

# IMB-198/IMB-199

## Mini-ITX Motherboard



### Spotlight Features

- BGA1356 for Intel® Core i7/i5 (Skylake-U) (IMB-198) / BGA1356 for Intel® Core i3 (Skylake-U) (IMB-199)
- Intel® Gen9 Intel® Graphics DX 11/12, OGL4.3/4.4
- Supports Dual Channel DDR4 2133MHz, 2 x SO-DIMM, up to 32GB system memory
- 1 x VGA, 1 x HDMI, 1 x Displayport, 1 x eDP
- 4 x USB 3.0, 4 x USB 2.0, 2 x SATA3
- 1 x Mini-PCIe, 1 x mSATA
- 1 x M.2(Key E)
- Gigabit LAN : 1 x Intel LAN, 1 x Realtek LAN
- 1 x TPM Header
- +12V or +19V~+24V DC-In (DC Jack / 4-pin ATX PWR Con)

### Specifications

Processor System	IMB-198	IMB-199
Dimension	Mini-ITX (6.7-in x 6.7-in)	
CPU	BGA1356 for Intel® Core i7/i5 (Skylake-U)	BGA1356 for Intel® Core i3 (Skylake-U)
Core Number	(By CPU, Max 4)	
Max Speed	(By CPU)	
L2 Cache	(By CPU)	
Chipset	N/A	
BIOS	UEFI	

Expansion Slot	
PCIe	0
Mini PCIe	1 (half/full size, supports PCIe x1 and USB device)
M.2	1 x M.2 Slot (Key E), supports type 2230 for WiFi + BT Module
mSATA	1 (full size, shared SATA and USB device)

Memory	
Technology	Dual Channel DDR4 2133MHz
Max.	32GB
Socket	2 x SO-DIMM

Graphics	
Controller	Intel® Gen9 Graphics DX 11/12, OGL4.3/4.4
VRAM	Shared Memory
VGA	Supports max resolution up to 1920 x 1200
LVDS	Supports max resolution up to 1920 x 1200@60Hz
eDP	Supports max resolution up to 4096 x 2160@60Hz
HDMI	Supports max resolution up to 4096 x 2160@24Hz
DVI	No
DisplayPort	Supports max resolution up to 4096 x 2160@60Hz
Multi Display	Yes (Triple Display)

Ethernet		
Interface	10/100/1000 Mbps	
Controller	1 x Intel® I219LM(vPro) 1 x Realtek RTL8111G	1 x Intel® I219V 1 x Realtek RTL8111G
Connector	2 x RJ45	

SATA	
Max Data Transfer Rate	SATA3 (6.0Gb/s)

Rear I/O	IMB-198	IMB-199
VGA	0	
DVI	0	
HDMI	1	
DisplayPort	1	
Ethernet	2	
USB	4 x USB 3.0	
Audio	2 (Mic-in, Line-out)	
Serial	0	
PS/2	0	

Internal Connector	
USB	4 x USB 2.0 (2 x 2.54 pitch header)
LVDS/inverter	1/1
eDP	1
VGA	1
Serial	6 x COM (COM1 and COM2 with RS-232/422/485)
SATA	2
mPCIe	1
Parallel	1 (shared with GPIO)
mSATA	1
IrDA	0
GPIO	8 x GPI + 8 x GPO
SATA PWR Output Con	1
Speaker Header	1

Watchdog Timer	
Output	From Super I/O to drag RESETCON#
Interval	256 segments, 0,1,2...255sec/min

Power Requirements	
Input PWR	+12V or +19V~+24V DC-In (DC Jack / 4-pin ATX PWR Con)
Power On	AT/ATX Supported AT : Directly PWR on as power input ready ATX : Press button to PWR on after power input ready

Environment	
Operating Temperature	0°C – 60°C