

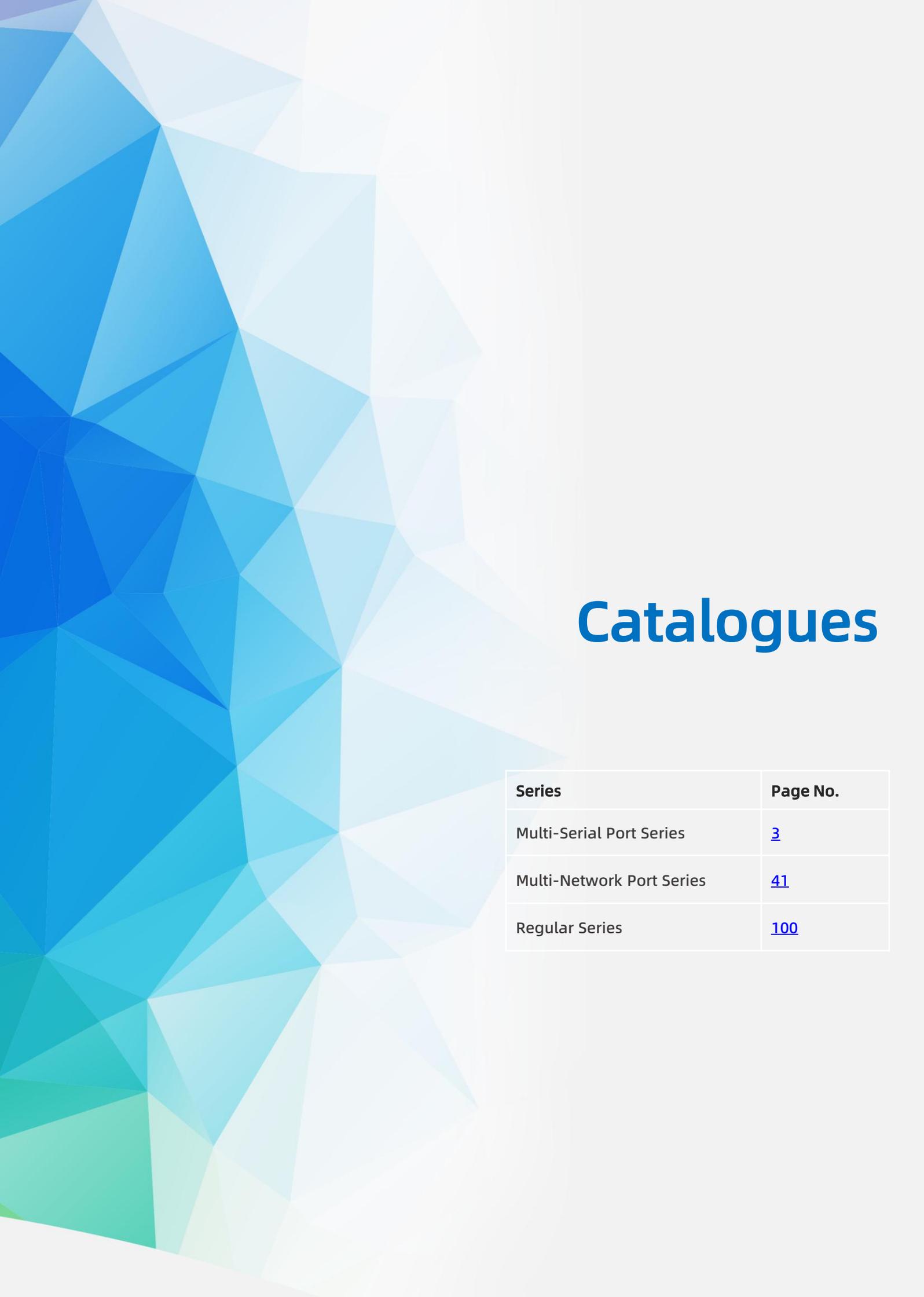
QOTOM TECHNOLOGY LIMITED

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2025

# Motherboard Catalogues

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# Catalogues

Series	Page No.
Multi-Serial Port Series	<a href="#">3</a>
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Regular Series	<a href="#">100</a>

