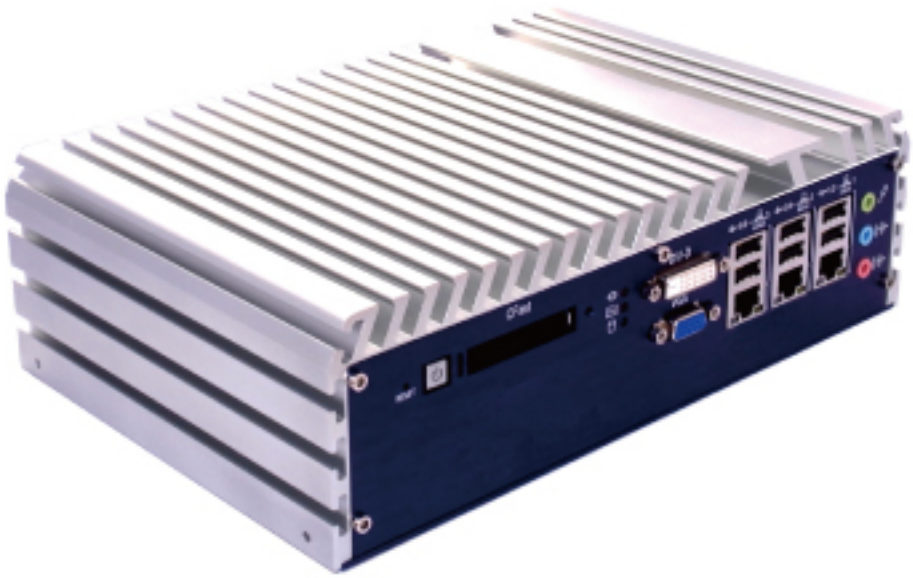
EC-5500 Series

High-Performance Embedded Controller with 2nd Gen Intel® Core™ i7 / i5 / i3 Sandy Bridge Processsor



EC-5500-3G/5G Model

EC-5500-3R/5R Model

Isolated DIO Connector

EC-5500-5G Front View

EC-5500-5G Rear View

Features

- 2nd Gen Intel® Core™ i7/i5/i3 Sandy Bridge Mobile Processor
- Rugged, -20 °C to 70 °C Operation Temperature
- Support 2 SO-DIMM DDR3, up to 16GB
- QM67 System Chipset
- Rich I/O: 4 COM, 6 USB, 2 Mini-PCIe
- 3 / 5 GbE LAN for Extend Internet Application
- Dual Display: DVI-D / HDMI and VGA
- Intel® AMT 7.0 Supported for 5G/5R Models
- 2 SATA III (6Gbps) 2.5" HDD / SSD
- Optional: Isolated DIO, SUMIT™ A, B

Overview

EC-5500 series, Extended Fanless Embedded System, which integrated 2nd Gen Intel® Core™ i7, i5, i3, and Celeron® Sandy Bridge mobile series processor equips maximum 5 GbE LANs, DVI-D/HDMI and VGA dual display, CFast, SUMIT A, B, dual channel maximum 16GB 1333/1066MHz DDR3 SO-DIMM slots, up to 2 bottom (optional front access with key lock) 2.5" SATA III (6Gbps) HDD/SSDs, SATA II (3Gbps), and 2 eSATA ports enable operating under -20ºC to +70ºC extended temperature. The new 2nd Gen Intel® Core™ processors offer embedded designers a number of important upgrades including multiple CPU cores, an integrated graphics processor, Intel® AMT 7.0 support, Intel® virtualization technology, Intel® Turbo Boost Technology, and remote management support. For vivid graphic enhancement, Intel® HD graphics engine supports H.264/AVC-MPEG2/VC1, DirectX 10.1 and OpenGL 3.0. Designed for harsh operation environment and high performance required application additional with high flexibility of expansions and data security, EC-5500 Series suits for a broad range of embedded applications, including security and surveillance solutions, digital signage, industrial automation, machine automation, in-vehicle platforms, and intelligent transportation systems.

