# Vecow

## Specification

### System
| | |
|---|---|
| Processor | 3rd Generation Intel® Quad Core™ i7/i5/i3 Ivy Bridge Processors (6M Cache, up to 3.30 GHz) |
| Chipset | Intel® Mobile QM77 |
| BIOS | AMI |
| SIO | IT8783F |
| Memory | DDR3 1066 / 1333 / 1600 MHz, DDR3L 1066 / 1333 MHz |
| | 16GB Max., 2 204-pin SO-DIMM Sockets |

### I/O Port
| | |
|---|---|
| Serial Interface | 3 COM RS-232, 1 COM RS-232 / 485 / 422 |
| USB | 4 USB 3.0, 2 USB 2.0, 2 Internal USB 2.0 |
| Isolated DIO | 8 DI, 8 DO (Optional) |
| LED | Power, SDD and CFast LEDs |
| GPIO | 16 GPIO |

### Expansion
| | |
|---|---|
| Mini PCIe | 1 miniPCIe Socket: PCIe + USB + SIM Card Socket |
| | 1 miniPCIe Socket: PCIe + USB |
| SUMIT A, B | 2 SUMIT Slots (Optional) |
| JST Connector | 1 Internal 6-pin (Internal USB 2.0) |

### Graphics
| | |
|---|---|
| Chipset | Intel® GMA HD 4000 |
| Display Memory | Shared Memory, Up to 1.7GB |
| Interface | 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 |
| | 1 SATA II 3Gbps - Support Horizontal Type SATA DOM |
| mSATA | 2 SATA II 3Gbps |
| Storage Expansion | CFast Slot Push In / Out Ejector |

### Audio
| | |
|---|---|
| Audio Codec | Realtek ALC892, 5.1 Channel HD Audio |
| Audio Interface | Line-in, Line-out, Mic-in, Front Audio Header |

### Ethernet
| | |
|---|---|
| LAN1 | Intel® 82579LM Gigabit LAN, Wake on LAN, PXE Support |
| LAN2~6 | Intel® 82574L Gigabit LAN, Wake on LAN, PXE Support |

### Power
| | |
|---|---|
| Power Input | 1 Mini DIN |
| | One 3-pin Terminal Block for DC-IN : V+, V-, Frame Ground |
| Power Input Voltage | DC-IN 6 ~ 36V |
| Power Adapter | AC to DC +24V / 5A 120W Max. (Optional) |
| Protection | On-board LT4356 for Power Input High Voltage Surge Protection |

### Other
| | |
|---|---|
| Trusted Platform Module (TPM) | 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 |

### Mechanical
| | |
|---|---|
| Chassis Construction | 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 lb) |
| Mounting | Wall-mount by Mounting Bracket |

### Environment
| | |
|---|---|
| Operating Temperature | -25°C to 70°C (-13°F to 157°F) |
| Storage Temperature | -40°C to 85°C (-40°F to 185°F) |
| Humidity | 10% to 95% Humidity, Non-condensing |
| Relative Humidity | 95% at 70°C |
| Vibration | Random: 0.5Grms @5~500 Hz according to IEC68-2-64 |
| | Sinusoidal: 0.5Grms @5~500 Hz according to IEC68-2-64 |
| Shock | Operating, 20 Grms, Half-sine 11 ms Duration (w / SSD, According to IEC60068-2-27) |
| EMC | CE / FCC Class A |

*All product specifications are subject to change without prior notice.

Unit: mm (inch)

260 (10.2")
175 (6.9")

260 (10.2")
79 (3.1")

260 (10.2")
128 (5.0")
94 (3.7")
85 (3.3")
175 (6.9")

175 (6.9")
79 (3.1")

## Order Information

| Part Number | Description |
|---|---|
| ECS-7000-6GDE | 6 GbE LAN Fanless Embedded Controller, 2 HDD, Isolated DIO, SUMIT (A, B), iAMT 8.0 |
| ECS-7000-6GD | 6 GbE LAN Fanless Embedded Controller, 2 HDD, Isolated DIO, iAMT 8.0 |
| ECS-7000-6R | 6 GbE LAN Fanless Embedded Controller, 2 Front Panel Access Removable HDD with Key Lock, iAMT 8.0 |
| ECS-7000-6G | 6 GbE LAN Fanless Embedded Controller, 2 HDD, iAMT 8.0 |
| ECS-7000-2R | 2 GbE LAN Fanless Embedded Controller, 2 Front Panel Access Removable HDD with Key Lock |
| ECS-7000-2G | 2 GbE LAN Fanless Embedded Controller, 2 HDD |

| Part Number | Description |
|---|---|
| i7-3610QE | Ivy Bridge 3rd Gen Intel® Mobile Quad-Core™ i7 Processor |
| i5-3610ME | Ivy Bridge 3rd Gen Intel® Mobile Core™ i5 Processor |
| i3-3120ME | Ivy Bridge 3rd Gen Intel® Mobile Core™ i3 Processor |
| M340S-W28M1 | Vecow DDR3 4GB 1333/1066MHz RAM, Wide Temperature -40°C ~ +85°C |
| KVR1333D3S9/8G | Kingston® DDR3 8GB PC1333 RAM |
| KVR1333D3S9/4G | Kingston® DDR3 4GB PC1333 RAM |
| PWA-120WM4P | 120W, 24V, 90VAC to 264VAC power adapter |
| SCSI-20P-100 | 20-in SCSI Cable, 1M |
| TMB-SCSI-20P | Terminal Board with One 20-pin SCSI Connector and DIN-Rail Mounting |
| WiFi Module | Intel® MiniPCIe WiFi Module with Antenna |

