



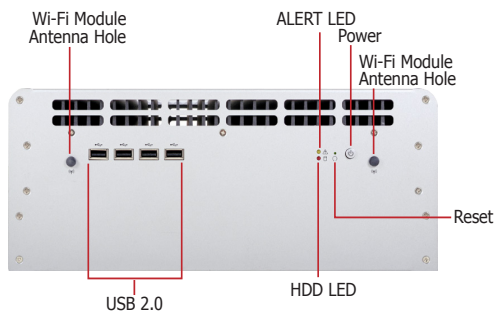
3rd/2nd Gen Intel® Core™
Modular-Designed Embedded System

EC320/EC321 Series

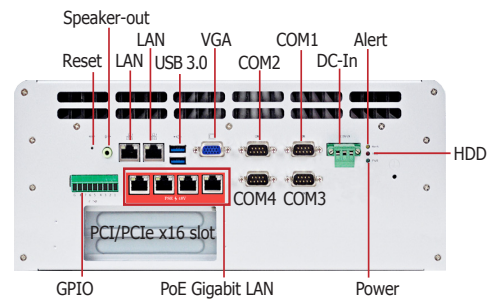
QM77



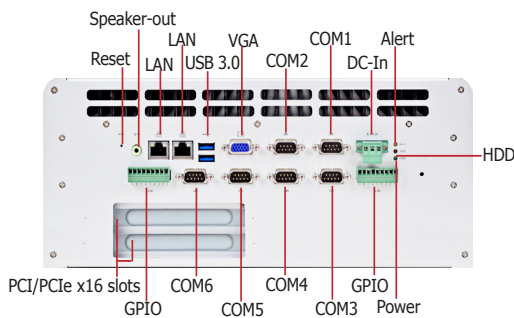
Panel



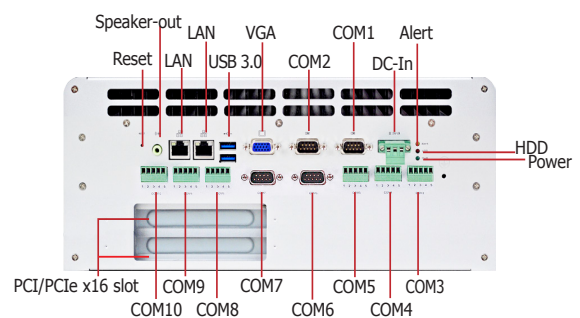
Front View



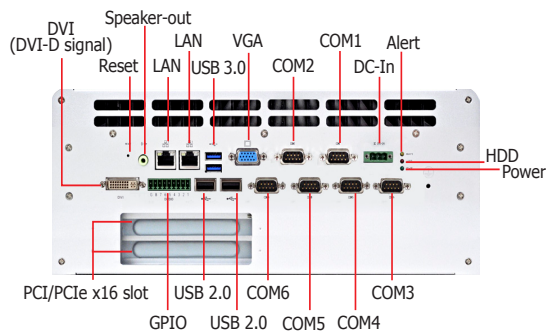
EC320/321-CR4866 Rear View



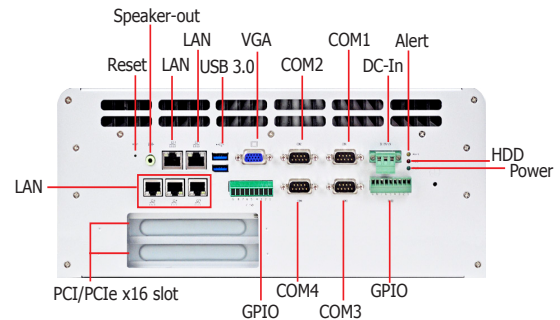
EC320/321-CR6G60 Rear View



EC320/321-CRA060 Rear View



EC320/321-CR6881 Rear View



EC321-CR4G65 Rear View

Features

- Fanless, compact design for industrial applications
- Supports DDR3/DDR3L SODIMM up to 16GB
- Up to 2x 2.5" SATA drive bay, 1 CF socket
- Supports mSATA via the mini PCIe slot
- PCIe x16 and PCI expansions



3rd/2nd Gen Intel® Core™ Modular-Designed Embedded System



EC320/EC321 Series

► Specifications * Optional and is not supported in standard model. Please contact your sales representative for more information.

