

DFI® EC310 Series Embedded Systems

QM77



Features

- Fanless, compact design for industrial applications
- 3rd/ 2nd Generation Intel® Core™ processors
- Intel® QM77 Express chipset
- Supports DDR3/ DDR3L SODIMM up to 16GB
- Up to 2 2.5" SATA drive bay, 1 CF socket
- Supports mSATA via the mini PCIe slot
- 1 PCI expansion



System Specifications

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

STORAGE

- 2.5" SATA drive bay(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® I210 PCI Express Gigabit Ethernet controller
- Intel® 82574L Gigabit Ethernet controller (EC310-CR4866)
 - Fully IEEE std 802.3at-2009 compliant
 - Power output: 48V DC 15.4 watts of power per PoE port (Type 1 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

EXPANSION

- 1 PCI slot
- 1 Mini PCIe slot supports Wi-Fi module or mSATA
- 1 XCT0-3G riser card supports 3G (option)
 - 1 Mini PCIe slot (USB signal)
 - 1 SIM slot

POWER

- Power input voltage: 9-36V DC

ENVIRONMENT

- Temperature
 - Operating: 0°C ~ 60°C
 - Storage: -20°C ~ 65°C
- Operating Vibration
 - MIL-STD810F 514.5C-1 (HDD)
 - MIL-STD810F 514.5C-2 (CompactFlash or Solid State Disk)
- Operating Shock
 - Half sine wave 15G, 11ms, 3 shock per axis

CONSTRUCTION

- Aluminum + SGCC

MOUNTING

- Wall mount

DIMENSIONS

- 340.5mm x 120.5mm x 223mm (W x H x D)

