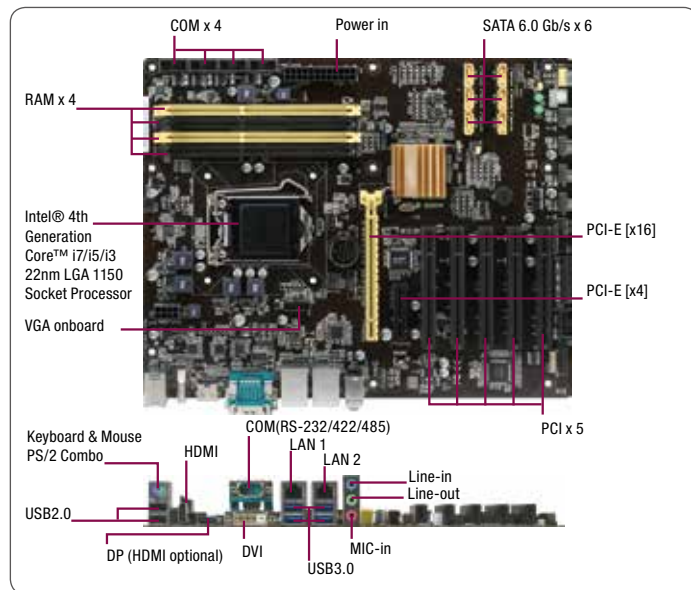


IMBA-Q87A

ATX Industrial Motherboard with Intel® 4th Generation LGA1150 Processor, SATA3 x 6, PCI x 5, Multiple Display Ports, Supports iAMT 9.0



Features

- Intel® 4th Generation Core™ i7/i5/i3 22nm LGA 1150 Socket Processor
- Three/Dual Independent Display: VGA, DVI-D, HDMI, DP (HDMI Optional)
- Dual Gigabit Ethernet, LAN1 Support AMT 9.0
- SATA 6.0 Gb/s x 6, USB 3.0 x 4, USB 2.0 x 10
- Rich Expansion Slot: PCI-E 3.0/2.0 [x16] x 1, PCI-E [x4] x 1, PCI x 5
- TPM Supported

Specifications

System	
Form Factor	ATX
Processor	Intel® 4th Generation Core™ i7/i5/i3 22nm LGA 1150 socket processor
System Memory	240-pin DDR3 1600/1333 MHz DIMM x 4, up to 32 GB, non-ECC, un-buffered memory, Dual channel memory architecture
Chipset	Intel® Q87 Express Chipset
I/O Chipset	Nuvoton NCT6791D Fintek F81216HD
Ethernet	LAN 1: Intel® PHY I217LM Giga LAN x 1 (support AMT 9.0) LAN 2: Intel® I210AT Giga LAN x 1, (RJ-45 x 2)
BIOS	64M bit Flash ROM x 2, AMI BIOS
Wake On LAN / PXE	Yes (WOL / PXE)
Watchdog Timer	1~255 step by software program
TPM	Yes, TPM 1.2 header x 1
H/W Monitor	Temperature Monitor on CPU/Chassis Voltage Monitor on Vcore/5V/12V Fan Monitor on CPU/Chassis
Expansion Interface	PCI-E 3.0/2.0 [x16] Slot x 1, PCI-E 2.0 [x4] Slot x 1, PCI x5
Battery	Lithium battery
Power Requirement	24-pin ATX connector x 1 8-pin(2x4) ATX 12V Power connector x 1 CPU Fan x 1/ Chassis Fan x 2
Power Consumption	Intel® Core™ i7-4770K Processor, DDR3 1600 8 GB x 4; 7.85A@12V, 0.61A@5V, 2.4A@3.3V
Board Size	12" x 9.6" (305mm x 244mm)
Gross Weight	1.76 lb (0.8 kg)
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
MTBF	86,000
Display	
Graphic Engine	Intel® Graphics Media Accelerator
Resolution	Up to 1920 x 1200 @60 Hz for VGA Up to 1920 x 1200 @60 Hz for DVI Up to 4960 x 2160 @24 Hz for HDMI Up to 2560 x 1440 @60 Hz for DP
Output Interface	VGA x 1, DVI-D x 1, Display Port x 1, HDMI x 1 VGA+DVI, VGA+HDMI, VGA+DP, DVI+HDMI, DVI+DP, HDMI+DP, VGA+DVI+HDMI, VGA+DVI+DP, HDMI+DP+VGA VGA x 1, DVI-D x 1, HDMI x 2 VGA+DVI, VGA+HDMI1, VGA+HDMI2, DVI+HDMI1, DVI+HDMI2, HDMI1+HDMI2, VGA+HDMI1+HDMI2, VGA+HDMI1+DVI, VGA+HDMI2+DVI



