

# ECS-7101

Intel® Core™ i7/ i5/ i3 Fanless Embedded System with Intel® QM77 Chipset, 2 Gigabit LAN, 1 PCI, 2 2.5" SSD, 16 GPIO, High Performance, Rugged, Extended Temperature



## Features

- Intel® Quad Core™ i7/ i5/ i3 Processor (Ivy Bridge)
- Supports VGA/ DVI-D/ Dual DisplayPort/ LVDS interface, up to 3 independent displays
- Fanless, -25°C to 70°C Operating Temperature
- 2 Gigabit LAN, iAMT 8.0 supported
- SIM Card Socket for 3G/ 4G/ LTE/ WiFi/ GPRS/ UMTS
- 6V to 36V DC-in, 80V Surge Protection
- 1 PCI, 2 Mini PCIe, 2 SATA III, 1 SATA II
- 4 COM, 4 USB 3.0, 4 USB 2.0
- 2 2.5" SSD/ HDD, 1 Front-access CFast Socket
- 16 GPIO



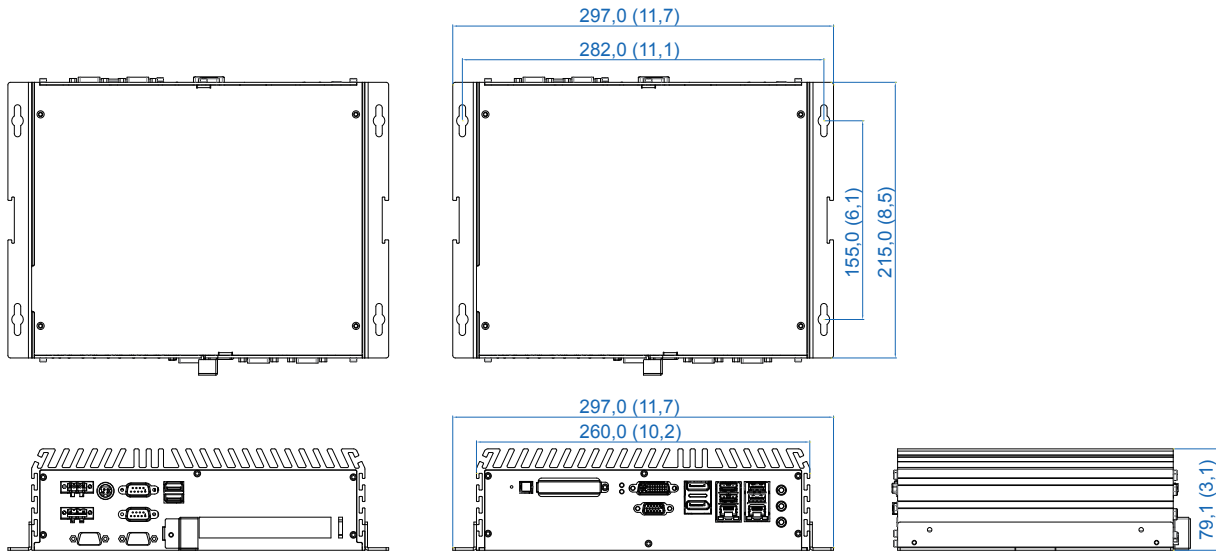
## Specifications

System	
Processor	Intel® Core™ i7-3610QE/ i5-3610ME/ i3-3120ME
Chipset	Intel® QM77
BIOS	AMI
SIO	IT8783
Memory	2 DDR3 1066/ 1333/ 1600 MHz or DDR3L 1066/ 1333 MHz SO-DIMM, up to 16GB
I/O Interface	
Serial	<ul style="list-style-type: none"> <li>▪ 1 COM RS-232/ 422/ 485</li> <li>▪ 3 COM RS-232</li> </ul>
USB	<ul style="list-style-type: none"> <li>▪ 4 USB 3.0 (External)</li> <li>▪ 4 USB 2.0 (2 External, 2 Internal by JST Connector)</li> </ul>
GPIO	16 GPIO (Internal)
LED	Power, HDD
SIM Card	1 SIM Card Socket (Internal)
Expansion	
Mini PCIe	2 Mini PCIe Socket : <ul style="list-style-type: none"> <li>▪ 1 Mini PCIe Socket for PCIe/ USB/ Internal SIM Card/ Optional mSATA</li> <li>▪ 1 Mini PCIe Socket for PCIe/ USB/ Optional mSATA</li> </ul>
PCI	1 PCI Slot
Graphics	
Graphics Processor	Intel® HD Graphics 4000
Display Memory	Shared Memory, up to 1.7GB
Interface	<ul style="list-style-type: none"> <li>▪ VGA : DB-15, up to 1920 x 1200</li> <li>▪ DVI-D : Up to 1920 x 1200</li> <li>▪ DisplayPort 1 : Up to 2560 x 1600</li> <li>▪ DisplayPort 2 : Up to 1920 x 1200</li> <li>▪ LVDS : Dual channel 24-bit, up to 1920 x 1200</li> </ul>
Storage	
SATA	<ul style="list-style-type: none"> <li>▪ 2 SATA III (6Gbps)</li> <li>▪ 1 SATA II (3Gbps), supports horizontal type SATA DOM</li> </ul>
mSATA	2 SATA II (Mini PCIe Type, 3Gbps)
Storage Device	<ul style="list-style-type: none"> <li>▪ 1 CFast Socket, Push-in/ Push-out Ejector</li> <li>▪ 2 2.5" SSD/ HDD Bracket (Internal)</li> </ul>
Audio	
Audio Codec	Realtek ALC892, 5.1 Channel HD Audio
Audio Interface	1 Line-in, 1 Line-out, 1 Mic-in
Ethernet	
LAN 1	Intel® 82579LM Gigabit LAN supports iAMT 8.0
LAN 2	Intel® 82574L Gigabit LAN

