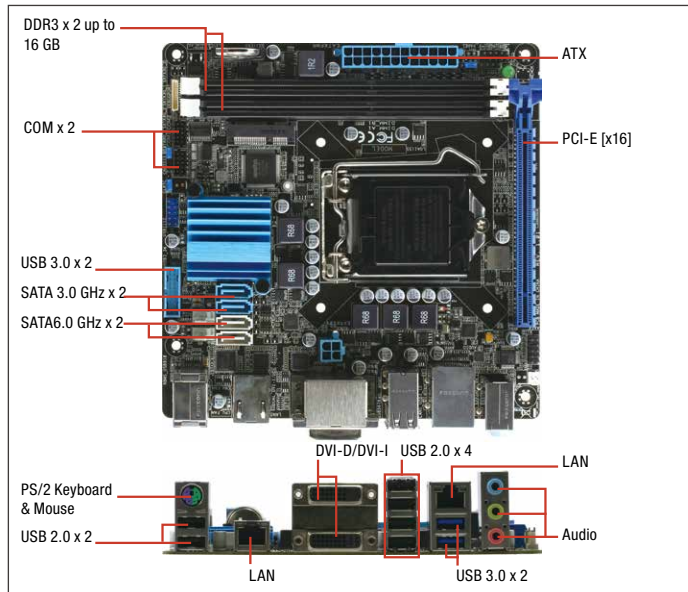


Mini-ITX Embedded Motherboard with Intel® 3rd/2nd Generation Core™ i7/i5/i3 Processor, USB 3.0 x 4 and SATA3 x 2



Specifications

System	
Processor	LGA1155 socket for Intel® 3rd/2nd Generation Core™ i7/ i5/ i3/ Pentium® / Celeron® Processor
Chipset	Intel® Q77 Express Chipset
Memory	DDR3 1333/1600 MHz DIMM x 2, Up to 16GB, Non-ECC, Dual-channel memory architecture
Graphics	Intel® HD Graphics
I/O Chipset	NCT 6779D
Ethernet	Intel® 82579LM (Support Intel® I AMT 8.X) x 1, Intel® 82583V x 1
Audio	Realtek® ALC887
TPM	Infineon SLB9635 TT 1.2 (optional)
Expansion Slots	PCIe [x16] x 1, Half size Mini-Card (USB+PCIe default) (mSATA optional) x 1
BIOS	128 Mbit Flash ROM, AMI BIOS
H/W Monitor	Temperature Monitor on CPU/Chassis, Voltage Monitor on Vcore/5V/3.3V/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
Graphics	
Graphics Chipset	Intel® HD Graphics
Graphics 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	—
Display Port	—
LVDS	—
eDP	—
Backlight Control	—
Environment & Power & ME	
Battery	Lithium battery
Power Requirement	24pin ATX connector x 1, 4pin ATX 12V Power connector x 1
Operating Temperature	32°F ~ 140°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
Form Factor	Mini-ITX, 6.7" x 6.7" (170mm x 170mm)
Weight	1.1 lb (0.5 Kg)
MTBF (Hours)	95,000

Features

- Intel® 3rd/2nd Generation Core™ i7/i5/i3/Processors
- DDR3 1600/1333 MHz DIMM x 2, Up to 16 GB
- 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 (mSATA Optional)
- Support USB 3.0 and SATA 6.0 Gb/sec



Rear Panel I/O Ports

USB	USB 3.0 x 2, USB 2.0 x 6
Display I/O	DVI-D x 1, DVI-I x 1
Audio I/O	Mic-in x 1, Line in x 1, Line-out x 1
LAN I/O	LAN (RJ-45) port x 2
Serial Port	—
PS/2 Port	—
Others	—

Internal I/O Connectors

Storage	SATA3 (6.0Gb/s) x 2, SATA2 (3.0Gb/s) x 2
USB	USB 3.0 (2 x 5-PIN, 2.54mm) x 1 port supports additional 2 USB, USB 2.0 (1 x 5-PIN, 2.0mm) x 1 port supports additional 1 USB
Display I/O	—
Audio I/O	AAFP x 1, speaker x 1
Serial Port	COM (RS-232) x 1, COM (RS-232/422/485) x 1
PS/2 Port	—
Parallel Port	—
DIO	—
FAN	CPU Fan connector x 1, Chassis Fan connector x 1
Power	24-pin ATX Power connector x 1, 4-pin AUX 12V Power connector x 1, AT/ATX mode select jumper x 1
Others	Front Panel connector x 1, Chassis Intrusion x 1, CMOS jumper x 1

OS

OS Support	Windows® XP 32/64-bit, Windows® 7 32/64-bit (WHQL), Windows® 8 (WHQL), Linux Fedora
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Packing List