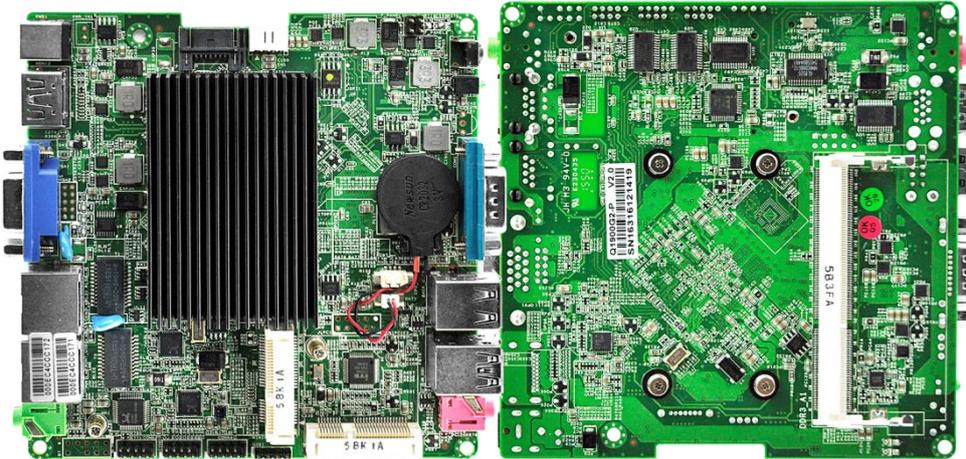
# Multi-Serial Port Series

NO.	New Series	Model	Code Name	Page No.	Default CPU	LAN	RS-232	5G	LVDS EDP	Remark
1	MB2J243-0100	Q1900G2-P	Bay Trail	<a href="#">4</a>	J1900	2	4			
2	MB3J213-0100	Q1900G2-X		<a href="#">6</a>	J1900	2	7			
3	MB2J249-0300	Q3710G2-D	Braswell	<a href="#">8</a>	J3710	2	4			
4	MB2J240-0500	MB2J240-0521	Gemini Lake Gemini Lake-R	<a href="#">10</a>	J4105	2	4			
5	<b>MB2J260-0700</b>	<b>MB2J260-0722</b>	<b>Jasper Lake</b>	<a href="#">12</a>	<b>N5105</b>	<b>2</b>	<b>6</b>	<b>Yes</b>		<b>New</b>
6	MB3J263-0800	MB3J263-0821	Elkhart Lake	<a href="#">14</a>	J6412	2	6	Yes		
7	<b>MB3J267-0900</b>	<b>MB3J267-0922</b>	Alder Lake-N Twin Lake-N	<a href="#">16</a>	<b>N100</b>	<b>2</b>	<b>6</b>	<b>Yes</b>		<b>New</b>
8	MB2U246-0400	Q5005UG2-H	Haswell Broadwell	<a href="#">18</a>	5005U	2	4		LVDS	
9	MB2U246-0500	MB2U246-0531		<a href="#">20</a>	5005U	2	4		LVDS	
10	MB3U267-0400	Q5005UG2-P		<a href="#">22</a>	5005U	2	6			
11	MB3U267-0500	MB3U267-0531		<a href="#">24</a>	5005U	2	6			
12	MB2U247-0600	Q7100UG2-P	Skylake Kaby Lake	<a href="#">26</a>	7100U	2	4			
13	MB4U267-0600	MB4U267-0651	Skylake Kaby Lake Kaby Lake-R	<a href="#">28</a>	6200U	2	6			
14	MB4U260-0900	MB4U260-0912	Whiskey Lake Coffee Lake Comet Lake	<a href="#">30</a>	4305U	2	6			
15	MB2U240-0900	MB2U240-0912		<a href="#">32</a>	4305U	2	4	Yes		
16	MB4U26B-1200	MB4U26B-1231	Alder Lake-P Raptor Lake-P	<a href="#">34</a>	1215U	2	4	Yes		New
17	MB5S247-0700	MB5S247-0700	Skylake-S Kaby Lake-S Coffee Lake-S	<a href="#">37</a>	H110	2	4			
18	MB7S26B-1200	MB7S26B-1200	Alder Lake S Raptor Lake S	<a href="#">39</a>	H610	2	6	Yes	EDP	New

# MB2J243-0100 Series

## Main Features

- Intel Bay Trail Processor
- 1 × VGA, 1 × HDMI, 4 × RS-232
- 1 × USB 3.0, 3 × USB 2.0, 1 × SATA 3.0
- 1 × Mini-PCIe, 1 × mSATA
- 2 × Realtek Gigabit LAN



## Specifications

### Processor System

Dimension	120 × 120mm
CPU	Intel Bay Trail Processor
Core Number	By CPU
Max. Speed	By CPU
L2 Cache	By CPU
Chipset	By CPU
BIOS	UEFI

### Expansion Slot

Mini-PCIe	1 × Half-length Mini PCIe for Wi-Fi
mSATA	1 × Full-length Mini PCIe for SSD

### Memory

Technology	DDR3L 1333/1600MHz SDRAM
Max.	8GB
Socket	1 × SO-DIMM

### Graphics

Controller	By CPU
VRAM	Shared Memory
VGA	1
HDMI	1
Multi Display	Yes

### Ethernet

Interface	10/100/1000Mbps
Controller	2 × Realtek Gigabit LAN
Connector	2 × RJ-45

### Audio

Controller	Realtek HD Audio
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### SATA

Max. Data Transfer Rate	SATA 3.0 (6.0Gb/S)
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### Accessories

Accessories	Cable for HDD, Cable for Serial Port
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### Rear I/O

DC-IN	1
VGA	1
HDMI	1
Ethernet	2
Audio	1 (Line-out)

### Front I/O

Power Button	1
LED	1 × Power LED
Serial Port	1 × RS-232
USB	1 × USB 3.0, 3 × USB 2.0
Audio	1 (Mic-in)

### Internal Connector

VGA	1, 2 × 5Pin, Pitch 2.0mm
Serial Port	3, 2 × 5Pin, Pitch 2.0mm
SATA	1, SATA 3.0 (6.0Gb/S)
SATA PWR Connector	1, 1 × 4Pin, Pitch PH2.0mm
AutoStart Jumper	No
Clear CMOS Jumper	0
GPIO Header	0
USB Header	1, 1 × 4Pin, Pitch 2.54mm
Front Panel Header	1, 2 × 2Pin, Pitch 2.54mm
Speakers Header	1, 2 × 5Pin, Pitch 2.54mm
Power Header	1, 1 × 2Pin, Pitch 2.5mm (Option)