WEIGHT

- 9 kg

OS SUPPORT

- Windows 7, Windows 7 Embedded, Windows XP SP3, Windows XP Embedded, Linux

OTHER FEATURES

- Watchdog Timer function

CERTIFICATION

- CE, FCC Class A and RoHS

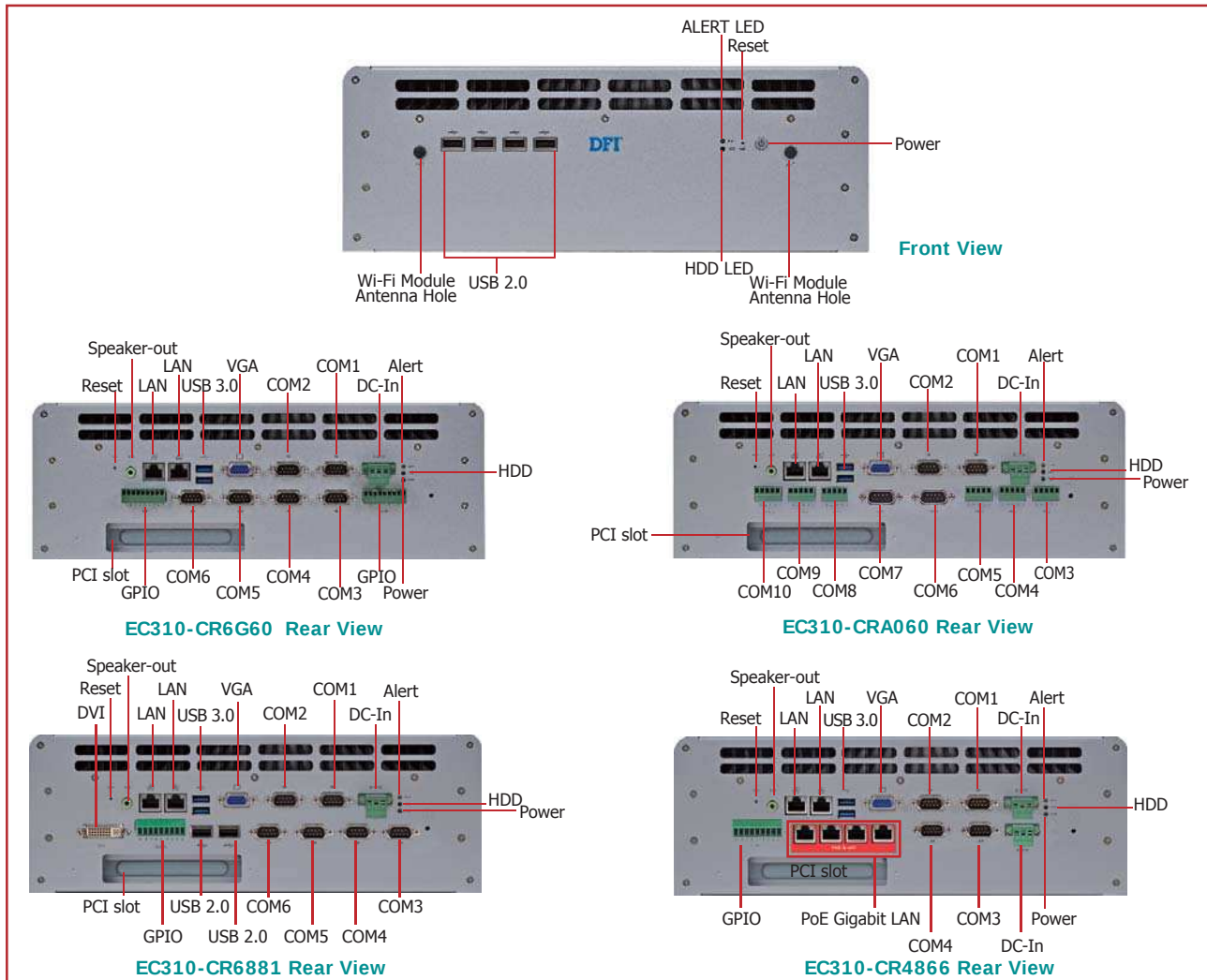
System Models

Rear I/O Ports	EC310-CR6881	EC310-CR6G60	EC310-CRA060	EC310-CR4866
DC-in power jack: 3-pole terminal block	1	1	1	2
Speaker-out: 2W 3.5mm audio jack	1	1	1	1
VGA: DB-15 D-sub	1	1	1	1
DVI	1	0	0	0
Gigabit LAN: RJ45 with LEDs	2	2	2	2
PoE Gigabit LAN: RJ45	0	0	0	4
COM: DB-9 D-sub (RS232/422/485)	6	6	4	4
COM: 5-pole terminal block (RS232/422/485)	0	0	6	0
USB 3.0 Type A	2	2	2	2
USB 2.0 Type A	2	0	0	0
GPIO: 9-pole terminal block	8-bit	16-bit	0	8-bit
Reset button	1	1	1	1
Power LED	1	1	1	1
HDD LED	1	1	1	1
Alert LED	1	1	1	1
Front I/O Ports	EC310-CR6881	EC310-CR6G60	EC310-CRA060	EC310-CR4866
USB 2.0 Type A	4	4	4	4
Power button with indicator	1	1	1	1
Reset button	1	1	1	1
HDD LED	1	1	1	1
Alert LED	1	1	1	1
Wi-Fi module antenna hole	2	2	2	2