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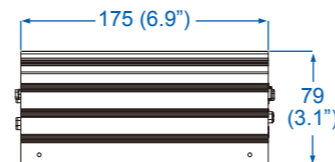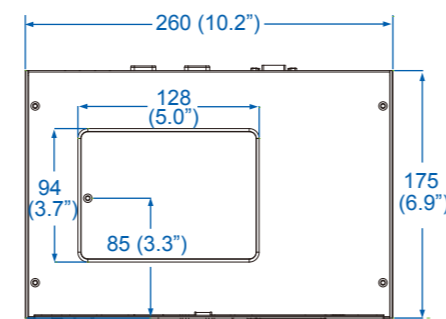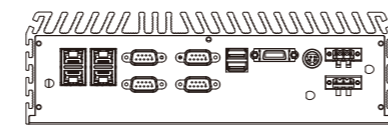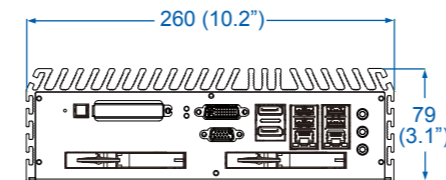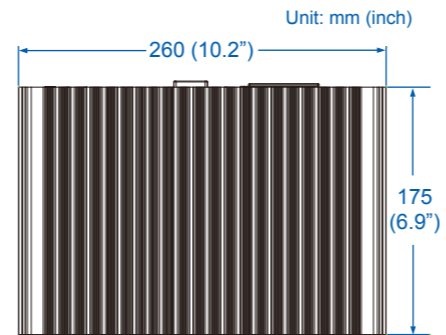
# ECS-7000 series

High Performance, Rugged, Extended Temp, Fanless Embedded System with 6 GbE and Intel® QM77 Express Chipset & Choice of 3rd Gen. Intel® Quad Core™ i7/i5/i3 Mobile Processor



- 3rd Gen Intel® Quad Core™ i7/i5/i3 Ivy Bridge Mobile Processor (6M Cache, up to 3.30 GHz)
- Fanless, -25°C to 70°C Operation Temperature
- 6 GbE LANs for Extended Internet Application
- QM77 System Chipset
- Support 2 SO-DIMM DDR3 or DDR3L, up to 16GB
- Isolated 8 DI / 8 DO, GPIO 8 DI / 8 DO
- 2 SATA III (6Gbps) 2.5" HDD / SSD, mSATA
- Built-in Input 80 $V_{DC}$ Overvoltage Protection
- Rich I/O: 4 COM, 4 USB 3.0, 2 USB2.0, 2 Mini-PCIe (1 with SIM Card Socket)
- 5 Display Support: 2 DP, DVI-D, VGA, LVDS 3 Independent Displays
- Intel® AMT 8.0 Support
- Onboard Trusted Platform Module (Optional)

ECS-7000 series support 3rd Gen Intel® Quad-Core™ series processor (6M Cache, up to 3.30 GHz), DDR3L and DDR3 maximum dual channel 16GB ram, 3 independent display (DP, DVI-D, and VGA), isolated DIO, maximum 6 GbE LANs, CFast, two 2.5" SATA 6Gp/s HDD/SSD trays, 4 COM, 4 USB 3.0 ports, JST connector, and 2 miniPCI-express, plus with overvoltage protection and Trusted Platform Module which making ECS-7000 series stand out from others in machine vision and GigE imaging, intelligent automation, surveillance and security, and most of embedded applications. ECS-7000 full series powered by cutting-edge the 3rd Gen Intel® Quad-Core™ i7 Processor (6M Cache, up to 3.3 GHz) not only increasing power efficiency as much as 25% also integrates Intel® HD 4000 graphics and extremely low thermal design power as 35W providing an enhanced reliability, safety and shock resistance for fanless operation required environments. Maximum 6 GbE LAN, ECS-7000 series provide stable and speedy Ethernet with 9.6 kb/s to 1 Gb/s data transmission option for high bandwidth and supports Ethernet Control Automation Technology (EtherCAT).

