

# ECS-9771

Quad Core Intel® Xeon®/Core™ i7/i5 (Skylake) 10GigE Fanless Embedded System with Intel® CM236 Chipset, 4-port 10GigE SFP+, 6 GigE LAN with 4 PoE+, 2 Front-access SSD Tray, 4 SIM, 6 USB 3.0, 4 COM, 32 Isolated DIO, High Performance, Rugged, EN50155, EN50121



## Features

- Quad Core Intel® Xeon®/Core™ i7/i5 Processor (Skylake-H) with Intel® CM236 chipset
- 2 DDR4 2133MHz Memory, up to 32GB (ECC/Non-ECC)
- 4-port 10 GigE SFP+ support up to 10Gbps data rate
- 6 Independent GigE LAN with 4 IEEE 802.3at PoE+
- 6V to 36V DC-in with 80V Surge Protection
- Configurable Ignition Power Control
- Fanless, -40°C to 55°C Operating Temperature
- 4 SIM Card Socket for WiFi/4G/3G/LTE/GPRS/UMTS
- VGA, DVI-D and 2 DisplayPort interfaces, up to 3 independent HD displays
- 2 2.5" SSD Tray, 6 USB 3.0, 4 COM, 32 Isolated DIO



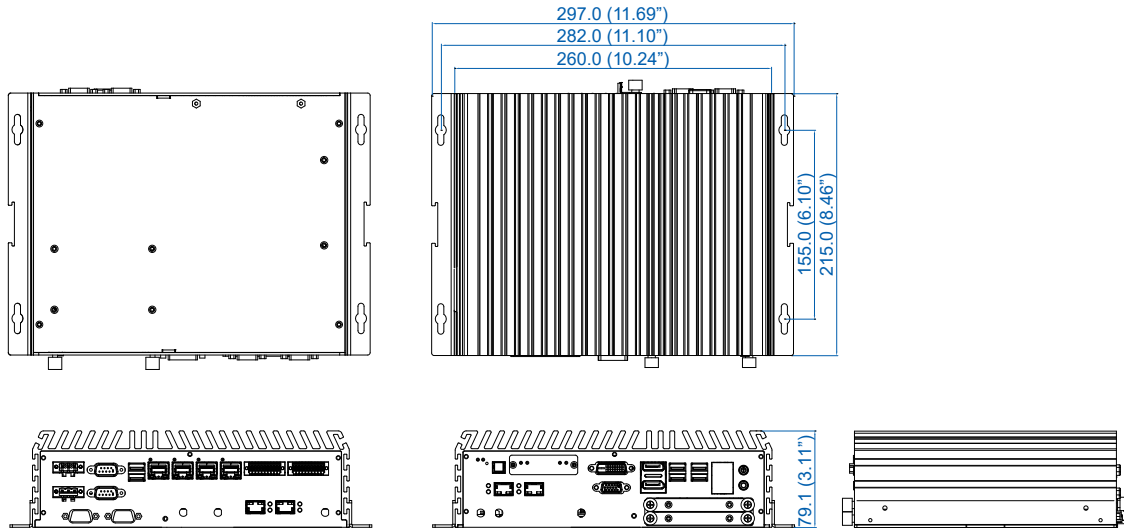
## Specifications

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 (ECC/Non-ECC)
I/O Interface	
Serial	4 COM RS-232/422/485 (ESD 8KV)
USB	<ul style="list-style-type: none"> <li>▪ 6 USB 3.0 (6 External)</li> <li>▪ 1 USB 2.0 (Internal)</li> </ul>
Isolated DIO	32 Isolated DIO : 16 DI, 16 DO
LED	Power, HDD, PoE, Wireless
SIM Card	4 SIM Card Socket (3 External, 1 Internal)
Expansion	
Mini PCIe	4 Mini PCIe Socket : <ul style="list-style-type: none"> <li>▪ 3 Full-size for PCIe/USB/External SIM Card/mSATA</li> <li>▪ 1 Full-size for PCIe/Internal SIM Card/mSATA</li> </ul>
Graphics	
Graphics Processor	Intel® HD Graphics P530/530
Interface	<ul style="list-style-type: none"> <li>▪ VGA : Up to 1920 x 1200 @ 60 Hz</li> <li>▪ DVI-D : Up to 1920 x 1200 @ 60Hz</li> <li>▪ DisplayPort 1 : Up to 4096 x 2304 @ 60Hz</li> <li>▪ DisplayPort 2 : Up to 4096 x 2304 @ 60Hz</li> </ul>
Storage	
SATA	4 SATA III support S/W RAID 0, 1, 5, 10 : <ul style="list-style-type: none"> <li>▪ 3 SATA III (6Gbps)</li> <li>▪ 1 SATA III co-lay with Mini PCIe (6Gbps)</li> </ul>
mSATA	4 mSATA connection : <ul style="list-style-type: none"> <li>▪ 3 SATA III (Mini PCIe Type, 6Gbps)</li> <li>▪ 1 SATA III co-lay with SATA (Mini PCIe Type, 6Gbps)</li> </ul>
Storage Device	<ul style="list-style-type: none"> <li>▪ 1 CFAST Socket, Push-in/Push-out Ejector</li> <li>▪ 2 Front-access 2.5" SSD/HDD Tray</li> </ul>
Audio	
Audio Codec	Realtek ALC888S-VD, 7.1 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	
LAN 3 to 6	GigE IEEE 802.3at (25.5W/48V) PoE+ by Intel® I210

