ECS-9000 Series

Quad Core Intel® Xeon®/Core™ i7/i5/i3 (Kaby Lake/Skylake) Fanless Embedded System with Intel® C236 Chipset, 9 GigE LAN with 4 PoE+, 2 Front-access SSD/HDD Tray, Isolated DIO, High Performance, Rugged, -40°C to 75°C Extended Temperature

- LGA 1151 Socket supports workstation-grade Intel® Xeon®/Core™ i7/i5/i3 Processor with C236
- Fanless, -40°C to 75°C Operating Temperature
- 9 Independent GigE LAN with 4 IEEE 802.3at PoE+
- SIM Sockets for WiFi/4G/3G/LTE/GPRS/UMTS
- Front-access : 2 2.5 SSD Tray, 3 SIM, 1 CFast
- Supports multiple 10GigE Ethernet/10 GigE SFP+ Fiber LAN connections
- Up to 6 Mini PCIe expansions
- 16 Isolated DIO : 8 DI, 8 DO
- 6V to 36V DC-in with 80V Surge Protection
- Configurable Ignition Power Control
Specifications

System
- Processor: Quad Core Intel® Xeon®/Core™ 17/15/13 Processor (Kaby Lake-S/Skylake-S)
- Chipset: Intel® C236
- BIOS: AMI
- SIO: IT8766E
- Memory: 2 DDR4 2400/2133 MHz SO-DIMM, up to 64GB

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

Expansion
- Mini PCIe: 3 Mini PCIe Socket:
  - 2 Full-size for PCIe/USB/External SIM/mSATA
  - 1 Half-size for PCIe/USB 3.0/External SIM
- SUMIT A, B: 2 SUMIT Slot (Optional)

Graphics
- Processor: Intel® HD Graphics (6950/6850/6800/6650/6600)
- Interface:
  - 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)
- SATADOM: 1 SATA II (3Gbps)/SSDSS
- Storage Device: 1 CFAST Socket, Push-in/ Push-out Ejector
- RAID: 1CFast Socket, Push-in/ Push-out Ejector
- SSD Tray: 2 SATA III (Mini PCIe Type, 6Gbps)
- mSATA: 2 SATA III (Mini PCIe Type, 6Gbps)
- Storage Type: 1 SSD DOM, 1 mSATA

Audio
- Audio Codec: Realtek ALC888S-VD, 7.1 Channel HD Audio
- Audio Interface: 1 Mic-in, 1 Line-out

Ethernet
- LAN 1: Intel® 82574L GigE LAN
- LAN 2: Intel® 82574L GigE LAN
- LAN 3 to LAN 6: GigE IEEE 802.3at (25.5W/48V) PoE+ by Intel® I210
- LAN 5: 1000BASE SFP by Intel® I350
- LAN 6: 1000BASE SFP by Intel® I350

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 SLB6665 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

Mechanical
- Dimension: 260mm x 175mm x 79mm (10.2" x 6.9" x 3.1"
- Weight: 3.6 kg (8.38 lb)
- Mounting: Wall mount by mounting bracket
- Power Interface: 16 Mode (Internal)

Environment
- Operating Temp.: 35W TDP CPU :
  - Core™ i7, i5, i3 : -40°C to 75°C (-40°F to 167°F)
  - Xeon® E3-1286L 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)
  - Xeon® E3-1275 v6, E3-1275 v5, E3-1225 v5 : -40°C to 45°C (-40°F to 113°F)
- Storage Temp.: -40°C to 85°C (-40°F to 185°F)
- Humidity: 5% to 95% Humidity, non-condensing
- Relative Humidity: 95% @ 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:
  - E13, CE, FCC, EN50155, EN50121-3-2

Order Information

CPU List

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