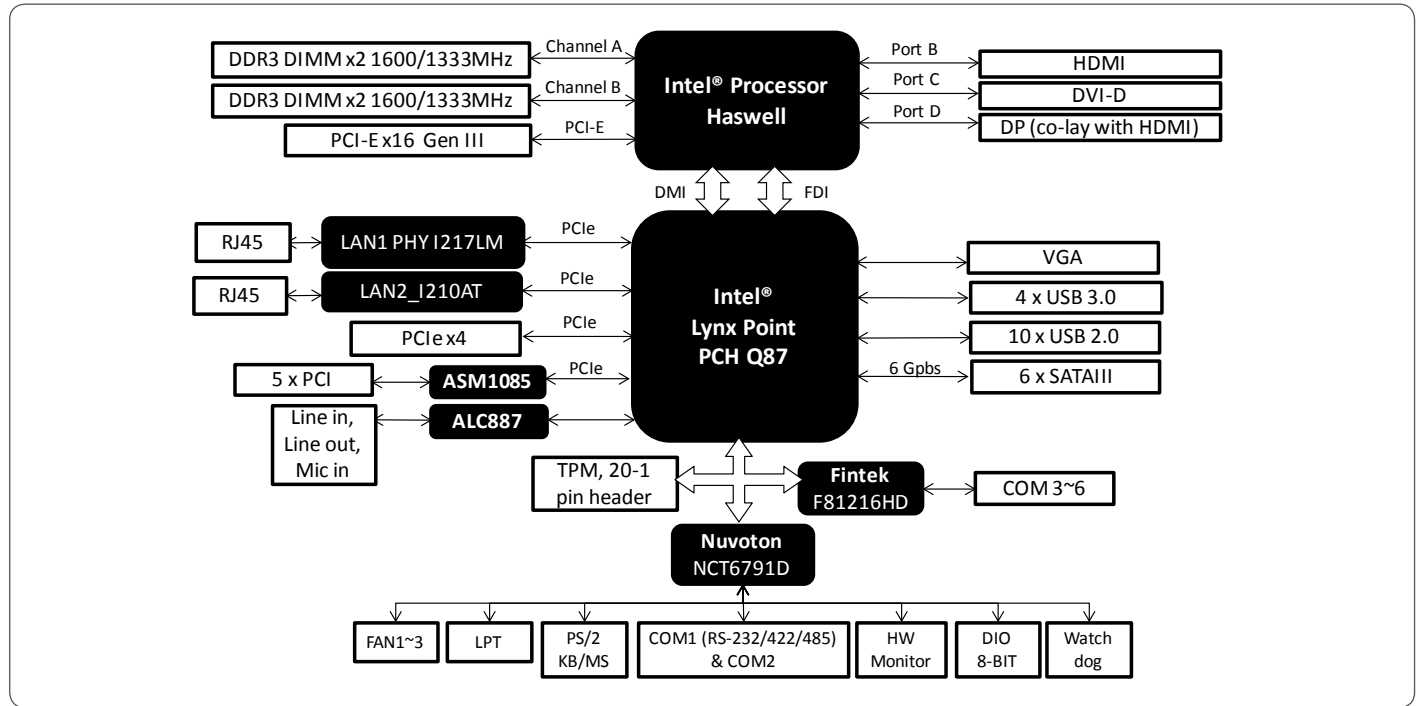
I/O	
Storage	SATA 3 (6.0 Gb/s) ports x 6 Supports RAID 0/1/5/10
Serial Port	RS-232/422/485 x 1 (supports 5/12V on RI) on back panel RS-232 x 5
Parallel Port	Yes, SPP/EPP/ECP Mode
USB	USB 3.0 ports x 4 (at rear I/O) USB 2.0 ports x 10 (8 ports at mid-board p=2.54mm, 2 ports at rear I/O)
DI/O	8 bit Digital I/O x 1 (In/Out programmable)
PS/2 Port	PS/2 Combo Connector x 1
Audio	Realtek ALC887, 6 Channel Line-in, Mic-in, Line-out

