

ECS-9700/9600 Series

Quad Core 6th Gen Intel® Xeon®/ Core™ i7 Processor (Skylake-H) Fanless Embedded System with Intel® CM236, 6 GigE LAN with 4 PoE+, 2 Front-access SSD Tray, 1 PCI/ PCIe x16 Slot, 4 SIM, 6 USB 3.0, 4 COM, 32 Isolated DIO, High Performance, Rugged, Extended Temperature



- Quad Core 6th Generation Intel® Xeon® / Core™ i7 Processor (Skylake-H) with CM236 Chipset
- Onboard VGA, DVI-D and dual DisplayPort display interface, up to 3 independent HD displays
- Fanless, -25°C to 70°C Operating Temperature
- 6V to 36V DC-in, 80V Surge Protection
- Configurable Ignition Power Control
- 6 Independent GigE LAN with 4 IEEE 802.3at PoE+, iAMT 11.0 supported
- Front-access : 2 2.5" SSD Tray, 3 SIM, 6 USB 3.0, 1 CFast, 4 COM, 32 Isolated DIO
- 4 SIM Card Socket for 3G/ 4G/ LTE/ WiFi/ GPRS/ UMTS
- 1 PCI/ PCIe x16 Expansion Slot, 4 Mini PCIe/ mSATA
- Optional supports full function SUMIT A, B



Machine Vision

Factory Automation

Smart Manufacturing

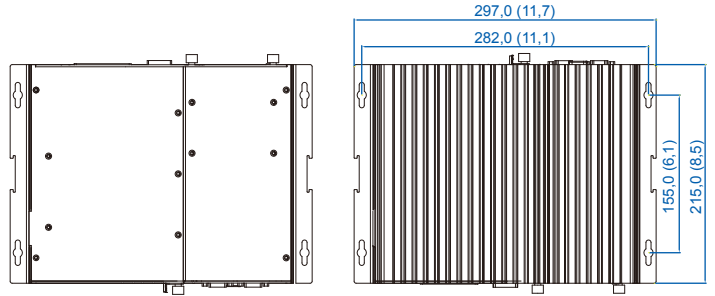
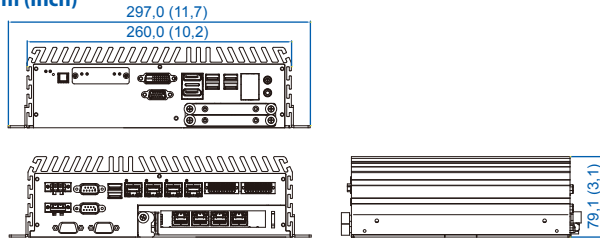
Intelligent Surveillance

Robot Control



Dimensions & Drawing

Unit: mm (inch)



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 2133/ 1866 MHz SO-DIMM, up to 32GB

I/O Interface	
Serial	4 COM RS-232/ 422/ 485
USB	• 6 USB 3.0 (External) • 1 USB 2.0 (Internal)
Isolated DIO	ECS-9700 : 32 Isolated DIO : 16 DI, 16 DO ECS-9600 : 16 Isolated DIO : 8 DI, 8 DO
LED	Power, HDD, PoE
SIM Card	4 SIM Card Socket (3 External, 1 Internal)

Expansion	
Mini PCIe	4 Mini PCIe Socket : • 3 Full-size for PCIe/ USB/ External SIM Card/ mSATA • 1 Full-size for PCIe/ Internal SIM Card/ mSATA
PCI/ PCIe	1 PCI/ PCIe x16 Slot
SUMIT A, B	2 SUMIT Slot (Optional)

Graphics	
Processor	Intel® HD Graphics P530/ 530
Interface	• VGA : Up to 1920 x1200 @ 60 Hz • 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 S/W RAID 0, 1, 5, 10 : • 3 SATA III (6Gbps) • 1 SATA III co-lay with Mini PCIe (6Gbps)
mSATA	4 mSATA connection : • 3 SATA III (Mini PCIe Type, 6Gbps) • 1 SATA III co-lay with SATA (Mini PCIe Type, 6Gbps)
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

PoE (ECS-9700)	
LAN 3	GigE IEEE 802.3at (25.5W/48V) PoE* by Intel® I210
LAN 4	GigE IEEE 802.3at (25.5W/48V) PoE* by Intel® I210
LAN 5	GigE IEEE 802.3at (25.5W/48V) PoE* by Intel® I210
LAN 6	GigE IEEE 802.3at (25.5W/48V) PoE* by Intel® I210

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.

Software Support	
OS	Windows 10, Windows 8.1, Windows 7, Linux

Mechanical	
Dimensions (WxLxH)	260mm x 215mm x 79mm (10.2" x 8.5" x 3.1")
Weight	3.5 kg (7.72 lb)
Mounting	• Wallmount by mounting bracket • 2U Rackmount (Optional)

Environment	
Operating Temp.	-25°C to 70°C (-13°F to 158°F)
Storage Temp.	-40°C to 85°C (-40°F to 185°F)
Humidity	5% to 95% humidity, non-condensing
Relative Humidity	95% at 70°C
Shock	• IEC 60068-2-27 • SSD : 50G @ wallmount, Half-sine, 11ms
Vibration	• IEC 60068-2-64 • SSD : 5Grms, 5Hz to 500Hz, 3 Axis
EMC	CE, FCC, EN 50155, EN 50121-3-2

Order Information

ECS-9710-505M	• ECS-9700, Quad Core Intel® Xeon® E3-1505M v5, 6 GigE LAN w/4 PoE*, 2 SSD Tray, 1 PCIe x16, 6 USB 3.0, 4 COM, 4 SIM, 32 Isolated DIO
ECS-9710-820Q	• ECS-9700, Quad Core Intel® Core™ i7-6820EQ, 6 GigE LAN w/4 PoE*, 2 SSD Tray, 1 PCIe x16, 6 USB 3.0, 4 COM, 4 SIM, 32 Isolated DIO
ECS-9710-440Q	• ECS-9700, Quad Core Intel® Core™ i5-6440EQ, 6 GigE LAN w/4 PoE*, 2 SSD Tray, 1 PCIe x16, 6 USB 3.0, 4 COM, 4 SIM, 32 Isolated DIO
ECS-9701-505M	• ECS-9700, Quad Core Intel® Xeon® E3-1505M v5, 6 GigE LAN w/4 PoE*, 2 SSD Tray, 1 PCI, 6 USB 3.0, 4 COM, 4 SIM, 32 Isolated DIO
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DDR4 16G	• Certified DDR4 16GB 2133MHz RAM
DDR4 8G	• Certified DDR4 8GB 2133MHz RAM
DDR4 4G	• Certified DDR4 4GB 2133MHz RAM
PWA-120W	• 120W, 24V, 90V AC to 264V AC Power Adapter with 3-pin Terminal Block
PWA-160W-WT	• 160W, 24V, 85V AC to 264V AC Power Adaptor with 3-pin Terminal Block, Wide Temperature -30°C to +70°C
PWA-280W-WT	• 280W, 24V, 85V AC to 264V AC Power Adaptor with 3-pin Terminal Block, Wide Temperature -30°C to +70°C
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



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