### Power Requirements

Input PWR	12V DC in, 5.5mm/2.5mm
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### Environment

Operating Temperature	0-50 °C
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### OS Support

OS	Windows 7, Windows 10, Linux
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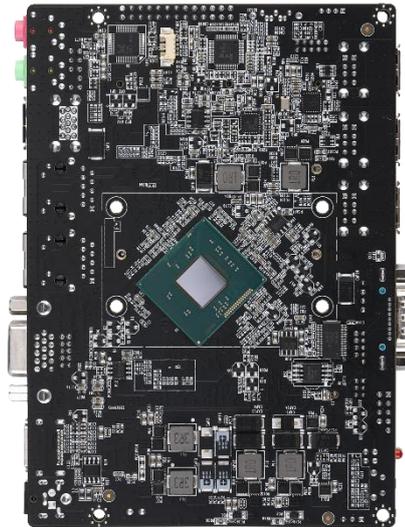
## Ordering and Specifications Information

Quick Order Model: Q1900G2-P

Ordering Code	Code Name	Processor Type	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Processor Graphics	TDP
Q1800G2-P (MB2J243-0111)	Bay trail	Celeron	J1800	2	2	2.41Ghz	2.58Ghz	1M	Intel HD Graphics	10W
Q1900G2-P (MB2J243-0121)	Bay trail	Celeron	J1900	4	4	2.00Ghz	2.42Ghz	2M	Intel HD Graphics	10W
MB2J243-0122	Bay trail	Celeron	N2920	4	4	1.86Ghz	2.00Ghz	2M	Intel HD Graphics	7.5W
MB2J243-0123	Bay trail	Celeron	N2930	4	4	1.83Ghz	2.16Ghz	2M	Intel HD Graphics	7.5W
MB2J243-0125 (MB2J243-0134)	Bay trail	Pentium	N3540	4	4	2.16Ghz	2.66Ghz	2M	Intel HD Graphics	7.5W

## Custom Options

Category	Description
USB 2.0	1



# MB3J213-0100 Series

## Main Features

- Intel Bay Trail Processor
- 1 × VGA, 1 × HDMI, 7 × RS-232
- 1 × USB 3.0, 7 × USB 2.0, 1 × SATA 3.0
- 1 × Mini-PCIe, 1 × mSATA
- 2 × Realtek Gigabit LAN

## Specifications

### Processor System

Dimension	148 × 104mm
CPU	Intel Bay Trail Processor
Core Number	By CPU
Max. Speed	By CPU
L2 Cache	By CPU
Chipset	By CPU
BIOS	UEFI

### Expansion Slot

Mini-PCIe	1 × Mini PCIe, Full-length Mini PCIe for 4G Half-length Mini PCIe for Wi-Fi by Default
mSATA	1 × Full-length Mini PCIe for SSD

### Memory

Technology	DDR3L 1333/1600MHz SDRAM
Max.	8GB
Socket	1 × SO-DIMM

### Graphics

Controller	By CPU
VRAM	Shared Memory
VGA	1
HDMI	1
Multi Display	Yes

### Ethernet

Interface	10/100/1000Mbps
Controller	2 × Realtek Gigabit LAN
Connector	2 × RJ-45

### Audio

Controller	Realtek HD Audio
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### SATA

Max. Data Transfer Rate	SATA 3.0 (6.0Gb/S)
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### Accessories

Accessories	Cable for HDD
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### Rear I/O

DC-IN	1
VGA	1
HDMI	1
Ethernet	2
USB	1 × USB 3.0, 1 × USB 2.0
Audio	2 (Line-out, Mic-in)

### Front I/O

Power Button	1
LED	1 × Power LED, 1 × HDD LED
Serial Port	1 × RS-232, Pin 9 supports 5V/12V
USB	6 × USB 2.0

### Internal Connector

VGA	1, 2 × 5Pin, Pitch 2.0mm
Serial Port	6, 2 × 13Pin, Pitch 2.54mm (Option)
Serial Port	1, 2 × 5Pin, Pitch 2.0mm
RS-485	0
SATA	1, SATA 3.0 (6.0Gb/S)
SATA PWR Connector	1, 1 × 4Pin, Pitch PH2.0mm
SIM Slot	1
AutoStart Jumper	Yes, 1 × 3Pin, Pitch 2.54mm
Clear CMOS Jumper	0
GPIO Header	1, 2 × 5Pin, Pitch 2.0mm
USB Header	1, 1 × 4Pin, Pitch 2.54mm
Front Panel Header	1, 2 × 5Pin, Pitch 2.54mm
Speakers Header	1, 2 × 5Pin, Pitch 2.54mm
Power Header	1, 1 × 2Pin, Pitch 5.5mm (Option)

### Power Requirements

Input PWR	12V DC in, 5.5mm/2.5mm
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### Environment

Operating Temperature	0-50 °C
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### OS Support

OS	Windows 7, Windows 10, Linux
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## Ordering and Specifications Information

