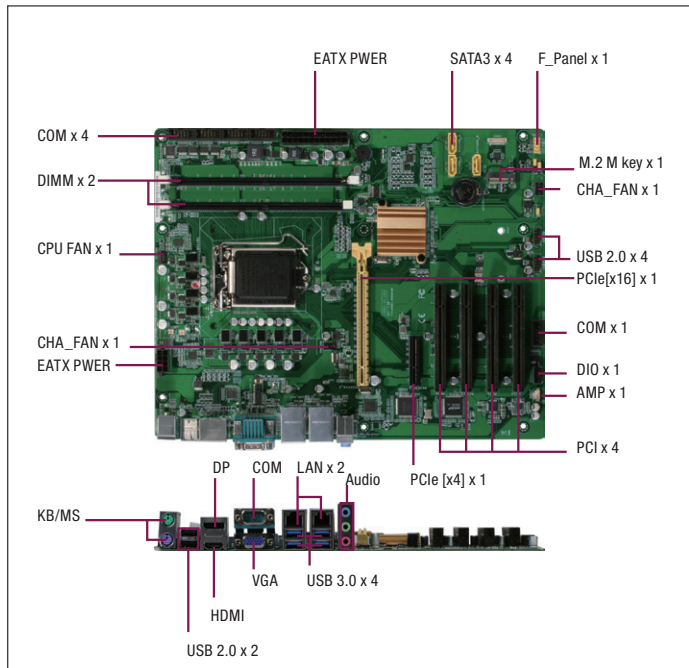


## ATX-Mainboard



## Features

- 7th/6th Generation Intel® Core™ LGA1151 Processor
- DDR4 DRAM Support, 2400 MHz, Max. 32GB
- Two Independent Display: HDMI x 1, DP x 1, VGA x 1
- Dual Intel® Gigabit Ethernet
- M.2 Slot (M key) x 1
- USB 3.0 Port x 4, USB 2.0 Port x 6



### Rear Panel I/O Ports

USB	USB 3.0 x 4, USB 2.0 x 2
Display I/O	HDMI x 1, DP x 1, VGA x 1
Audio I/O	Line-in, Mic-in, Line-out
LAN I/O	RJ-45 x 2
Serial Port	DB-9 COM x 1 (supports RS-232/422/485)
PS/2 Port	Stack Port (Keyboard & Mouse) x 1
Others	—

### Internal I/O Connectors

Storage	SATA 6.0Gb/s x 3 M.2 M key (22 x 80mm) x 1
USB	USB 2.0 x 4
Display I/O	—
Audio I/O	Speaker header x 1 (Line-out)
Serial Port	RS-232 header x 5
PS/2 Port	—
Parallel Port	—
DIO	8-bit x 1 (In/Out programmable)
FAN	4-pin CPU Fan x 1, 4-pin Chassis Fan x 2
Others	Front panel header x 1, Clear CMOS jumper x 1, BIOS flash header (2[x4]P p=1.27mm) x 1, Chassis Intrusion x 1, AT/ATX mode select jumper x 1

### OS

OS Support	Windows® 7 32/64-bit (not supported when a Kaby Lake processor is used), Windows® 8.1 64-bit (not supported when a Kaby Lake processor is used), Windows® 10 64-bit, Linux Fedora 64bit
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## Specifications