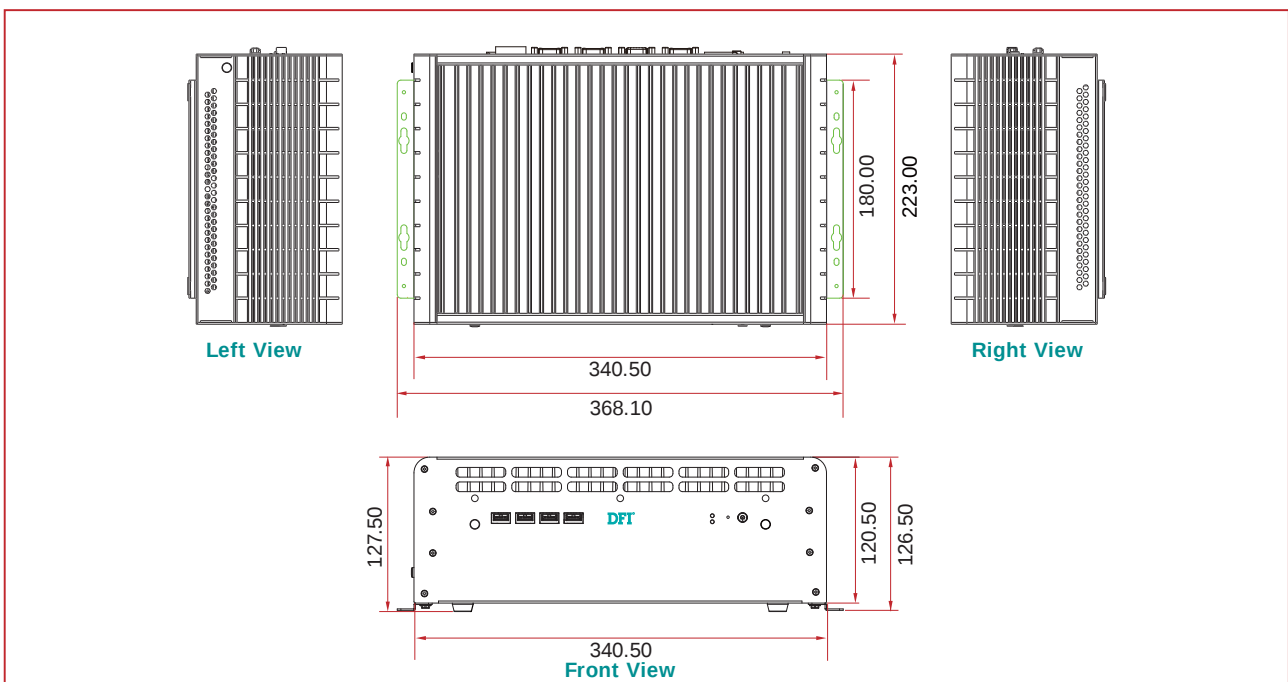
EC310 Series Embedded Systems

DFI®

Panel

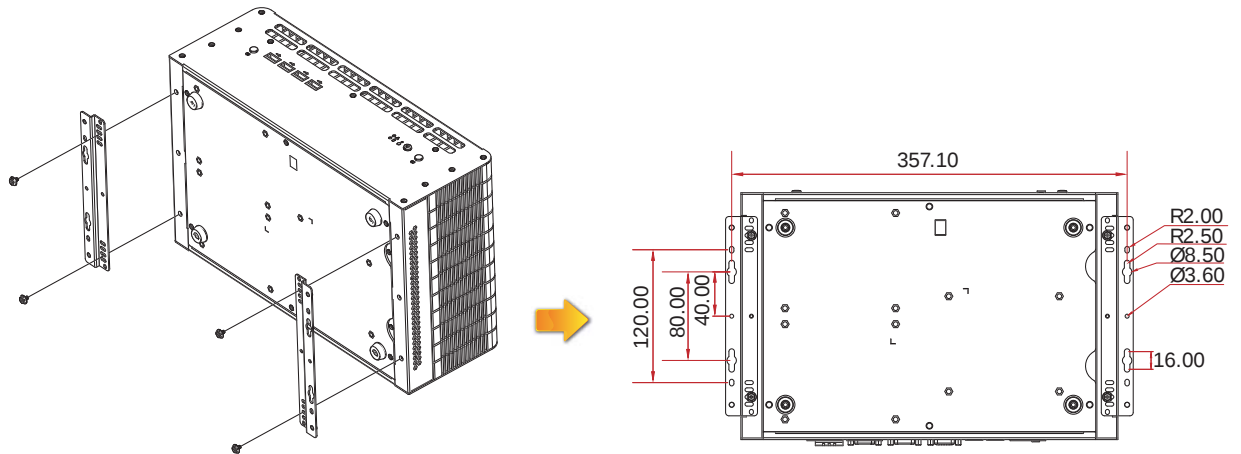


Dimensions



Mounting

Wall Mounting



EC310 Series Embedded Systems



Packing List

- 1 EC310 system unit
- 1 SATA data/power cable
- 1 120W power adapter
- 1 Quick Installation Guide
- 1 CD disk includes:
 - Drivers / Manual

Ordering Information

Model Name	Part Number	Description
EC310-CR6G60	750-EC3100-100G	Fanless, i7/i5/i3, QM77, 1 VGA, 2 LAN, 6 COM, 16-bit GPIO, 6 USB, RoHS
EC310-CRA060	750-EC3100-200G	Fanless, i7/i5/i3, QM77, 1 VGA, 2 LAN, 10 COM, 6 USB, RoHS
EC310-CR6881	750-EC3100-300G	Fanless, i7/i5/i3, QM77, 1 DVI, 1 VGA, 2 LAN, 6 COM, 8-bit GPIO, 8 USB, RoHS
EC310-CR4866	750-EC3100-500G	Fanless, i7/i5/i3, QM77, 1 VGA, 4 PoE Gigabit LAN, 2 LAN, 4 COM, 8-bit GPIO, 6 USB, RoHS

Optional Items

Optional Items	Part Number	Description
CPU	785-CP988BML	CPU, Socket 988B, Long-term support, RoHS
Memory	785-RSOD31G	SODIMM, DDR3, 1GB, RoHS
	785-RSOD32G	SODIMM, DDR3, 2GB, RoHS
	785-RSOD34G	SODIMM, DDR3, 4GB, RoHS
	785-RSOD38G	SODIMM, DDR3, 8GB, RoHS
HDD	785-H25250G	2.5" SATA HDD, 250GB, RoHS
	785-H25500G	2.5" SATA HDD, 500GB, RoHS
	785-S25128G	2.5" SATA SSD; 128GB MLC; RoHS
CF	785-CF01G	CF Card, 1G, Industrial Grade SLC
	785-CF02G	CF Card, 2G, Industrial Grade SLC
	785-CF04G	CF Card, 4G, Industrial Grade SLC
	785-CF08G	CF Card, 8G, Industrial Grade SLC
Power Cord	785-PWRD	Power cord, Standards (USA/EUR/CH), 1.8m, RoHS
Wall Mount	785-EC3WMK	EC300 Series Wall Mount kit
3G	785-EC3G	For EC300/310/320/321 Series and EC200/210/220/221 Series 3G Module