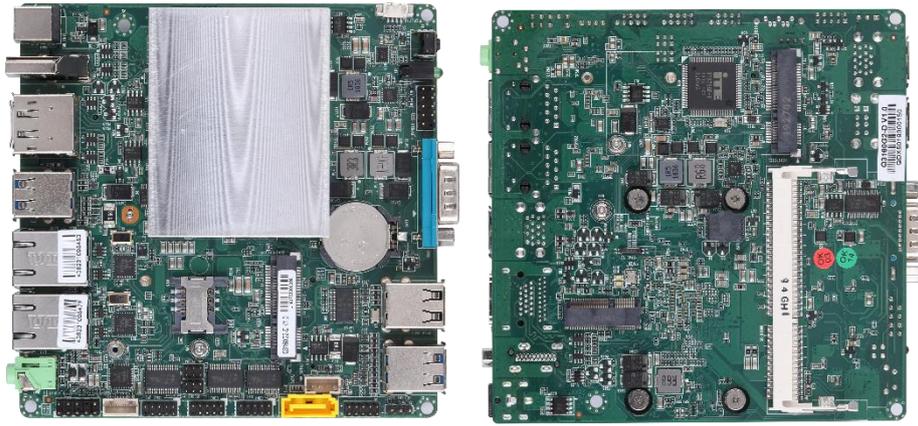
Quick Order Model: Q1900G2-X

Ordering Code	Code Name	Processor Type	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Processor Graphics	TDP
Q1800G2-X (MB3J213-0111)	Bay trail	Celeron	J1800	2	2	2.41Ghz	2.58Ghz	1M	Intel HD Graphics	10W
Q1900G2-X (MB3J213-0121)	Bay trail	Celeron	J1900	4	4	2.00Ghz	2.42Ghz	2M	Intel HD Graphics	10W
MB3J213-0122	Bay trail	Celeron	N2920	4	4	1.86Ghz	2.00Ghz	2M	Intel HD Graphics	7.5W
MB3J213-0123	Bay trail	Celeron	N2930	4	4	1.83Ghz	2.16Ghz	2M	Intel HD Graphics	7.5W
MB3J213-0125 (MB2J213-0134)	Bay trail	Pentium	N3540	4	4	2.16Ghz	2.66Ghz	2M	Intel HD Graphics	7.5W

# MB2J249-0300 Series

## Main Features

- Intel Braswell Processor
- 2 × HDMI, 1 × Display Port
- 4 × USB 3.0, 2 × USB 2.0
- 1 × M.2, 1 × mSATA
- 1 × Mini-PCIe, 1 × SATA 3.0
- 4 × RS-232 Serial Port
- 2 × Realtek Gigabit LAN



## Specifications

### Processor System

Dimension	120 × 120mm
CPU	Intel Braswell Processor
Core Number	By CPU
Max. Speed	By CPU
L2 Cache	By CPU
Chipset	By CPU
BIOS	UEFI

### Expansion Slot

M.2	1 × M.2 for Wi-Fi (E key, Type: 2230)
mSATA	1 × Full-length Mini PCIe for SSD
Mini-PCIe	1 × Mini PCIe, Half-length Mini PCIe for Wi-Fi by Default, Full-length Mini PCIe for 4G

### Memory

Technology	DDR3L 1333/1600MHz SDRAM
Max.	8GB
Socket	1 × SO-DIMM

### Graphics

Controller	By CPU
Display Port	1
HDMI	2
Multi Display	Yes

### Ethernet

Interface	10/100/1000Mbps
Controller	2 × Realtek Gigabit LAN
Connector	2 × RJ-45

### Audio

Controller	Realtek HD Audio
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### SATA

Max. Data Transfer Rate	SATA 3.0 (6.0Gb/S)
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### Accessories

Accessories	Cable for HDD, Cable for Serial Port
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### Rear I/O

DC-IN	1
HDMI	2
Display Port	1
Ethernet	2
USB	2 × USB 3.0
Audio	1 (Mic-in, Line-out)

### Front I/O

USB	2 × USB 3.0, 2 × USB 2.0
Serial Port	1 × RS-232
Power Button	1
LED	1 × Power LED, 1 × HDD LED

### Internal Connector

Serial Port	3, 2 × 5Pin, Pitch 2.0mm, COM3/4 Support 5V/12V
SATA	1, SATA 3.0 (6.0Gb/S)
SATA PWR Connector	1, 1 × 4Pin, Pitch PH2.0mm
SIM Slot	1
AutoStart Jumper	Yes, 1 × 3Pin, Pitch 2.54mm
Clear CMOS Jumper	No
GPIO Header	1, 2 × 5Pin, Pitch 2.0mm
Front Panel Header	1, 2 × 5Pin, Pitch 2.54mm
Speakers Header	1, 2 × 5Pin, Pitch 2.54mm 1, 1 × 4Pin, Pitch PH2.0mm
Power Header	1, 1 × 2Pin, Pitch 4.2mm (Option)

### Watchdog Timer

Output	From Super I/O to Drag RESETCON#
Interval	256 Segments, 0, 1, 2, 3, ..., 255 sec/min

### Power Requirement

Input PWR	12V DC in, 5.5mm/2.5mm
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### Environment

Operating Temperature	0-50 °C
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### OS Support

OS	Windows 7 x64, Windows 10, Linux
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## Ordering and Specifications Information

Quick Order Model: Q3710G2-D

Ordering Code	Code Name	Processor Type	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Processor Graphics	TDP
Q3060G2-D (MB2J249-0311)	Braswell	Celeron	N3060	2	2	1.6Ghz	2.48Ghz	2M	Intel HD Graphics	6W
Q3160G2-D (MB2J249-0321)	Braswell	Celeron	N3160	4	4	1.6Ghz	2.24Ghz	2M	Intel HD Graphics	6W
Q3710G2-D (MB2J249-0331)	Braswell	Pentium	J3710	4	4	1.6Ghz	2.64Ghz	2M	Intel HD Graphics	6.5W

