

ECS-9771 Series

Quad Core Intel® Xeon®/Core™ i7/i5 Processor (Skylake-H) Embedded System with Intel® CM236, 4-port 10 GigE SFP+, 6 GigE LAN with 4 PoE+, 2 SSD Tray, 4 SIM, 6 USB 3.0, 4 COM, 32 Isolated DIO, High Performance, Fanless, EN50155, EN50121-3-2



10GigE



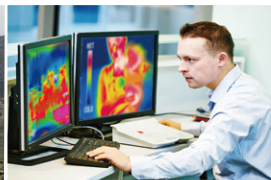
- Quad Core Intel® Xeon®/Core™ i7/i5 Processor (Skylake-H) with Intel® CM236 chipset
- 2 DDR4 2133MHz Memory, up to 32GB (ECC/Non-ECC)
- 6 Independent GigE LAN with 4 IEEE 802.3at PoE+
- 6V to 36V DC-in with 80V Surge Protection
- Configurable Ignition Power Control
- 4-port 10 GigE SFP+, up to 10Gbps data rate
- Fanless, -40°C to 55°C Operating Temperature
- 4 SIM Card Socket for 3G/4G/LTE/WiFi/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



Machine Vision



Vehicle Computing



Embedded Workstation



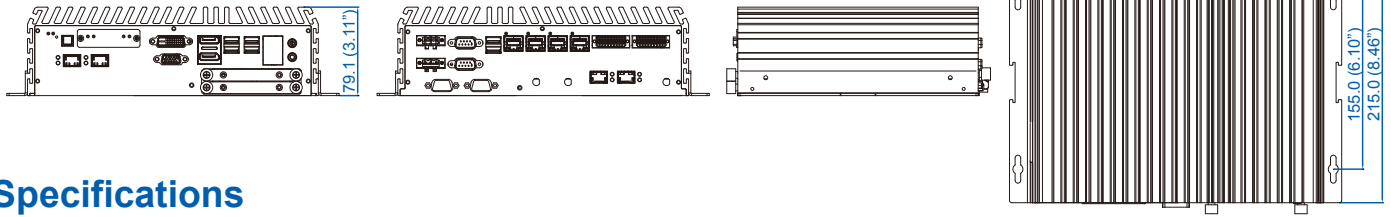
ITS (Intelligent Transportation System)



Energy Management



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 2133MHz SO-DIMM, up to 32GB (ECC/Non-ECC)
OS	Windows 10, Windows 8.1, Windows 7, Linux

I/O Interface	
Serial	4 COM RS-232/422/485 (ESD 8KV)
USB	• 6 USB 3.0 (External) • 1 USB 2.0 (Internal)
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 : • 3 Full-size for PCIe/USB/External SIM Card/mSATA • 1 Full-size for PCIe/Internal SIM Card/mSATA

Graphics	
Processor Interface	Intel® HD Graphics P530/530 • 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	
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

10G Ethernet	
LAN 7	Intel® X710-BM2 10 GigE LAN supports IEEE 802.3 10GBASE-T SFP+
LAN 8	Intel® X710-BM2 10 GigE LAN supports IEEE 802.3 10GBASE-T SFP+
LAN 9	Intel® X710-BM2 10 GigE LAN supports IEEE 802.3 10GBASE-T SFP+
LAN 10	Intel® X710-BM2 10 GigE 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.

Mechanical	
Dimensions (WxLxH)	260mm x 215mm x 79mm (10.2" x 8.5" x 3.1")
Weight	4.0 kg (8.82 lb)
Mounting	• Wallmount by mounting bracket • DIN Rail Mount (Optional) • 2U Rackmount (Optional)

Environment	
Operating Temp.	-40°C to 55°C (-40°F to 131°F)
Storage Temp.	-40°C to 85°C (-40°F to 185°F)
Humidity	5% to 95% Humidity, non-condensing
Relative Humidity	95% @ 55°C
Shock	• IEC 60068-2-27 • SSD : 50G @ wallmount, Half-sine, 11ms • IEC 60068-2-64
Vibration	• SSD : 5Grms, 5Hz to 500Hz, 3 Axis
EMC	CE, FCC, EN50155, EN50121-3-2

Order Information

ECS-9771-505M	• ECS-9700, Quad Core 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
ECS-9771-820Q	• ECS-9700, Quad Core 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
ECS-9771-440Q	• ECS-9700, Quad Core 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
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
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