ECS-7000 Rugged Embedded Computer

Fanless, Solid State, Industrial Computer from Rugged Science
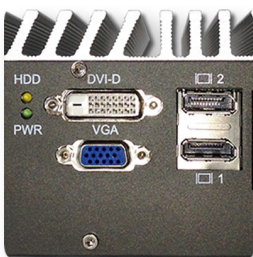## Operating Temperature -25°C to 70°C

Intel© 3rd Gen Quad Core i7|i5|i3 Ivy Bridge

The ECS-7000 is powered by Intel Ivy Bridge series mobile processors (6M Cache and up to 3.30Ghz) in either Core i7, i5, or i3 options. Ivy Bridge processors have increased power efficiency by as much as 25%, which permits an extremely low thermal design power of 35W. **It** can be configured with up to 16Gb of DDR3L RAM and features the QM77 chipset. Graphics are managed by Intel HD4000 Graphics Processing Unit.

Versatile I/O with Fiber and Copper GbE Ports

The **ECS-7000** from Rugged Science features 2 GbE Fiber ports and 6 GbE Copper ports for multiple network communication requirements. I/O includes 4 USB 3.0 ports, 2 USB 2.0 ports, 4 COM ports (3 RS-232 and 1 RS-232/422/485), 8 Isolated DIO, PS/2 Keyboard & Mouse (optional), 2 mini-PCIe ports, 1 SIM, 2 SUMIT connectors. Storage options include 2 SATA III 6Gbs SSD, 1 SATA II 3Gbs DOM, 2 mSATA II 3Gbs, and CFast card.

Supports 3 Independent and 5 Total Displays

The **ECS-7000** can simultaneously support 3 independent displays via DisplayPort, VGA, and DVI-D connection. Alternatively, 2 of the 3 displays can be cloned for a total of 5 simultaneous display capability. VGA supports 1920x1200 Max resolution, DVI-D supports 1920x1200 Max resolution, Display-Port 1 supports 2560x1600 Max resolution, DisplayPort2 supports 1920x1200 Max resolution. LVDS is also supported at 1920x1200 resolution.

Specifications

System

Processor	3rd Generation Intel® Core™ i7 | i5 | i3 Ivy Bridge Processors (6M Cache, up to 3.30 GHz)
Chipset	Intel® Mobile QM77
BIOS	AMI
Memory	DDR3 1066 | 1333 | 1600 MHz, DDR3L 1066 | 1333 MHz 16GB Max., 2 204-pin SO-DIMM Sockets

I/O Ports

Serial Interface	3 COM RS-232, 1 COM RS-232 / 485 / 422
USB	6 External USB (4 USB 3.0 + 2 USB2.0) + 2 Internal USB 2.0
Isolated DIO	8 Digital Input, 8 Digital Output
LED Indicators	Power, SSD, CFast
GPIO	16 General Purpose IO
PS/2 Keyboard & Mouse	Available via optional SUMIT card

Expansion

Mini-PCIe	1x miniPCIe socket (PCIe +USB+ SIM card socket) 1x miniPCIe socket (PCIe +USB), compatible with mSATA

Graphics

Chipset	Intel® GMA HD 4000
Display Memory	Shared Memory, Up to 1.7GB
Display Interfaces	DB-15 VGA / 1920 x 1200 Max. DVI-D | 1920 x 1200 Max. Display Port 1 | 2560 x 1600 Max. Display Port 2 | 1920 x 1200 Max. LVDS | Dual Channel 24-bit | 1920 x 1200 Max.

Storage

SATA	2 SATA III 6Gbps (bottom load) 1 SATA II 3Gbps DOM
Storage Expansion	CFast Slot, Push In | Out Ejector

Ethernet

LAN 1	1 Intel® 82579LM Gigabit LAN, Wake on LAN, PXE Support ; Intel® AMT 8.0
LAN 2-6	8 Intel® 82574L Gigabit LAN, Wake on LAN, PXE Support
Fiber LAN 1-2	(2) 100 Base FX with Metal ST connectors

Power

Power Input	3-Pin Terminal Block for DC-IN V+, V-, Frame Ground ATX: 2-Pin Remote Power On | Off Switch
Input Voltage	DC-IN 6 ~ 36V
Power Supply	AC to DC +24V / 5A. 120W Max. (Optional)
Protection	Temperature | Voltages Auto Throttling Control When CPU Overheats

Mechanical

Chassis	Aluminum Housing
Size (W x D x H)	260mm x 175mm x 79mm (10.2" x 6.9" x 3.1")
Weight	2.8Kg (6 lbs)

Environmental

Operating Temp	-25°C to 70°C (-13°F to 157°F)
Strorage Temp	-40°C to 85°C (-40°F to 185°F)
Humidity	10% to 95% Humidity, Non-condensing
Relative Humidity	95% at 70°C
EMC	CE, FCC, RoHS

Additional

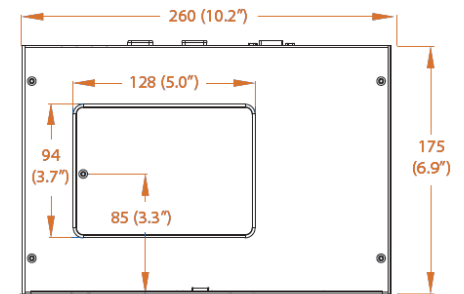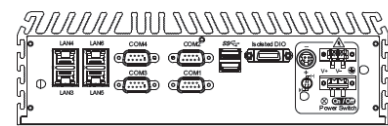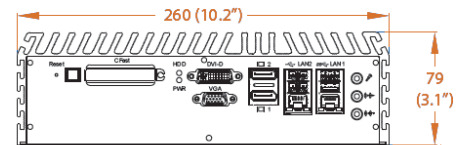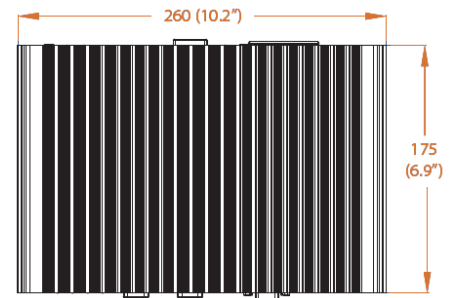|	
Trusted Platform Module	Infineon SLB9635, LPC Interface (Optional)
Watchdog Timer	Reset: 1 to 255 sec / min Per Step
HW Monitor	Temperature | Voltages Auto Throttling Control When CPU Overheats
Audio Codec	Realtek ALC892, 5.1 Channel HD Audio
Audio Interface	Line-out, Mic-in, Front Audio Header

FRONT

BACK

CORTEX v7460F

Unit: mm (inch)

260 (10.2")

175 (6.9")

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79 (3.1")

260 (10.2")

128 (5.0")

94 (3.7")

85 (3.3")

175 (6.9")

Call
1.855.769.9747