System	
Processor	7th/6th Generation Intel® Core™ i7/i5/i3/Pentium®/ Celeron® 14nm LGA1151 Socket Processor
Chipset	Intel® H110
Memory	288-pin DIMM x 2, max. 32GB, DDR4 2400/2133/1867, Dual channel
I/O Chipset	NCT6791D, F81216HD
Ethernet	LAN1: Intel® PHY I219V Giga LAN, LAN2: Intel® I211AT Giga LAN
Audio	Realtek® ALC887 (Colay with ALC886)
TPM	Nuvoton NPCT650ABBYX TPM2.0 (default : No)
Expansion Slots	PCIe [x16] x 1, PCIe [x4] (open edge) x 1, PCI x 4, M.2 M key (22 x 80mm) x 1
BIOS	128M bit Flash ROM x 1, 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 steps by software program
Smart Fan Control	CPU Fan x 1, Chassis Fan x 2
Wake On LAN/ PXE	Yes (WOL/PXE)
Power State	S3, S4, S5
Graphics	
Graphics Chipset	Intel® HD Graphics
Graphics Multi Display	VGA+HDMI, VGA+DP, HDMI+DP
VGA	Up to 1920 x 1200 @60Hz
DVI	—
HDMI	HDMI 1.4 up to 4096 x 2304 @24 Hz
Display Port	DP 1.2, up to 4096 x 2304 @60 Hz
LVDS	—
eDP	—
Backlight Control	—
Environment & Power & ME	
Battery	Lithium battery
Power Requirement	24-pin ATX connector x 1, 8-pin 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 Class A
Form Factor	ATX, 12" x 9.6" (305 mm x 244 mm)
Weight	1.76 lb (0.8 Kg)
MTBF (Hours)	244,580

## Packing List

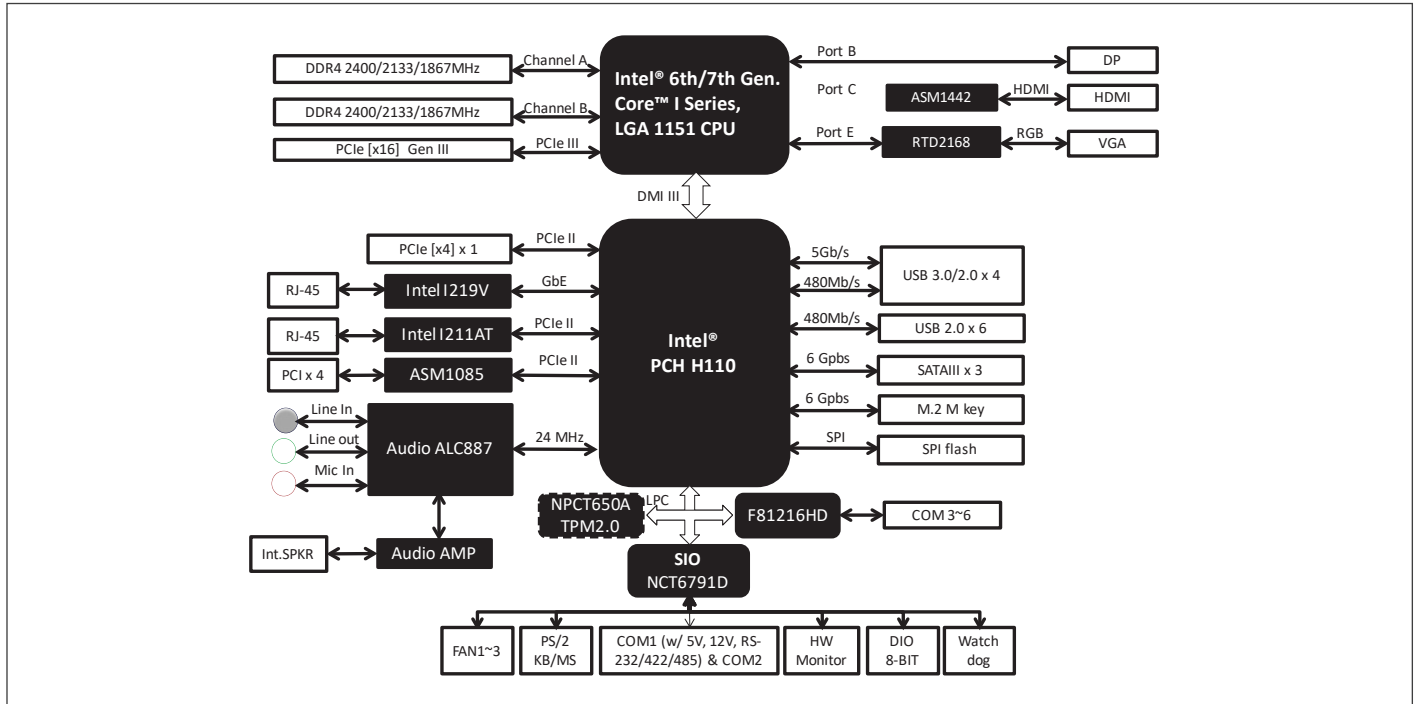
- 14001-0063010  
SATA 6G Cable (7P, 180; 90, 500mm 2 in1)
- 14001-00400100  
COM Port Cable (9P, 260mm, p=2.54mm w/bracket)
- I/O Shield
- Product CD
- IMBA-H110A