PROCESSOR SYSTEM

- 3rd Generation Intel® Core™ processors (22nm process technology)
 - Intel® Core™ i7-3610QE (6M Cache, up to 3.3 GHz); 45W
 - Intel® Core™ i5-3610ME (3M Cache, up to 3.3 GHz); 35W
 - Intel® Core™ i3-3120ME (3M Cache, 2.4 GHz); 35W
- 2nd Generation Intel® Core™ processors (32nm process technology)
 - Intel® Core™ i7-2710QE (6M Cache, up to 3.0 GHz); 45W
 - Intel® Core™ i5-2510E (3M Cache, up to 3.1 GHz); 35W
 - Intel® Core™ i3-2330E (3M Cache, 2.2 GHz); 35W
 - Intel® Celeron® B810 (2M Cache, 1.6 GHz); 35W
- Chipset: Intel® QM77

MEMORY

- 2 DDR3/DDR3L 1066/1333/1600MHz SODIMM sockets
- Supports up to 16GB memory
- Dual channel memory interface

GRAPHICS

- Intel® HD Graphics 4000
- Supports 2 independent displays
- VGA display resolution up to 2048x1536 @ 60Hz
- DVI display resolution up to 1920x1080 @ 60Hz
- Display outputs: 1 VGA and 1 DVI (DVI-D signal)

STORAGE

- 2.5" SATA drive bay(s)
 - 2 SATA 3.0 ports with data transfer rate up to 6Gb/s
 - Standard: 1 drive bay
 - Option: Single drive bay for second SATA drive (supports RAID 0/1/5/10)
- 1 CompactFlash socket
- Supports 1 mSATA module via the Mini PCIe slot

ETHERNET

- Intel® WG82579LM with iAMT7.0 Gigabit Ethernet Phy
- Intel® 82574 Gigabit Ethernet controller (-CR4G65/-CR4866)
- Fully IEEE std 802.3af-2003 compliant (-CR4866)
 - Power output: 48V DC 15.4 watts of power per PoE port (Type 1 Mode A 15.4W per port)
- Supports wireless 802.11 b/g/n via the mini PCIe slot

AUDIO

- Realtek ALC262 High Definition Audio
- 2 watt, 4Ω power amplifier

POWER

- Power input voltage: 9~30V DC-in

EXPANSION

- EC320 series
 - 2 PCI slots
 - 1 Mini PCIe slot
 - 1 XCTO-3G riser card supports 3G*
 - : 1 Mini PCIe slot (USB signal)
 - : 1 SIM slot
- EC321 series
 - 1 PCI slot
 - 1 PCIe x16 slot
 - 1 Mini PCIe slot
 - 1 XCTO-3G riser card supports 3G*
 - : 1 Mini PCIe slot (USB signal)
 - : 1 SIM slot

ENVIRONMENT

- Temperature
 - Operating: 0°C ~ 60°C (-CR6881/-CR6G60/-CRA060/-CR4G65)
 - Operating: 0°C ~ 55°C (-CR4866)
 - Storage: -20°C ~ 65°C
- Operating Vibration
 - IEC68-2-64 (HDD)
- Operating Shock
 - Half sine wave 15G, 11ms, 3 shock per axis

CONSTRUCTION

- Aluminum + SGCC

MOUNTING

- Wall mount

DIMENSIONS

- 340.5mm x 140.5mm x 223mm (W x H x D)

WEIGHT

- 9 kg

OS SUPPORT

- Windows XP, WES 2009, POSReady 2009, Windows 7, WES 7, Windows 8.1, WES 8
- Linux (Distribution available upon request)

