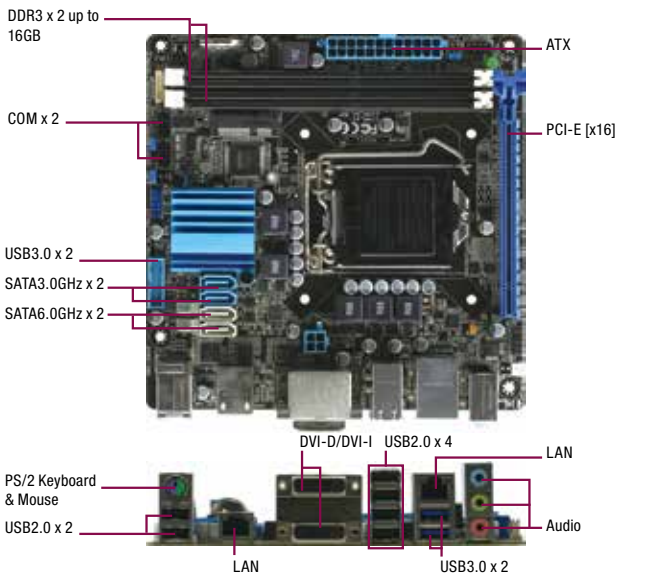


EMB-Q77A

Intel® 3rd/2nd Generation Core™ i7/ i5/ i3 Mini-ITX Support USB 3.0 Port x 4 and SATA3 Port x 2

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Embedded & Industrial Motherboards



Features

- Intel® 3rd/2nd Generation Core™ i7/ i5/ i3/ Processors
- DDR3 1600/1333/1066 MHz DIMM x 2, Max. 16GB
- Dual Independent Display: DVI-D, DVI-I
- Dual Intel® Gigabit Ethernet
- Onboard TPM Infineon SLB9635 TT 1.2
- PCI-E [x16] x 1, Half-size Mini Card x 1
- Support USB3.0 and SATA 6.0 Gb/sec



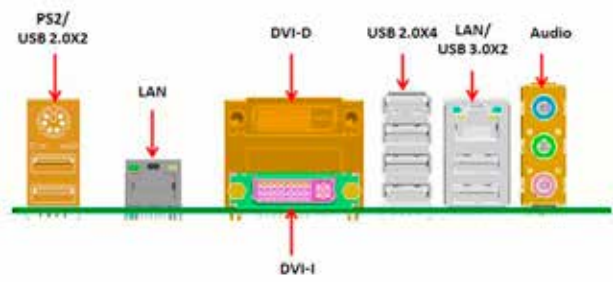
Specifications

System	
Processor	LGA1155 socket for Intel® 3rd/2nd Generation Core™ i7/ i5/ i3/ Pentium® / Celeron® Processors
Chipset	Intel® Q77 Express Chipset
System Memory	DIMM x 2, max. 16GB, DDR3 1600/1333/1066 MHz, non-ECC, un-buffered memory
Graphics	Intel® Graphics Media Accelerator
I/O Chipset	NCT 6779
Ethernet	Intel® 82579LM (Support AMT 8.X) x 1, Intel® 82583V x 1
Audio	Realtek® ALC887 (8-channel)
TPM	Infineon SLB9635 TT 1.2
Expansion Interface	PCIe 3.0/2.0 x16 Slot x 1, Mini Card (USB+PCIe) Half size x 1
BIOS	128 Mbit Flash ROM, AMI BIOS
H/W Monitor	Temperature Monitor on CPU/Chassis, Voltage Monitor on Vcore/3.3V/5V/12V, Fan Monitor on CPU/ Chassis
Watchdog Timer	1~255 step by software program
Smart Fan Control	CPU Fan / Chassis Fan
Wake On LAN / PXE	Yes (WOL / PXE)
Power State	S3, S4, S5
Battery	Lithium battery
Power Requirement	24-pin ATX connector x 1, 4-pin ATX 12V Power connector x 1
Power Consumption	—
Power Compliance	Compliant with EuP / ErP
Mechanical	
Form Factor	Mini-ITX Form Factor, 6.7" x 6.7" (170mm x 170mm)
Gross Weight	1.1 lb (0.5 Kg)
Environmental	
Operating Temperature	14°F ~ 131°F (0°C ~ 60°C)
Storage Temperature	-40°F ~ 185°F (-40°C ~ 85°C)
Operating Humidity	0% ~ 90% RH, non-condensing
Certificate	CE & FCC
MTBF	—
Display	
Chipset	Intel® Graphics Media Accelerator
Multi Display	DVI-D + DVI-I
VGA	—
DVI	DVI-D: Up to 1920 x 1200 @60 Hz, DVI-I: Up to 1920 x 1200 @60 Hz
HDMI	—
LVDS	—
Backlight Control	—

I/O	
Storage	SATA 6.0 Gb/s port x 2, SATA 3.0 Gb/s port x 2 (Supports RAID 0/1/5/10)
USB	USB 3.0 port x 4 (2 ports at mid-board, 2 ports at back panel), USB 2.0 port x 8 (2 ports at mid-board, 6 ports at back panel)
Display I/O	DVI-I x 1, DVI-D x 1
Audio I/O	Line-in, Mic-in, Line-out, internal Speaker
LAN I/O	RJ-45 x 2
Serial Port	RS-232/422/485 x 1 supports 5/12V/RI, (COM1, box header), RS-232 x 1
PS/2 Port	PS/2 Port x 1 (Keyboard & Mouse)
DIO	—
FAN	CPU Fan connector(s) (4-pin) x 1, Chassis Fan connector(s) (4-pin) x 1
Operating System	
MS Windows	Windows® XP 32/64 bit, Windows® 7 32/64 bit (WHQL), Windows® 8 (WHQL)
Linux	Fedora