Specifications

System

CPU	2nd Generation Intel® Mobile Core™ i7 / i5 / i3 and Celeron® Sandy Bridge Processor
Chipset	Intel® QM67
BIOS	Phoenix UEFI BIOS
SIO	Nuvoton NCT6106D
Memory	DDR3 1333 / 1066MHz Max. 16GB Capacities 2 204-pin SO-DIMM Sockets

I/O Port

Serial Interface	3 COM RS-232, 1 COM RS-232/485/422
USB Interface	6 USB Ports, Compliant with USB 2.0
Isolated DIO	8 DI, 8 DO (5GD/5GDE Model)
LED	Power/Suspend, HDD, and WDT LED
GPIO	8 DI, 8 DO

Expansion

Mini PCIe	2 Mini PCIe, 1 SIM Socket on 1 Mini PCIe Interface
SUMIT A, B	2 SUMIT Slots (EC-5500-5GDE Model)

Graphics

Chipset	Intel® GMA HD 3000
Display Memory	Shared Memory, Up to 1.7GB
Interface	VGA + DVI-D / HDMI Onboard VGA, Supports Max. Resolution 2048 x1536 (@60Hz) Onboard DVI-D, Supports Max. Resolution 1920 x1200

Storage

SATA	2 Bottom SATA III (6Gbps) 2.5" HDD/SSD Drive Bays (3G/5G Model) 2 Front Access SATA III (6Gbps) 2.5" HDD/SSD Drive Bays with Key Lock (3R/5R Model) SATA II (3Gbps) Slot, Supports IDE / AHCI Mode
Storage Expansion	CFast Slot, External Hot-swap, Push In / Out Ejector
eSATA	2 eSATA Ports

Audio

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

Ethernet

LAN1	Intel® 82583v Gigabit LAN
LAN2	Intel® 82583v Gigabit LAN
LAN3	Intel® 82583v Gigabit LAN
LAN4	Intel® 82583v Gigabit LAN
LAN5	Intel® 82579LM Gigabit LAN

Power

Power Input	DC Jack, 2-pin Terminal Block
Power Input Voltage	DC-IN 6 ~ 36V
Power Adapter	AC to DC +24V / 3.75A. 90W Max. (Optional)

Other

Watchdog Timer	Reset: 1 to 255 sec/min Per Step
HW Monitor	Temperature/ Voltages Auto Throttling Control When CPU Overheats

Mechanical

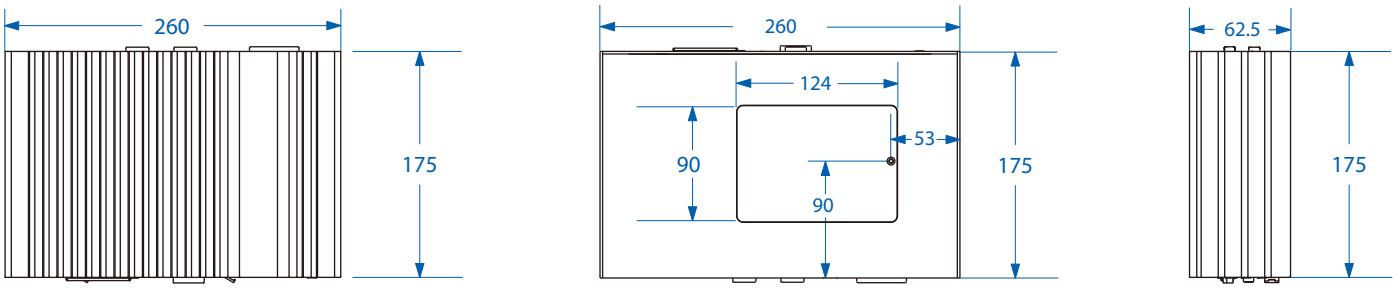
Chasis Construction	Aluminum Housing
Size(W x D x H)	260mm x 175mm x 78mm
Weight	2.8Kg
Mounting	Wall-mount by Mounting Bracket

Environment

Operating Temperature	-20°C to 70°C (-4°F to 157°F)
Storage Temperature	-40°C to 85°C (-40°F to 185°F)
Humidity	10% to 95% Humidity, Non-condensing
Vibration	Operating, 5 Grms, 5-500 Hz, 3 Axes (w/ SSD, According to IEC60068-2-64)
Shock	Operating, 50 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.