# Vecow

# ECS-7000 series Performance Fanless Embedded System

High Performance, Rugged, Extended Temp, Fanless Embedded System with 6 GbE and Intel® QM77 Express Chipset & Choice of 3rd Gen. Intel® Quad Core™ i7/i5/i3 Mobile Processor

## ISOLATED DIO

SUMIT

### ECS-7000-6GDE

Ideal industrial system solution, ECS-7000-6GDE model equipped with 6 GbE LAN, Isolated DIO 8 DI, 8 DO, and SUMIT interface to provide greater effective data transfer rates. ECS-7000-6GDE model also enables 3rd Gen Intel® Quad-Core™ series processor (6M Cache, up to 3.30 GHz), 4 COM, 4 USB 3.0 ports, JST connector, and 2 miniPCI-express, plus with overvoltage protection and Trusted Platform Module.

### ECS-7000-6GD

Collecting most industrial useful interfaces, ECS-7000-6GD model has designed with isolated DIO 8 DI, 8 DO and GPIO 8DI, 8DO. Like all other ECS-7000 series, ECS-7000-6GD enables 3rd Gen Intel® Quad-Core™ series processor (6M Cache, up to 3.30 GHz), 2 SSD/HDD trays, 4 COM, 4 USB 3.0 ports, JST connector, and 2 miniPCI-express, plus with overvoltage protection and Trusted Platform Module.

## GRAND

SSD/HDD Trays

### ECS-7000-6R

Featuring with 6 GbE LAN and 2 front panel accessible SSD/HDD trays, ECS-7000-6R model also enables 3rd Gen Intel® Quad-Core™ series processor (6M Cache, up to 3.30 GHz), 4 COM, 4 USB 3.0 ports, JST connector, and 2 miniPCI-express, plus with overvoltage protection and Trusted Platform Module.

### ECS-7000-6G

For the outstanding console functions, ECS-7000-6G model has designed with 6 GbE LAN ports for various devices to communicate with microcontroller. ECS-7000-6G model not only enables 3rd Gen Intel® Quad-Core™ series processor (6M Cache, up to 3.30 GHz), 2 SSD/HDD trays, 4 COM, 4 USB 3.0 ports, JST connector, and 2 miniPCI-express, plus with overvoltage protection and Trusted Platform Module.

## STANDARD

SSD/HDD Trays

### ECS-7000-2R

ECS-7000-2R supports 3rd Gen Intel® Quad-Core™ series processor (6M Cache, up to 3.30 GHz), 2 GbE LAN, 2 front panel access removable SSD/HDD trays with key locks, 4 COM, 4 USB 3.0 ports, JST connector, and 2 miniPCI-express, plus with overvoltage protection and Trusted Platform Module.

### ECS-7000-2G

ECS-7000-2G supports 3rd Gen Intel® Quad-Core™ series processor (6M Cache, up to 3.30 GHz), 2 GbE LAN, 2 SSD/HDD trays , 4 COM, 4 USB 3.0 ports, JST connector, and 2 miniPCI-express, plus with overvoltage protection and Trusted Platform Module.
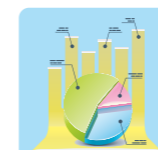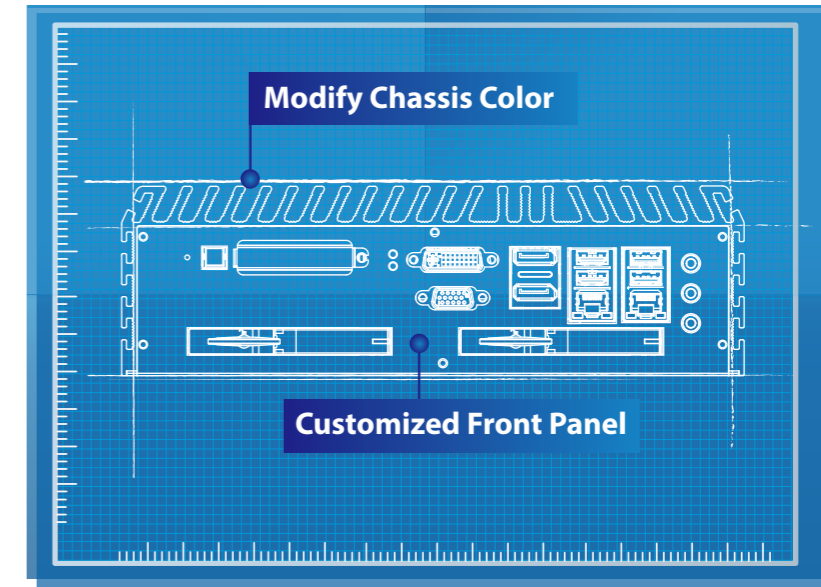
## CUSTOMISED

Cost-Efficient

Customized

Quality

**Modify Chassis Color**

**Customized Front Panel**

Time-To-Market

Integrated

Reliability

Industrial Plant   Machine Vision   Intelligent Manufacture System   Intelligent Automation   Medical & Health Care   Surveillance & Security (NVR)