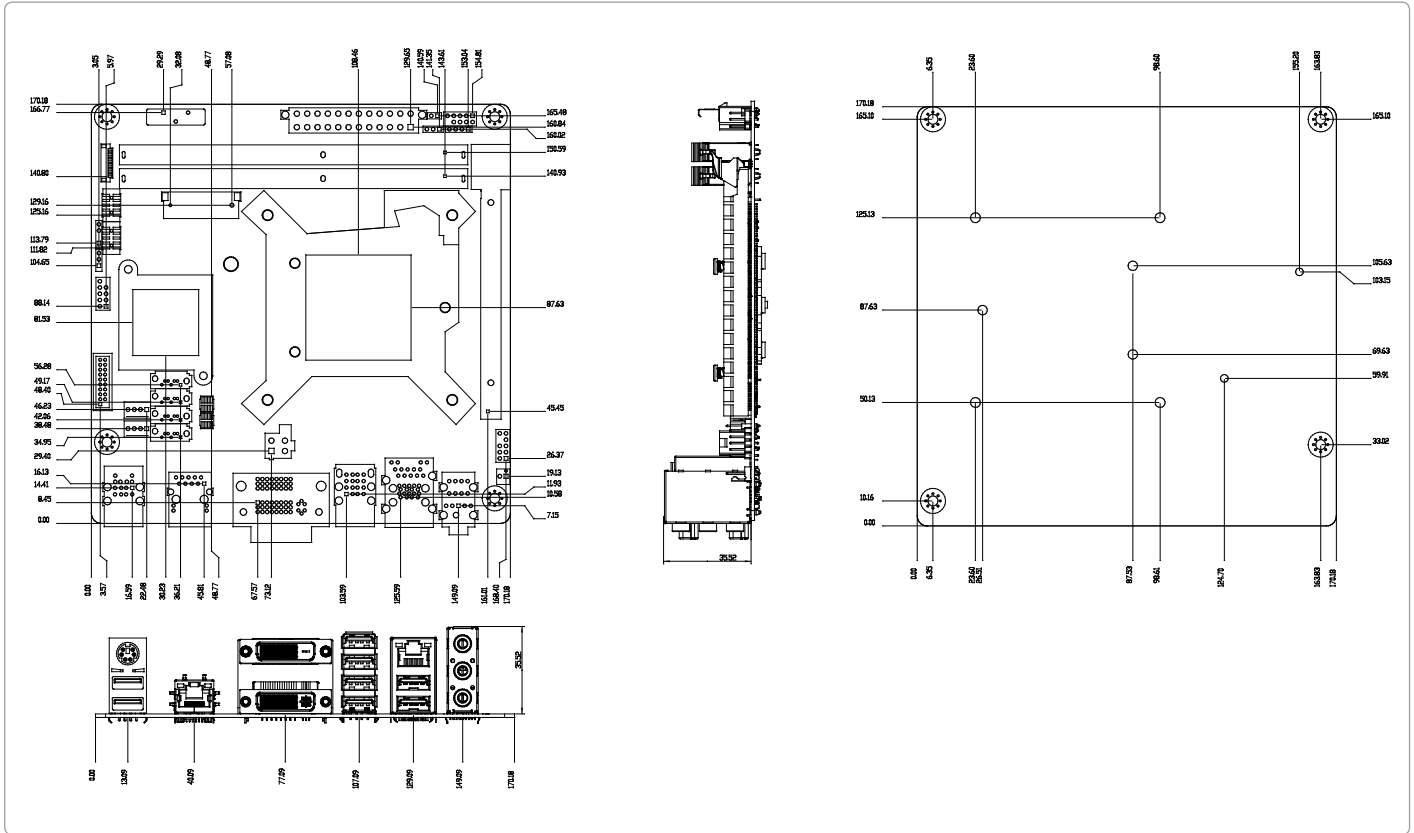
I/O Ports Placement

- **Rear I/O**
 - DVI-D x 1
 - DVI-I x 3
 - PS/2 Keyboard/ Mouse Port (Purple/Green) x 1
 - LAN (RJ-45) Port x 2
 - USB 3.0/2.0 Port x 2
 - USB 2.0/1.1 Ports x 6
 - Audio Jacks x 3
 - SATA 6G connectors x 2
 - SATA 3G connectors x 2
 - CPU Fan connector (4-pin) x 1
 - Chassis Fan connectors (4-pin) x 1
 - COM header x 2
 - Front Panel Connector x 1
 - Front Panel Audio Connector (AAFP) x 1
 - Internal Speaker Connector x 1
 - 24-pin ATX Power connector x 1
 - 4-pin ATX 12V Power connector x 1
 - Chassis Intrusion x 1
- **Internal I/O Connectors**
 - PCIe [x16] Slot x 1
 - Mini Card (Half size) x 1
 - USB 2.0 connectors support additional 2 USB 2.0 ports x 1
 - USB 3.0 connectors support additional 2 USB 3.0 ports x 1



EMB-Q77A

Block Diagram



Order Information

Part Number	CPU	RAM	Fan/Fanless	Storage	Display	LVDS	LAN	USB	RS-232	RS-232/422/485	Expansion Slot	Power	Temp.
EMB-Q77A-A10	Socket	DIMM	Fan	SATA 6.0GHz x 2	DVI-I, DVI-D	—	GbE x 2	USB2.0 x 8, USB3.0 x 4	1	1	PCI-E [x16] x1, Mini Card x1	ATX	0°C ~ 60°C

Packing List

- 1709070501
SATA cable (7P, 180;90, 500MM) 2pcs
- Driver/Utility DVD
- I/O Shield

Optional Accessories

- TBD