



# IMB-198/ IMB-199

Mini-ITX Motherboard



D Sku

V Sku

## KEY FEATURES

- Intel® 7<sup>th</sup>/ 6<sup>th</sup> Gen (Kabylake-U/Skylake-U) Core™ MCP Processors
- 2 x 260-pin SO-DIMM up to 32GB DDR4 2133 MHz (16GB per DIMM)
- 4 x USB 3.0, 4 x USB 2.0, 1 x mini-PCIe, 1 x M.2 Key E, 1 x mSATA, 6 x COM, 2 x SATA3
- 1 x Intel 1 Gigabit LAN, 1 x Realtek 1 Gigabit LAN
- Supports triple display, 1 x HDMI 2.0, 1x VGA, 1 x LVDS (For V sku)
- Supports triple display, 1 x HDMI 2.0, 1 x DP 1.2, 1 x eDP (For D sku)
- TPM Header
- Supports Intel® vPro, AMT, RAID 0/1
- 12V/ 19V~24V DC-In

## SPECIFICATIONS

### Form Factor

Dimensions	Mini-ITX (6.7-in x 6.7-in)
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### Processor System

CPU	Intel® 7 <sup>th</sup> / 6 <sup>th</sup> Gen (Kabylake-S/Skylake-S) Core™ MCP Processors -IMB-199V (i3-6100U, DC, 2.30 GHz, 15W) -IMB-198M (i5-6300U, DC, 2.40 GHz, 15W) -IMB-198P (i7-6600U, DC, 2.40 GHz, 15W)
Chipset	MCP
Socket	N/A
BIOS	AMI SPI 128 Mbit

### Memory

Technology	Dual Channel DDR4 2133 MHz
Capacity	32 GB (16 GB per DIMM)
Socket	2 x 260-pin SO-DIMM

### Graphics

Controller	Intel® Gen9 Graphics DX 11/12
HDMI	HDMI 2.0 Max resolution up to 4096x2160@60Hz
DisplayPort	DisplayPort 1.2, DP++ Max resolution up to 4096x2304@60Hz
VGA	Max resolution up to 1920x1200@60Hz
LVDS	Dual channel 24 bit up to 1920x1200@60Hz
eDP	eDP 1.3 Max resolution up to 4096x2304@60Hz
DVI	N/A
MultiDisplay	Triple Display

### Expansion Slot

PCIe	N/A
PCI	N/A
mini-PCIe	1 x Full/Half size with PCIe x1 and USB 2.0
M.2	1 x M.2 (Key E, 2230) with PCIe x1 and USB 2.0 for Wireless
SIM Socket	N/A

### Audio

Interface	Realtek ALC887, High Definition Audio. Line-out, Mic-in
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### Ethernet

Controller/ Speed	IMB-199V LAN1: 1 x Intel I219V with 10/100/1000 Mbps LAN2: 1 x Realtek RTL8111G with 10/100/1000 Mbps IMB-198M/IMB-198P LAN1: 1 x Intel I219LM with 10/100/1000 Mbps, supports AMT/vPro LAN2: 1 x Realtek RTL8111G with 10/100/1000 Mbps
Connector	2 x RJ-45

### Rear I/O

HDMI	1 x HDMI 2.0
DisplayPort	1 x DP 1.2 (Only for D sku)
VGA	N/A
DVI	N/A
Ethernet	2 x 1 Gigabit LAN
USB	4 x USB 3.0
Audio	2 (Mic-in, Line-out)
COM	N/A
PS2	N/A

### Internal Connector

USB	4 x USB 2.0 (2 x 2.54 pitch header)
COM	COM1, 2(RS-232/422/485) COM3, 4, 5, 6(RS-232)
Parallel	1 (shared with GPIO)
GPIO	8 x GPI, 8 x GPO (shared with LPT header)
TPM	TPM Header
LVDS	1 (Only for V sku)
eDP	1 (Only for D sku)
VGA	1 x Header (Only for V sku)
SATA PWR Output	1
Speaker Header	1

### Storage

M.2	N/A
mSATA	1 x full size with SATA3
SATA	2 x SATA3 (6Gb/s)
RAID	Intel® SATA RAID 0/1
eMMC	N/A

### Watchdog Timer

Output	From Super I/O to drag RESETCON#
Interval	256 Segments, 0, 1, 2, ...255sec

### Power Requirements

Input PWR	12V or 19~24V DC-In with 4-pin plug PWR cable or DC Jack
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 Temp	0°C ~ 60°C
Storage Temp	-40° C ~ 85° C
Operating Humidity	5% ~ 90%
Storage Humidity	5% ~ 90%