



Preliminary

# IMB-1216

Mini-ITX Motherboard



## Key Features

- Intel® 8<sup>th</sup> Gen Whiskey Lake-U Core™ MCP Processors
  - IMB-1216V (i3-8145UE)
  - IMB-1216M (i5-8365UE)
  - IMB-1216P (i7-8665UE)
- Supports Dual Channel DDR4 SO-DIMM 2400MHz, up to 32GB
- 1 x DisplayPort or VGA, 1 x HDMI, 1 x LVDS or eDP
- 5 x USB 3.1, 3 x USB 2.0, 2 x SATA3, 6 x COM
- 1 x M.2 Key E, 1 x M.2 Key B, 1 x M.2 Key M
- 1 x Intel LAN, 1 x Realtek LAN
- 1 x TPM Header (IMB-1216V), 1 x TPM 2.0 IC onboard (IMB-1216M/P)
- +12V~28V DC-in (DC Jack / 4-pin ATX PWR Con) (Option: +12V)

## Specifications

### Processor System

Dimensions	Mini-ITX (6.7-in x 6.7-in)
CPU	Intel® 8th Gen (Whiskey lake-U) Core™ MCP Processors IMB-1216V (i3-8145UE, DC, 2.2GHz, 15 W) IMB-1216M (i5-8365UE, QC, 1.6GHz, 15 W) IMB-1216P (i7-8665UE, QC, 1.7GHz, 15 W)
Chipset	SoC

### Expansion Slot

PCIe	N/A
mini-PCIe	N/A
M.2	1 x M.2 (Key E, 2230) with PCIe x1, CNVI and USB2.0 for Wireless 1 x M.2 (Key M, 2242/2260/2280) with PCIe x4 or SATA3 for SSD 1 x M.2 (Key B, 3042) with USB 3.0 and PCIe x1 for 4G

### Memory

Technology	Dual Channel DDR4 2400 MHz
Max	32 GB
Socket	2 x SO-DIMM

### Graphics

VGA	Supports max resolution up to 1920 x 1200
DVI	N/A
LVDS	Supports max resolution up to 1920 x 1200@60Hz
eDP	N/A
HDMI	Max resolution up to 4096 x 2160@60Hz
DisplayPort	Max resolution up to 3840 x 2160@60Hz
Multi Display	Triple Display

### Ethernet

Interface	10/100/1000 Mbps
Controller	IMB-1216V: 1 x Intel I219V, 1 x Realtek RTL8111G IMB-1216M/P: 1 x Intel I219LM (vPro), 1 x Realtek RTL8111G

### Environment

Operating Temperature	0°C – 60°C
Storage Temperature	-40°C – 85°C

### Rear I/O

VGA	N/A
DVI	N/A
HDMI	1
DisplayPort	1 x DP1.2++
Ethernet	2
USB	4 x USB 3.1
Serial	N/A
Audio Jack	2 (Mic-in, Line-out)
PS/2	N/A

### Internal Connector

USB	3 x USB 2.0, 1 x USB 3.1 Type-A
LVDS	1
eDP	1 (shared with LVDS)
VGA	1 x Header (shared with DP)
Serial	2 x COM (RS232/422/485), 4 x COM (RS-232)
SATA	2 x SATA3 (6.0Gb/s)
Parallel	1 (shared with GPIO)
GPIO	8 x GPI, 8 x GPO
SATA PWR Output Con	1
Speaker Header	1
TPM	IMB-1216V: 1 x Header IMB-1216M/P: 1 x TPM 2.0 IC onboard
SIM	1 x Socket connected to M.2 Key B

### Watchdog Timer

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

### Power Requirements

Input PWR	+12V~28V DC-in (DC Jack / 4-pin ATX PWR Con) (Option: +12V)
Power On	AT/ATX Supported AT : Directly PWR on as power input ready ATX : Press button to PWR on after power input ready"