## Optional Accessories

- 1709100330  
USB 2.0 cable (9P, 330MM, p=2.54mm, w/bracket)
- 170910020K  
USB 2.0 cable (9P, 330MM, p=2.54mm, w/o bracket)
- 175921156B  
CPU Cooler (2-Ball, Push-pin Type)
- 1759200172  
CPU Cooler (2-Ball, Screw with Retention Plate)

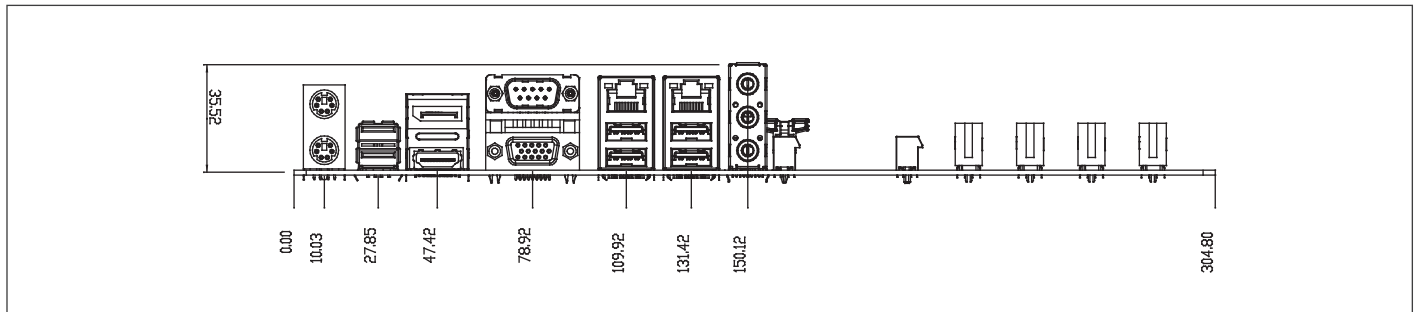
## ATX-Mainboard

### Block Diagram



### Dimension

Unit: mm



### Ordering Information

Part Number	CPU	RAM	Fan/Fanless	Display	Storage	LVDS	LAN	USB	RS-232	RS-232/422/485	Expansion Slot	Power	TPM	Temp.
IMBA-H110A-A10	LGA1151 socket	DDR4	Fan	HDMI x 1, DP x 1, VGA x 1	M.2 M key 2280 x 1 SATA3 x 3	—	GbE x 2	USB3.0 x 4, USB2.0 x 6	5	1	PCIe(x16) x 1, PCIe [x4] x 1, PCI x 4	ATX	TPM2.0	32°F ~ 140°F (0°C ~ 60°C)
IMBA-H110A-A10-NTP	LGA1151 socket	DDR4	Fan	HDMI x 1, DP x 1, VGA x 1	M.2 M key 2280 x 1 SATA3 x 3	—	GbE x 2	USB3.0 x 4, USB2.0 x 6	5	1	PCIe(x16) x 1, PCIe [x4] x 1, PCI x 4	ATX	—	32°F ~ 140°F (0°C ~ 60°C)