# MB2J240-0500 Series

## Main Features

- Intel Gemini Lake Processor
- 1 × HDMI, 1 × Display Port, 1 × VGA (Header)
- 4 × USB 3.0, 2 × USB 2.0, 4 × RS-232
- 1 × M.2, 1 × mSATA, 1 × Mini PCIe
- 2 × Realtek Gigabit LAN



## Specifications

### Processor System

Dimension	120 × 120mm
CPU	Intel Gemini Lake Processor
Core Number	By CPU
Max. Speed	By CPU
L2 Cache	By CPU
Chipset	By CPU
BIOS	UEFI

### Expansion Slot

M.2	1 × M.2 for Wi-Fi (E key, Type: 2230)
Mini-PCIe	1 × Mini PCIe, Half-length Mini PCIe for Wi-Fi by Default, Full-length Mini PCIe for 4G
mSATA	1 × Full-length Mini PCIe for SSD

### Memory

Technology	DDR4 2133/2400MHz SDRAM <b>Only Supports a Single 1G Memory Chip</b>
Max.	16GB
Socket	1 × SO-DIMM

### Graphics

Controller	By CPU
VGA	1 (Header)
HDMI	1
Display Port	1
Multi Display	Yes

### Ethernet

Interface	10/100/1000Mbps
Controller	2 × Realtek Gigabit LAN
Connector	2 × RJ-45

### Audio

Controller	Realtek HD Audio
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### SATA

Max. Data Transfer Rate	SATA 3.0 (6.0Gb/S)
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### Accessories

Accessories	Cable for HDD, Cable for Serial Port
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### Rear I/O

DC-IN	1
Display	1 × HDMI, 1 × Display Port
Ethernet	2
USB	2 × USB 3.0
Audio	1 (Mic-in, Line-out)

### Front I/O

Power Button	1
LED	1 × Power LED, 1 × HDD LED
USB	2 × USB 3.0, 2 × USB 2.0
Serial Port	1 × RS-232

### Internal Connector

VGA Header	1, 2 × 5Pin, Pitch 2.0mm
Serial Port	3, 2 × 5Pin, Pitch 2.0mm
RS-485	COM1/2 can be set up as RS-485
PS/2	1, 2 × 5Pin, Pitch 2.0mm
SATA	1, SATA 3.0 (6.0Gb/S)
SATA PWR Connector	1, 1 × 4Pin, Pitch PH2.0mm
SIM Slot	1
AutoStart Jumper	Yes, 1 × 3Pin, Pitch 2.54mm
Clear CMOS Jumper	Yes, 1 × 3Pin, Pitch 2.54mm
GPIO Header	1, 2 × 5Pin, Pitch 2.0mm
GPIO Power Select	Yes, 1 × 3Pin, Pitch 2.54mm
USB Header	1, 1 × 5Pin, Pitch 2.54mm
Front Panel Header	1, 2 × 5Pin, Pitch 2.0mm
Power Header	1, 1 × 2Pin, Pitch 3.5mm, Phoenix 2Pin (Option)

### Watchdog Timer

Output	From Super I/O to Drag RESETCON#
Interval	256 Segments, 0, 1, 2, 3, ..., 255 sec/min

### Power Requirement

Input PWR	12V DC in, 5.5mm/2.5mm
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### Environment

Operating Temperature	0-50 °C
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### OS Support

OS	Windows 10, Linux
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## Ordering and Specifications Information

Quick Order Model: MB2J240-0521

Ordering Code	Code Name	Processor Type	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Processor Graphics	TDP
MB2J240-0511	Gemini Lake	Celeron	J4005	2	2	2.0GHz	2.7GHz	4M	Intel UHD Graphics 600	10W
MB2J240-0512	Gemini Lake	Celeron	N4000	2	2	1.1GHz	2.6GHz	4M	Intel UHD Graphics 600	6W
MB2J240-0521	Gemini Lake	Celeron	J4105	4	4	1.5GHz	2.5GHz	4M	Intel UHD Graphics 600	10W
MB2J240-0611	Gemini Lake Refresh	Celeron	N4020	2	2	1.1GHz	2.8GHz	4M	Intel UHD Graphics 600	6W
MB2J240-0621	Gemini Lake Refresh	Celeron	J4125	4	4	2.0GHz	2.7GHz	4M	Intel UHD Graphics 600	10W

## Custom Options

Category	Description
USB 2.0	2

# MB2J260-0700 Series

## Main Features

- Intel Jasper Lake Processor
- 1 × HDMI, 1 × Display Port, 1 × VGA (Header)
- 1 × USB 3.0, 5 × USB 2.0, 1 × Type C
- 3 × M.2, 1 × SATA 3.0
- 6 × RS-232, 2 × PS/2
- 2 × Realtek Gigabit LAN

## Specifications

### Processor System

Dimension	120 × 120mm
CPU	Intel Jasper Lake Processor
Core Number	By CPU
Speed	By CPU
L2 Cache	By CPU
Chipset	By CPU
BIOS	UEFI

