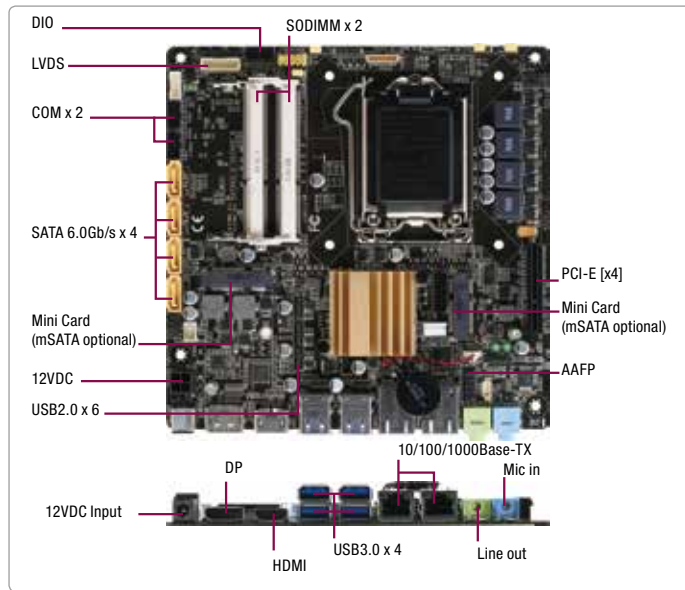


EMB-Q87A

Thin Mini-ITX Embedded Motherboard with Intel® 4th Generation Core™ i Series Processor, 12~24V Wide Power Input Range



Features

- LGA 1150 Socket For Intel® 4th Generation Core™ i Series 22nm Processor
- Intel® Q87
- DDR3 1333/1600MHz SODIMM x 2, Up to 16GB
- Three independent Display: LVDS, VGA, HDMI, DP
- SATA 6.0Gb/s x 4
- USB 3.0 x 4, USB 2.0 x 6
- PCI-E2.0[x4] x 1, Full-size Mini Card with Optional mSATA x 1, Half-size Mini Card x 1
- DC 12~24V



Specifications

System	
Form Factor	Thin Mini-ITX
Processor	LGA 1150 socket for Intel® 4th generation Core™ i series 22nm Processor, Max. 65W TDP
Memory	DDR3 1333/1600 MHz SODIMM x 2, up to 16GB, Non-ECC (flat type)
Chipset	Intel® Q87
I/O Chipset	NCT6791D
Ethernet	Intel® PHY I217LM (supports vPro) / Intel® I210AT, Gigabit Ethernet x 2
Audio	Realtek® ALC887
BIOS	128Mb Flash ROM, AMI BIOS
Wake On LAN / PXE	Yes (WOL / PXE)
Watchdog Timer	1~255 steps programmable
TPM	Infineon SLB9655
H/W Monitor	Temperature Monitor on CPU/Chassis, Voltage Monitor on Vcore 5V/12V, Fan Monitor on CPU/Chassis
Expansion Slots	PCI-E2.0[x4] x 1, Full/ Half size Mini Card (mSATA 6.0Gb/s optional) x 1, Half size Mini Card (mSATA 6.0Gb/s optional) x 1
Battery	Lithium battery
Power Requirement	12~24VDC
Power Consumption	—
Board Size	6.7" x 6.7" (170mm x 170mm), Half-height (25.54mm) I/O shield
Gross Weight	1.1 lb (0.5 Kg)
Operating Temperature	32°F ~ 140°F (0°C ~ 60°C)
Operating Humidity	0%~90%RH, non-condensing
Smart Fan Control	CPU Fan / Chassis Fan
Power State	S3, S4, S5
Power Requirement	12~24V wide-range voltage input backpanel DC jack (5.5/2.5mm) 2-pin internal power connector x 2 Note: Please don't use Adjustable Power Supply
Power Compliance	Compliant with EuP/ErP
Certificate	CE & FCC
Display	
Graphics Engine	Intel® Graphics Media Accelerator
Display	LVDS x 1, HDMI x 1, DP x 1, VGA x 1
VGA	Up to 1920 x 1200 @60 Hz
DVI	—
HDMI	Up to 3840 x 2160 @60 Hz, with Digital Audio
LVDS	Up to 1920 x 1200 @ 60 Hz, Dual Channel 18/24 bit
eDP	—
DP	—
Backlight Control	Voltage / PWM

I/O	
Storage	SATA 6Gb/s x 4 & 4-pin SATA power
USB	USB 3.0 x 4 (Rear I/O), USB 2.0 x 6 (on mid board)
Audio I/O	Hddadphone/mic headset analog audio port, internal speakers and front panel headphones/ mic headers
LAN I/O	RJ-45 x 2
Serial Port	RS-232 x 1 (on mid board)
Parallel Port	—
PS/2 Port	Keyboard / Mouse with PS/2 for pin header x 1
DIO	8-bit Programmable Digital I/O (In/Out programmable)
FAN	CPU Fan connector x 1 (4-pin) Chassis Fan connector x 1 (4-pin)

Packing List

- SATA Cable
- SATA Power Cable
- I/O Shield
- Product CD
- EMB-Q87A

EMB-Q87A

Dimension

Unit: mm

Launching in Q1

Order Information

Part Number	CPU	RAM	Fan/Fanless	Display	Storage	LVDS	LAN	USB	RS-232	RS-232/422/485	Expansion Slot	Power	Temp.
EMB-Q87A-A10	Socket	SODIMM	FAN	VGA/HDMI/DP/ LVDS	SATA3 x 4 Full size Mini Card (mSATA Optional) Half size Mini Card (mSATA Optional)	Daul Channel 18/24 bit	GbE x 2	USB 3.0 x 4, USB 2.0 x 6	1	1	PCI-E [x4], Full size mini card x 1, Half size mini card x 1	12-24VDC	0-60°C

Optional Accessories

- **Power Adapter**
- **1759200172**
CPU Cooler (2-Ball, Screw with Retention Plate)
- **175921156B**
CPU Cooler (2-Ball, Push-pin Type)
- **1701160201**
VGA Cable (200MM, p=2.00mm)
- **1709100201**
USB 2.0 Cable (10P, 220MM, p=2.00mm)
- **1701100206**
COM Cable (220MM, p=2.00mm)