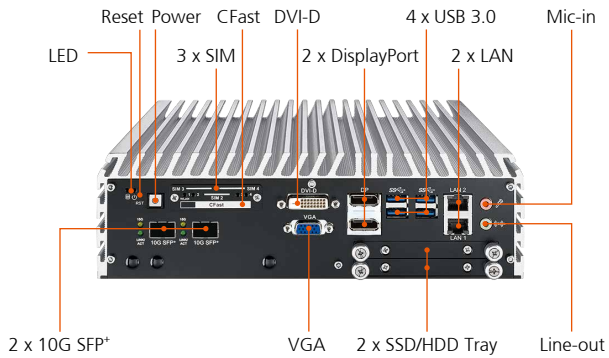
10G Ethernet	
LAN 7 to 10	Intel® X710-BM2 10GigE LAN supports IEEE 802.3 10GBASE-T SFP+
Power	
Power Input	6V to 36V, DC-in
Power Interface	3-pin Terminal Block : V+, V-, Frame Ground
Ignition Control	16 Mode (Internal)
Remote Switch	3-pin terminal block
Surge Protection	Up to 80V/1ms Transient Power
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 (W x L x H)	260mm x 215mm x 79mm (10.2" x 8.5" x 3.1")
Weight	4.0 kg (8.82 lb)
Mounting	<ul style="list-style-type: none"> <li>▪ Wallmount by mounting bracket</li> <li>▪ DIN Rail Mount (Optional)</li> <li>▪ 2U Rackmount (Optional)</li> </ul>
Environment	
Operating Temperature	-40°C to 55°C (-40°F to 131°F)
Storage Temperature	-40°C to 85°C (-40°F to 185°F)
Humidity	5% to 95% Humidity, non-condensing
Relative Humidity	95% @ 55°C
Shock	<ul style="list-style-type: none"> <li>▪ IEC 60068-2-27</li> <li>▪ SSD : 50G @ wallmount, Half-sine, 11ms</li> </ul>
Vibration	<ul style="list-style-type: none"> <li>▪ IEC 60068-2-64</li> <li>▪ SSD : 5Grms, 5Hz to 500Hz, 3 Axis</li> </ul>
EMC	E13, CE, FCC, EN50155, EN50121-3-2

## Dimensions

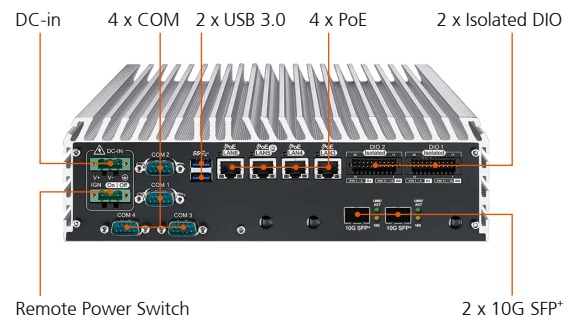
Unit : mm/ inch



## Front I/O



## Rear I/O



## Order Information

<b>ECS-9771-505M</b>	ECS-9700, Intel® Xeon® E3-1505M v5, 6 GigE LAN w/4 PoE+, 4 10G SFP+, 2 SSD Tray, 6 USB 3.0, 4 COM, 4 SIM, 32 Isolated DIO
<b>ECS-9771-820Q</b>	ECS-9700, Intel® Core™ i7-6820EQ, 6 GigE LAN w/4 PoE+, 4 10G SFP+, 2 SSD Tray, 6 USB 3.0, 4 COM, 4 SIM, 32 Isolated DIO
<b>ECS-9771-440Q</b>	ECS-9700, Intel® Core™ i5-6440EQ, 6 GigE LAN w/4 PoE+, 4 10G SFP+, 2 SSD Tray, 6 USB 3.0, 4 COM, 4 SIM, 32 Isolated DIO

## Accessories

<b>DDR4 16G</b>	Certified DDR4 16GB 2133MHz RAM
<b>DDR4 8G</b>	Certified DDR4 8GB 2133MHz RAM
<b>DDR4 4G</b>	Certified DDR4 4GB 2133MHz RAM
<b>PWA-160W-WT</b>	160W, 24V, 85V AC to 264V AC Power Adapter with 3-pin Terminal Block, Wide Temperature -30°C to +70°C
<b>PWA-280W-WT</b>	280W, 24V, 85V AC to 264V AC Power Adapter with 3-pin Terminal Block, Wide Temperature -30°C to +70°C
<b>VESA Mount</b>	VESA Mounting Kit
<b>DIN-RAIL</b>	DIN Rail Kit
<b>Rack Mount</b>	2U Rackmount Kit
<b>TMK2-20P-100</b>	Terminal Block 20-pin to Terminal Block 20-pin Cable, 100cm
<b>TMK2-20P-500</b>	Terminal Block 20-pin to Terminal Block 20-pin Cable, 500cm
<b>TMB-TMBK-20P</b>	Terminal Board with One 20-pin Terminal Block Connector and DIN-Rail Mounting
<b>4G Module</b>	Mini PCIe 4G/GPS Module with Antenna
<b>WiFi &amp; Bluetooth</b>	Intel® Mini PCIe WiFi & Bluetooth Module with Antenna