### Expansion Slot

M.2	1 × M.2 for SSD (M key, Type: 2280, PCIe 3.0 × 1)
M.2	1 × M.2 for 4G/5G (B key, Type: 3042/3052)
M.2	1 × M.2 for Wi-Fi (E key, Type: 2230)

### Memory

Technology	DDR4 2666MHz SDRAM
Max.	32GB
Socket	1 × SO-DIMM

### Graphics

Controller	By CPU
VRAM	Shared Memory
Display	1 × Display Port 1 × HDMI 1 × VGA (Header)
Multi Display	Yes

### Ethernet

Interface	100/1000Mbps
Controller	2 × Realtek Gigabit LAN
Connector	2 × RJ-45

### Audio

Controller	Realtek HD Audio
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### SATA

Max. Data Transfer Rate	SATA 3.0 (6.0Gb/S)
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### Accessories

Accessories	Cable for HDD, Cable for Serial Port
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### Front I/O

Power Button	1 × Power Button, 1 × Reset Button
LED	1 × Power LED, 1 × HDD LED
Serial Port	2 × RS-232
USB	1 × USB 3.0, 1 × USB 2.0
Type C	1, USB 3.0 and Display Port

### Real I/O

DC-IN	1
Display	1 × HDMI, 1 × Display Port
Ethernet	2
USB	4 × USB 2.0
Audio	1 (Mic-in, Line-out)

### Internal Connector

VGA Header	1, 2 × 5Pin, Pitch 2.0mm
Serial Port	4, 2 × 5Pin, Pitch 2.0mm
RS-485	COM1/2 can be set up as RS-485
PS/2	2, 1 × 4Pin, Pitch 2.0mm
SATA	1, SATA 3.0 (6.0Gb/S)
SATA PWR Connector	1, 1 × 4Pin, Pitch PH2.0mm
SIM Slot	1
AutoStart Jumper	Yes, 1 × 3Pin, Pitch 2.0mm
Clear CMOS Jumper	Yes, 1 × 3Pin, Pitch 2.0mm
USB 2.0	2, 2 × 5Pin, Pitch 2.0mm
Front Panel Header	2, 1 × 4Pin, Pitch 2.0mm
Power Header	1, Phoenix 1 × 2Pin, Pitch 3.5mm (Option)

### Watchdog Timer

Output	From Super I/O to Drag RESETCON#
Interval	256 Segments, 0, 1, 2, 3, ..., 255 sec/min

### Power Requirement

Input PWR	12V DC in, 5.5mm/2.5mm
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### Environment

Operating Temperature	0-50 °C
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### OS Support

OS	UEFI Windows 10, UEFI Linux
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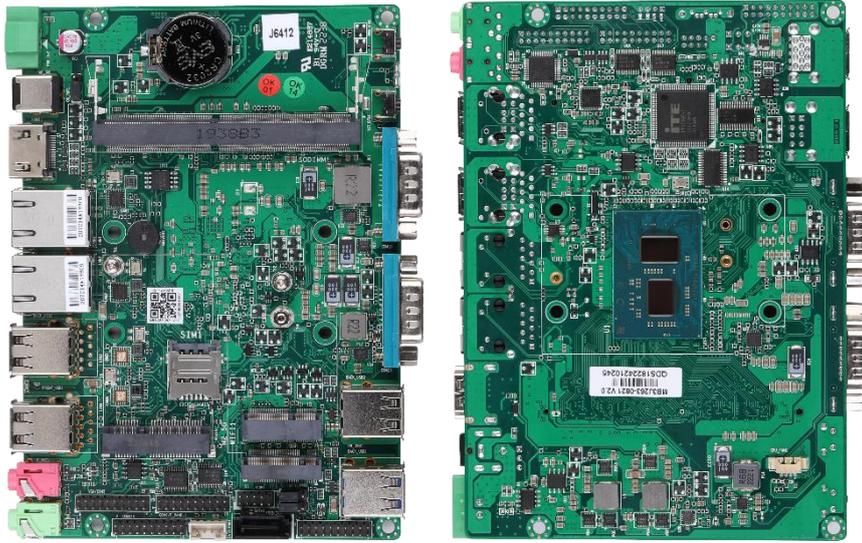
## Ordering and Specifications Information

Quick Order Model: MB2J260-0722

Ordering Code	Code Name	Processor Type	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Processor Graphics	TDP
MB2J260-0711	Jasper Lake	Celeron	N4500	2	2	1.1GHz	2.8GHz	4M	Intel UHD Graphics	6W
MB2J260-0712	Jasper Lake	Celeron	N4505	2	2	2.0GHz	2.9GHz	4M	Intel UHD Graphics	10W
MB2J260-0721	Jasper Lake	Celeron	N5100	4	4	1.1GHz	2.8GHz	4M	Intel UHD Graphics	6W
<b>MB2J260-0722</b>	<b>Jasper Lake</b>	<b>Celeron</b>	<b>N5105</b>	<b>4</b>	<b>4</b>	<b>2.0GHz</b>	<b>2.9GHz</b>	<b>4M</b>	<b>Intel UHD Graphics</b>	<b>10W</b>
MB2J260-0723	Jasper Lake	Celeron	N5095	4	4	2.0GHz	2.9GHz	4M	Intel UHD Graphics	15W
MB2J260-0731	Jasper Lake	Pentium	N6000	4	4	1.1GHz	3.0GHz	4M	Intel UHD Graphics	6W
MB2J260-0732	Jasper Lake	Pentium	N6005	4	4	2.0GHz	3.3GHz	4M	Intel UHD Graphics	10W