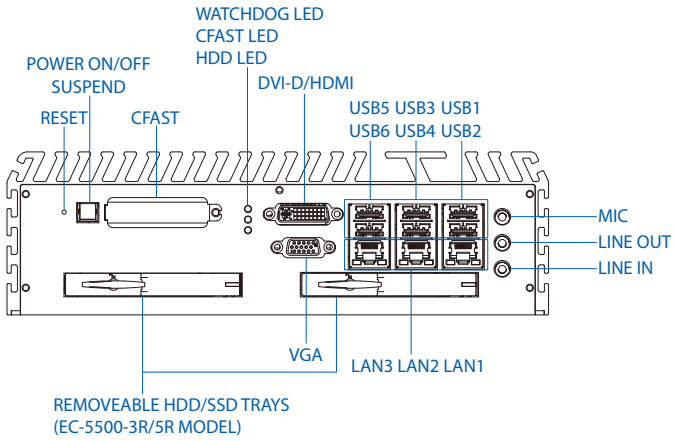
Dimensions



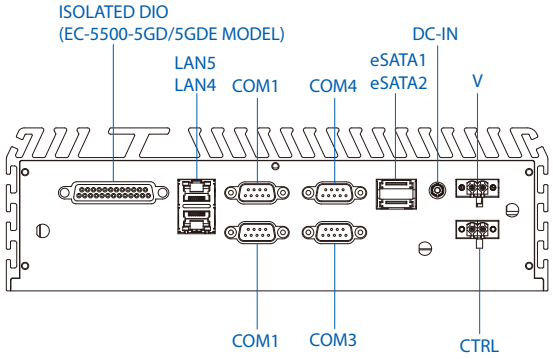
*EC-5500-3G/5G Model

Unit: mm (inch)

Front Panel External I/O Layout



Rear Panel External I/O Layout



Ordering Information

Product No.	Description
EC-5500-3G	Fanless Embedded Controller, 2 HDD
EC-5500-5G	Fanless Embedded Controller, 2 HDD, iAMT 7.0
EC-5500-5GD	Fanless Embedded Controller, 2 HDD, Isolated DIO, iAMT 7.0
EC-5500-5GDE	Fanless Embedded Controller, 2 HDD, Isolated DIO, SUMIT (A, B), iAMT 7.0
EC-5500-3R	Fanless Embedded Controller, 2 Front Panel Access Removable HDD with Key Lock
EC-5500-5R	Fanless Embedded Controller, 2 Front Panel Access Removable HDD with Key Lock, iAMT 7.0

Options	Description
CPU Selection	Sandy Bridge 2nd Gen Intel® Mobile Core™ i7-2710QE
	Sandy Bridge 2nd Gen Intel® Mobile Core™ i5-2510E
	Sandy Bridge 2nd Gen Intel® Mobile Core™ i3-2330E
	Sandy Bridge 2nd Gen Intel® Mobile Core™ Celeron® B810
SO-DIMM Selection	Vecow M-Series Wide Temperature -40°C ~ +85°C , DDR3 1333/1066MHz 4GB SO-DIMM
	Kingston®, DDR3 1333/1066MHz 4GB SO-DIMM
PWA-90V	90W, 24V, 90V ac to 264V ac Power Adapter

Last updated: 13-Dec-2011

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Vecow

Security & Surveillance | Factory/Machine Automation | Mass Transporation Signage | Medical & Healthcare | In-vehicle Surveillance

Superior Performance

- 2nd Gen Intel® Core™ Mobile Series, Sandy Bridge CPU
- Dual Channel DDR3 1333/1066MHz Maximum 16GB
- SATA III (6Gbps) HDD/SSD

HD Graphic

- Dual Display: VGA + DVI-D/HDMI
- Intel® HD Graphics for significant 3D performance
- Intel® InTru™: Full HD 1080p Resolution in 3D

Security & Reliability

- -20°C to 70°C Wide Operation Temperature
- Fanless and Less Internal Cable
- DC-IN, 6~36 Voltage
- Removeable HDD with Key Lock

Wire-rate Network Communication

- RJ-45 GbE LAN Port
- Intel® AMT 7.0 Support

Applications

Medical Computing

High performance computing platforms enable to provide medical quality displays and surgery monitoring system. Also, provides accurate recording database and instant monitoring and accessing between nursing staffs and patients.

Traffic Management

Using as traffic management systems, EC-5500 series can manage over 1000's high quality video streams in the same time. Provideing live and quality information, enable correct public surveillance and prompt traffic flow control applications

Factory/Machine Automation

Generate maximum quantities in the shortest amount of time to realize cost-effective mass production are main concerns in this field. Connecting with data server and cameras, EC-5500 series edge out rivals in the industry with productivity and competitive price.

In-vehicle Surveillance

Not only ensures safety and reduces danger also provide various functions, for example, it can be served as an information center to passengers or an connector with central controller.

Security

To monitor buildings, offices, shops, facilities and assets, this real-time and instantly analyzed controller can share based information and help to preven possible risks and demanges.

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