OTHER FEATURES

- Watchdog Timer function

CERTIFICATION

- CE, FCC Class A, RoHS

► System Models

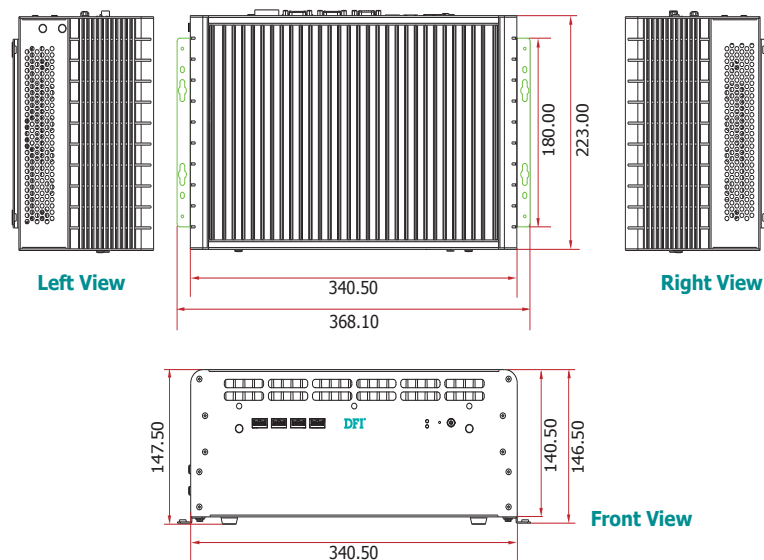
Rear I/O Ports	EC320/321-CR6881	EC320/321-CR6G60	EC320/321-CRA060	EC321-CR4G65	EC320/321-CR4866
DC-in power jack: 3-pole terminal block	1	1	1	1	1
Speaker-out: 2W 3.5mm audio jack	1	1	1	1	1
VGA: DB-15 D-sub	1	1	1	1	1
DVI (DVI-D signal)	1	0	0	0	0
Gigabit LAN: RJ45 with LEDs	2	2	2	5	2
PoE Gigabit LAN: RJ45	0	0	0	0	4
COM: DB-9 D-sub (RS232/422/485)	6	6	4	4	4 (2 ports are RS232)
COM: 5-pole terminal block (RS232/422/485)	0	0	6	0	0
USB 3.0 Type A	2	2	2	2	2
USB 2.0 Type A	2	0	0	0	0
GPIO: 9-pole terminal block	8-bit	16-bit	0	16-bit	8-bit
Reset button	1	1	1	1	1
Power LED	1	1	1	1	1
HDD LED	1	1	1	1	1
Alert LED	1	1	1	1	1
Front I/O Ports	EC320/321-CR6881	EC320/321-CR6G60	EC320/321-CRA060	EC321-CR4G65	EC320/321-CR4866
USB 2.0 Type A	4	4	4	4	4
Power button with indicator	1	1	1	1	1
Reset button	1	1	1	1	1
HDD LED	1	1	1	1	1
Alert LED	1	1	1	1	1
Wi-Fi module antenna hole	2	2	2	2	2



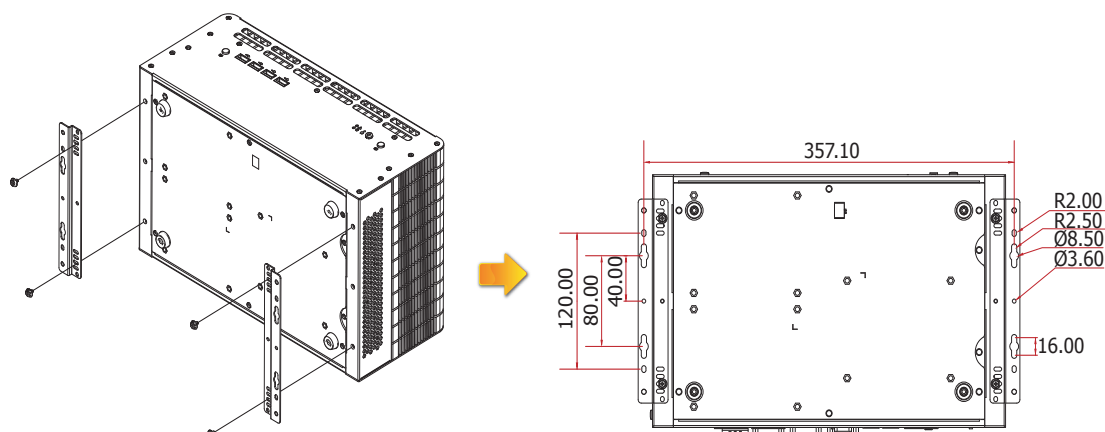
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EC320/EC321 Series