## Custom Options

Category	Description



# MB3J263-0800 Series

## Main Features

- Intel Elkhart Lake Processor
- 1 × HDMI, 1 × VGA (Header)
- 2 × USB 3.0, 6 × USB 2.0
- 2 × M.2, 1 × mSATA, 1 × SATA 3.0
- 6 × RS-232, 2 × PS/2
- 2 × Realtek Gigabit LAN

## Specifications

### Processor System

Dimension	148 × 104mm
CPU	Intel Elkhart Lake Processor
Core Number	By CPU
Speed	By CPU
L2 Cache	By CPU
Chipset	By CPU
BIOS	UEFI

### Expansion Slot

mSATA	1 × Full-length Mini PCIe for SSD
M.2	1 × M.2 for 4G/5G (B key, Type: 3042/3052), 5G Defaults to PCIe Mode, USB 3.0 Mode Requires Customization
M.2	1 × M.2 for Wi-Fi (E key, Type: 2230)

### Memory

Technology	DDR4 2133/2400MHz SDRAM
Max.	32GB
Socket	1 × SO-DIMM

### Graphics

Controller	By CPU
VRAM	Shared Memory
VGA	1 (Header)
HDMI	1 (Support HDMI 1.4a)
Multi Display	Yes

### Ethernet

Interface	10/100/1000Mbps
Controller	2 × Realtek Gigabit LAN
Connector	2 × RJ-45

### Audio

Controller	Realtek HD Audio
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### SATA

Max. Data Transfer Rate	SATA 3.0 (6.0Gb/S)
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### Accessories

Accessories	Cable for HDD, Cable for Serial Port
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### Front I/O

Power Button	1 × Power Button, 1 × Reset Button
LED	1 × Power LED, 1 × HDD LED
Serial Port	2 × RS-232
USB	2 × USB 3.0, 2 × USB 2.0

### Real I/O

DC-IN	1
Phoenix 2Pin	1, 1 × 2Pin, Pitch 3.5mm
HDMI	1
Ethernet	2
USB	4 × USB 2.0
Audio	2 (Mic-in, Line-out)

### Internal Connector

VGA Header	1, 2 × 5Pin, Pitch 2.0mm
Serial Port	4, 2 × 5Pin, Pitch 2.0mm
RS-485	COM1/2 can be set up as RS-485
PS/2	1, 2 × 5Pin, Pitch 2.0mm
SATA	1, SATA 3.0 (6.0Gb/S)
SATA PWR Connector	1, 1 × 4Pin, Pitch PH2.0mm
SIM Slot	1
AutoStart Jumper	Yes, 1 × 3Pin, Pitch 2.54mm
Clear CMOS Jumper	Yes, 1 × 3Pin, Pitch 2.54mm
GPIO Header	1, 2 × 5Pin, Pitch 2.0mm
GPIO Power Select	Yes, 1 × 3Pin, Pitch 2.54mm
Front Panel Header	1, 2 × 5Pin, Pitch 2.0mm
Power Header	1, 1 × 2Pin, Pitch 3.5mm, Phoenix 2Pin (Option)

### Watchdog Timer

Output	From Super I/O to Drag RESETCON#
Interval	256 Segments, 0, 1, 2, 3, ..., 255 sec/min

### Power Requirement

Input PWR	12V DC in, 5.5mm/2.5mm
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### Environment

Operating Temperature	0-50 °C
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### OS Support

OS	UEFI Windows 10, UEFI Linux
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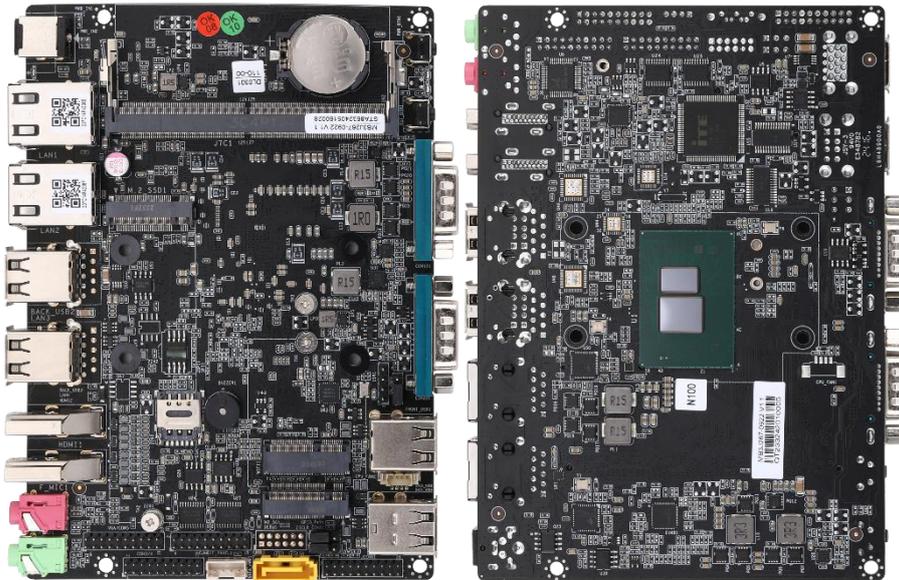
## Ordering and Specifications Information

