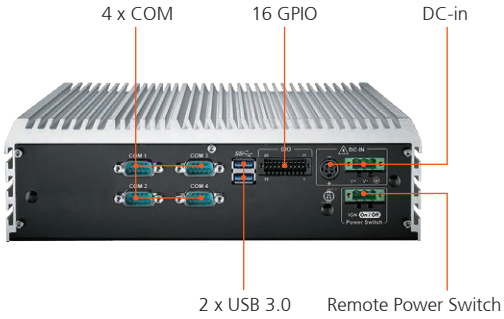
Unit : mm/ inch



Front I/O



Rear I/O



Order Information

ECS-9000-2R	ECS-9000, 2 GigE LAN, 2 SSD Tray, 6 USB 3.0, 4 COM, 3 SIM, 16 GPIO

Accessories

DDR4 32G	Certified DDR4 32GB 2666MHz RAM
DDR4 16G	Certified DDR4 16GB 2400/2133 MHz RAM
DDR4 8G	Certified DDR4 8GB 2400/2133 MHz RAM
DDR4 4G	Certified DDR4 4GB 2400/2133 MHz 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
PWA-120WM4P	120W, 24V, 90V AC to 264V AC Power Adapter with 4-pin Mini-DIN Connector
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	Yes
	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	35	
	i3-7101E	3	3.9	65	Yes
	i3-7101TE		3.4	35	
	i3-6100	4	3.7	65	
	i3-6100TE		2.7	35	

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