► Dimensions



► Wall Mounting



3rd/2nd Gen Intel® Core™ Modular-Designed Embedded System



EC320/EC321 Series

► Ordering Information

Model Name	Part Number	Description
EC321-CR6G60	750-EC3210-100G	Fanless, i7/i5/i3, QM77, 2 LAN, 1 VGA, 6 COM, 16-bit GPIO, 6 USB, 1 PCI, 1 PCIe x16, RoHS
EC321-CRA060	750-EC3210-200G	Fanless, i7/i5/i3, QM77, 2 LAN, 1 VGA, 10 COM, 6 USB, 1 PCI, 1 PCIe x16, RoHS
EC321-CR6881	750-EC3210-300G	Fanless, i7/i5/i3, QM77, 2 LAN, 1 DVI, 1 VGA, 6 COM, 8-bit GPIO, 8 USB, 1 PCI, 1 PCIe x16, RoHS
EC321-CR4G65	750-EC3210-A00G	Fanless, i7/i5/i3, QM77, 5 LAN, 1 VGA, 4 COM, 16-bit GPIO, 6 USB, 1 PCI, 1 PCIe x16, RoHS
EC321-CR4866	750-EC3210-500G	Fanless, i7/i5/i3, QM77, 1 VGA, 4 PoE Gigabit LAN, 2 LAN, 4 COM, 8-bit GPIO, 6 USB, 1 PCI, 1 PCIe x16, RoHS
EC320-CR6G60	750-EC3200-100G	Fanless, i7/i5/i3, QM77, 2 LAN, 1 VGA, 6 COM, 16-bit GPIO, 6 USB, 2 PCI, RoHS
EC320-CRA060	750-EC3200-200G	Fanless, i7/i5/i3, QM77, 2 LAN, 1 VGA, 10 COM, 6 USB, 2 PCI, RoHS
EC320-CR6881	750-EC3200-300G	Fanless, i7/i5/i3, QM77, 2 LAN, 1 DVI, 1 VGA, 6 COM, 8-bit GPIO, 8 USB, 2 PCI, RoHS
EC320-CR4866	750-EC3200-500G	Fanless, i7/i5/i3, QM77, 1 VGA, 4 PoE Gigabit LAN, 2 LAN, 4 COM, 8-bit GPIO, 6 USB, 2 PCI, RoHS



Important:

Due to EC320/321's unique construction, the system will be delivered with a built-in processor. Make sure to inform your sales representative the processor of your choice.

► Optional Items

Optional Items	Part Number	Description
CPU	785-CP988BML	CPU, Socket 988B, Long-term support, RoHS
Memory	785-RSOD38G-L	SODIMM, DDR3L Module (supports dual voltage 1.5V DDR3/1.35V DDR3L), 8GB, RoHS
	785-RSOD34G-L	SODIMM, DDR3L Module (supports dual voltage 1.5V DDR3/1.35V DDR3L), 4GB, RoHS
	785-RSOD32G-L	SODIMM, DDR3L Module (supports dual voltage 1.5V DDR3/1.35V DDR3L), 2GB, RoHS
	785-RSOD31G	SODIMM, DDR3 Module, 1GB, RoHS
HDD	785-H25500G	2.5" SATA HDD, 500GB, RoHS
	785-H25320G	2.5" SATA HDD, 320GB, RoHS
	785-S251TBG	2.5" SATA SSD, 1TB MLC, RoHS
	785-S25512G	2.5" SATA SSD, 512GB MLC, RoHS
	785-S25256G	2.5" SATA SSD, 256GB MLC, RoHS
	785-S25128G	2.5" SATA SSD, 128GB MLC, RoHS
	785-S25064G	2.5" SATA SSD, 64GB MLC, RoHS
HDD Bracket	761-EC3000-200G	2nd HDD Bracket kit, RoHS
mSATA	785-MS128GMF	mSATA Card, 128GB MLC, RoHS
	785-MS64GMF	mSATA Card, 64GB MLC, RoHS
	785-MS32GMF	mSATA Card, 32GB MLC, RoHS
	785-MS16GMF	mSATA Card, 16GB MLC, RoHS
	785-MS08GMF	mSATA Card, 8GB MLC, RoHS
	785-MS04GMF	mSATA Card, 4GB MLC, RoHS
CF	785-CF08G	CF Card, 8G, Industrial Grade SLC
3G	785-EC3G	For EC3xx Series and EC2xx Series 3G Module
Wi-Fi	761-110091-000G	Wi-Fi Kit, RoHS
Power Cord	785-PWRD	Power Cord, Standards (USA/EUR/CH), 1.8m, RoHS
Wall Mount	785-EC3WMK	Wall Mount Kit

► Packing List

- 1 EC320/EC321 system unit
- 1 SATA data/power cable
- 1 120W power adapter (-CR6G60/-CRA060/-CR6881/-CR4G65)
- 1 160W power adapter (-CR4866)

- 1 Quick Installation Guide
- 1 CD disk includes:
- Drivers / Manual

Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

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