Packing List

- SATA 6G Cable (7P, 180; 90, 500MM) 2 in 1
- I/O Shield
- Product DVD
- IMBA-Q87A
- 1701100260
COM Cable (4P, 260mm, P=2.54mm)

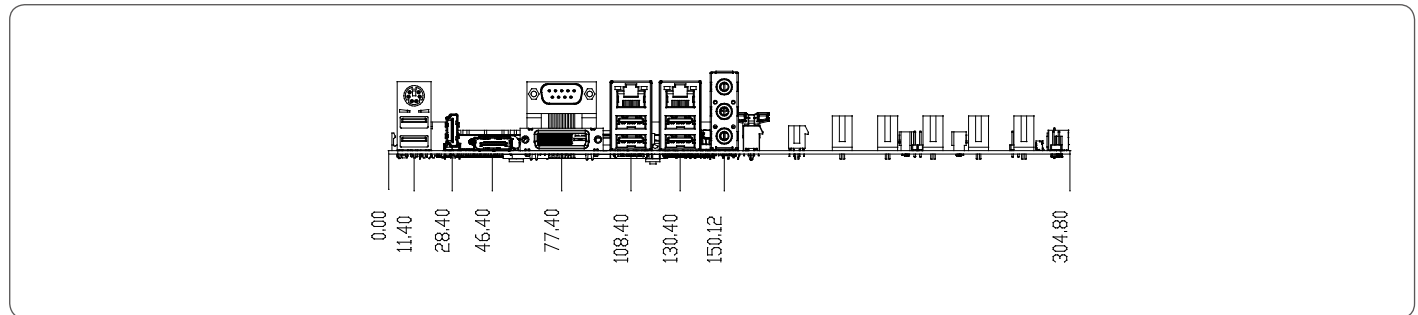
IMBA-Q87A

Block Diagram



Dimension

Unit: mm



Ordering Information

PN	CPU	RAM	Fan/Fanless	Display	Storage	LVDS	LAN	USB	RS-232	RS-232/422/485	Expansion Slot	Power	TPM	Temp.
IMBA-Q87A-A10-DH	Haswell 1150 Socket Type	240-pin DIMM x 4	Fan	VGA, DVI, HDMI, DP	SATA3 x 6	—	IntelGbE x 2	USB 3.0 x 4 USB 2.0 x 10	5	1	PCI-Express [x16] x 1 PCI-Express [x4] x 1 PCI x5	ATX	20-1 Pin Header	0°C ~ 60°C
IMBA-Q87A-A10-HH	Haswell 1150 Socket Type	240-pin DIMM x 4	Fan	VGA, DVI, HDMI x 2	SATA3 x 6	—	IntelGbE x 2	USB 3.0 x 4 USB 2.0 x 10	5	1	PCI-Express [x16] x 1 PCI-Express [x4] x 1 PCI x5	ATX	20-1 Pin Header	0°C ~ 60°C

Optional Accessories

- **1709100330**
USB 2.0 cable (9P, 330MM, p=2.54mm, w/bracket)
- **170910020K**
USB 2.0 cable (9P, 200MM, p=2.54mm, w/o bracket)
- **1701260305**
LPT Cable (25P, 270MM)
- **1759200172**
CPU Cooler (2-Ball, Screw with Retention Plate)
- **175921156B**
CPU Cooler (2-Ball, Push-pin Type)
- **1701160201**
VGA Cable (200MM, p=2.00mm)
- **1700060192**
PS/2 Combo Cable, 6P, 190mm
- **TPM Module**