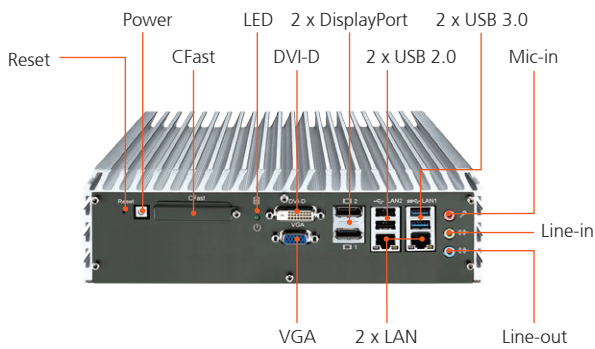
Power	
Power Input	6V to 36V, DC-in
Power Interface	<ul style="list-style-type: none"> <li>▪ 3-pin Terminal Block : V+, V-, Frame Ground</li> <li>▪ Mini-DIN 4-pin</li> </ul>
Remote Switch	3-pin Terminal Block : On, Off, IGN
Surge Protection	Up to 80V/1ms Transient Power
Others	
TPM	Optional Infineon SLB9635 supports TPM 1.0, 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 8, Windows 7, Windows XP, Linux
Mechanical	
Dimensions (W x L x H)	260mm x 215mm x 79mm (10.2" x 8.5" x 3.1")
Weight	2.8 kg (6.2 lb)
Mounting	<ul style="list-style-type: none"> <li>▪ Wallmount by mounting bracket</li> <li>▪ 2U Rackmount (Optional)</li> </ul>
Environment	
Operating Temperature	-25°C to 70°C (-13°F to 158°F)
Storage Temperature	-40°C to 85°C (-40°F to 185°F)
Humidity	10% to 95% Humidity, non-condensing
Relative Humidity	95% @ 70°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	CE, FCC, EN 50155, EN 50121-3-2

## Dimensions

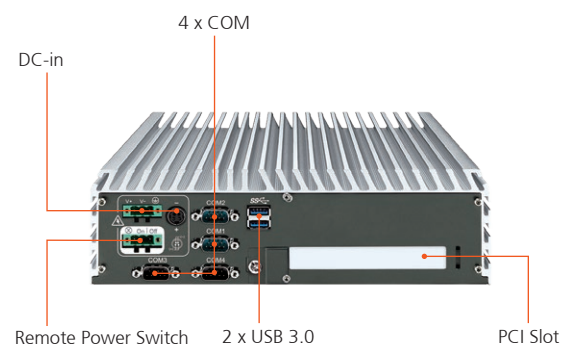
Unit : mm/ inch



## Front I/O



## Rear I/O



## Order Information

<b>ECS-7101</b>	ECS-7100 Fanless Embedded System, 2 GbE LAN, 1 PCI, 4 COM, 8 USB, 1 SIM, 16 GPIO
<b>i7-3610QE</b>	Ivy Bridge 3 <sup>rd</sup> Gen Intel® Mobile Quad Core™ i7 Processor
<b>i5-3610ME</b>	Ivy Bridge 3 <sup>rd</sup> Gen Intel® Mobile Core™ i5 Processor
<b>i3-3120ME</b>	Ivy Bridge 3 <sup>rd</sup> Gen Intel® Mobile Core™ i3 Processor
<b>M340S-W28M1</b>	Vecow DDR3 4GB 1333/ 1066 MHz RAM, Wide Temperature -40°C to +85°C
<b>Certified DDR3 4GB RAM</b>	Certified DDR3 4GB 1333/ 1600 MHz RAM
<b>Certified DDR3 8GB RAM</b>	Certified DDR3 8GB 1333/ 1600 MHz RAM
<b>PWA-120W</b>	120W, 24V, 90VAC to 264VAC Power Adapter with 3-pin Terminal Block
<b>PWA-120WM4P</b>	120W, 24V, 90VAC to 264VAC Power Adapter with 4-pin Mini-DIN Connector
<b>PWA-160W-WT</b>	160W, 24V, 85VAC to 264VAC 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>3G Module</b>	Mini PCIe 3G/GPS Module with Antenna
<b>4G Module</b>	Mini PCIe 4G/GPS Module with Antenna
<b>WiFi &amp; Bluetooth Module</b>	Intel® Mini PCIe WiFi & Bluetooth Module with Antenna

1

High Performance Embedded System

2

Expandable Embedded System

3

Ultra Compact Embedded System

4

Multi-Touch Computer/ Display

5

Frame Grabber