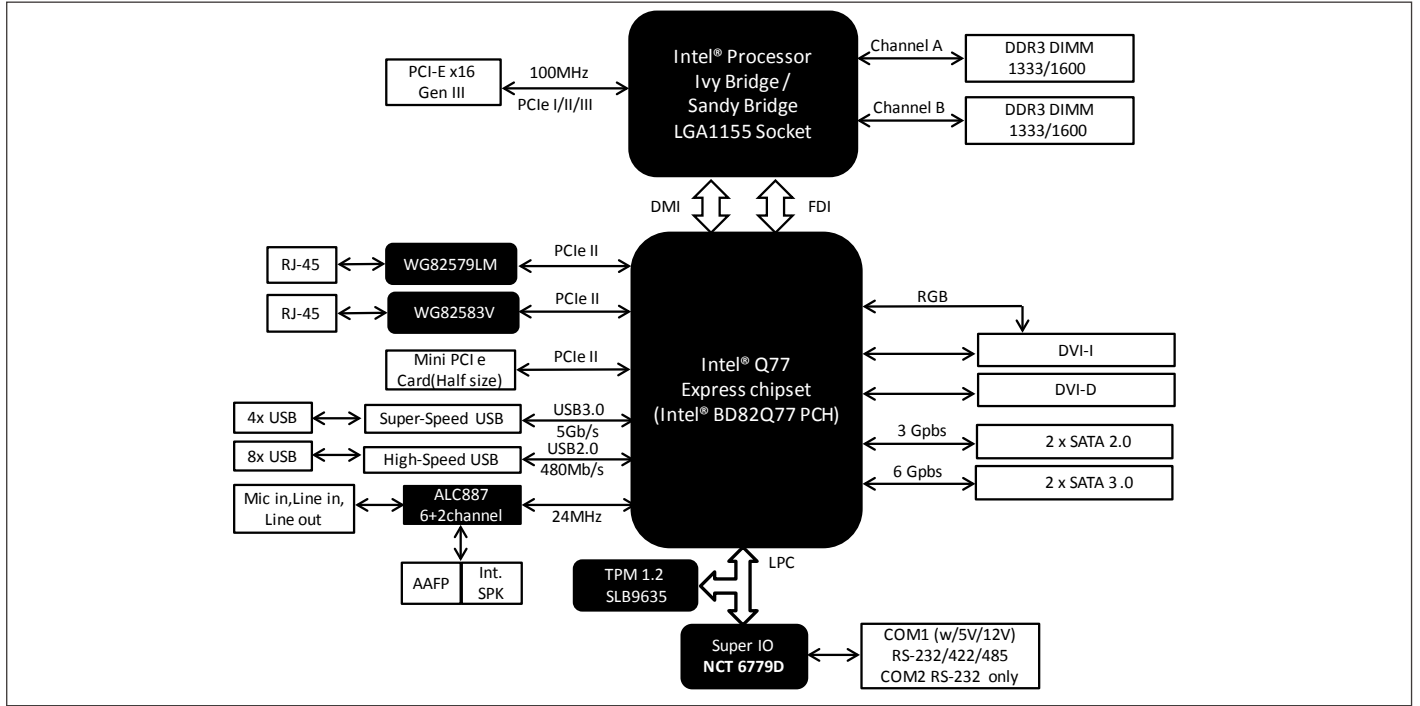
- SATA Cable (7P, 180; 90, 500MM) 2 pcs
- I/O Shield
- Product DVD
- EMB-Q77A

Optional Accessories

Part Number	Description
1759200172	CPU Cooler (2-Ball, Screw with Retention Plate)
175921156B	CPU Cooler (2-Ball, Push-pin Type)
1700190450	2U CPU Cooler (2-Ball, Push-pin Type)
1709070800	SATA Cable
1709100201	USB 2.0 Cable (10P, 200MM, p=2.00mm, w/ bracket)
1701100206	COM Cable (200MM, p=2.00mm)
1700060192	PS/2 Cable (6P, 190mm, P=2.0mm)

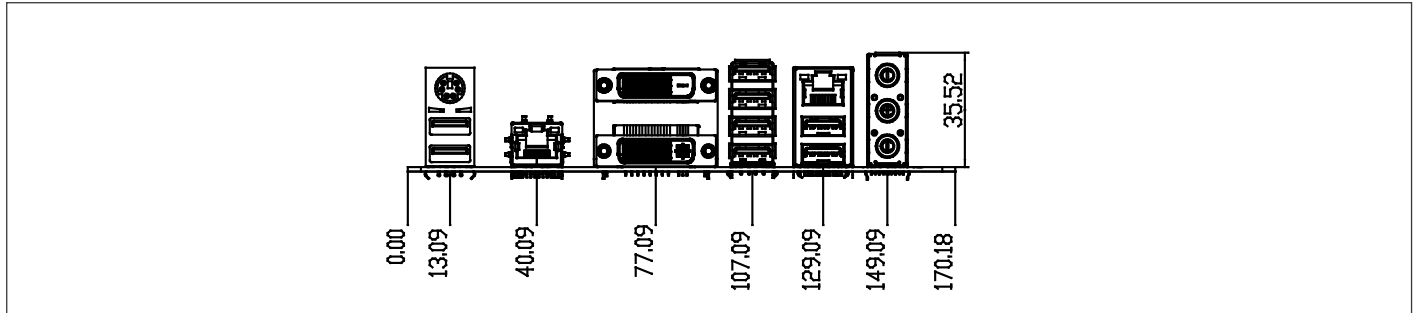
EMB-Q77A

Block Diagram



Dimension

Unit: mm



Order Information

Part number	CPU	RAM	Fan/Fanless	Display	Storage	LVDS	LAN	USB	RS-232	RS-232/422/485	Expansion Slot	Power	TPM	Temp.
EMB-Q77A-A10	Socket	DIMM x 2	Fan	DVI-I, DVI-D	SATA3 x 2, SATA2 x 2	—	GbE x 2	USB 3.0 x 4, USB 2.0 x 8	1	1	PCI-E[x16] x 1, Mini-Card x 1	ATX	—	32°F ~ 140°F (0°C ~ 60°C)