Quick Order Model: MB3J263-0821

Ordering Code	Code Name	Processor Type	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Processor Graphics	TDP
MB3J263-0811	Elkhart Lake	Celeron	N6210	2	2	1.20Ghz	2.6Ghz	1.5M	Intel UHD Graphics	6.5W
MB3J263-0821	Elkhart Lake	Celeron	J6412	4	4	2.00Ghz	2.60Ghz	1.5M	Intel UHD Graphics	10W

## Custom Options

Category	Description
RJ-45	2



# MB3J267-0900 Series

## Main Features

- Intel Alder Lake-N Processor
- 2 × HDMI, 1 × VGA (Header)
- 1 × USB 3.0, 7 × USB 2.0
- 3 × M.2, 1 × SATA 3.0
- 6 × RS-232, 2 × PS/2
- 2 × Realtek 2.5 Gigabit LAN

## Specifications

Processor System	
Dimension	148 × 104mm
CPU	Intel Alder Lake-N Processor
Core Number	By CPU
Speed	By CPU
L2 Cache	By CPU
Chipset	By CPU
BIOS	UEFI
Expansion Slot	
M.2	1 × M.2 for SSD (M key, Type: 2280, PCIe 3.0 × 1)
M.2	1 × M.2 for 4G/5G (B key, Type: 3042/3052)
M.2	1 × M.2 for Wi-Fi (E key, Type: 2230)
Memory	
Technology	DDR5 4800MHz SDRAM
Max.	48GB
Socket	1 × SO-DIMM
Graphics	
Controller	By CPU
VRAM	Shared Memory
VGA	1 (Header)
HDMI	2 (Support HDMI 1.4a)
Multi Display	Yes
Ethernet	
Interface	100/1000/2500Mbps
Controller	2 × Realtek 2.5 Gigabit LAN
Connector	2 × RJ-45
Audio	
Controller	Realtek HD Audio
SATA	
Max. Data Transfer Rate	SATA 3.0 (6.0Gb/s)
Accessories	
Accessories	Cable for HDD, Cable for Serial Port

Front I/O	
Power Button	1 × Power Button, 1 × Reset Button
LED	1 × Power LED, 1 × HDD LED
Serial Port	2 × RS-232
USB	1 × USB 3.0, 3 × USB 2.0
Real I/O	
DC-IN	1
HDMI	2
Ethernet	2
USB	4 × USB 2.0
Audio	2 (Mic-in, Line-out)
Internal Connector	
VGA Header	1, 2 × 5Pin, Pitch 2.0mm
Serial Port	4, 2 × 5Pin, Pitch 2.0mm
RS-485	COM1/2 can be set up as RS-485
PS/2	1, 2 × 5Pin, Pitch 2.0mm
USB 2.0	1, 1 × 4Pin, Pitch 2.54mm
SATA	1, SATA 3.0 (6.0Gb/s)
SATA PWR Connector	1, 1 × 4Pin, Pitch PH2.0mm
SIM Slot	1
AutoStart Jumper	Yes, 1 × 3Pin, Pitch 2.54mm
Clear CMOS Jumper	Yes, 1 × 3Pin, Pitch 2.54mm
GPIO Header	1, 2 × 5Pin, Pitch 2.0mm
GPIO Power Select	Yes, 1 × 3Pin, Pitch 2.54mm
Front Panel Header	1, 2 × 5Pin, Pitch 2.0mm
Power Header	1, 1 × 2Pin, Pitch 3.5mm, Phoenix 2Pin (Option)
Watchdog Timer	
Output	From Super I/O to Drag RESETCON#
Interval	256 Segments, 0, 1, 2, 3, ..., 255 sec/min
Power Requirement	
Input PWR	12V DC in, 5.5mm/2.5mm
Environment	
Operating Temperature	0-50 °C
OS Support	
OS	UEFI Windows 10, UEFI Linux

# Ordering and Specifications Information

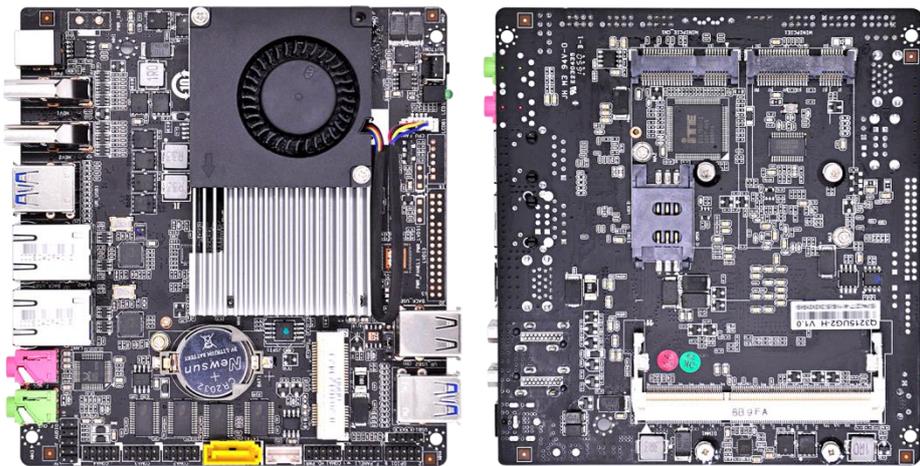
Quick Order Model: MB3J267-0922

Ordering Code	Code Name	Processor Type	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Processor Graphics	TDP
MB3J267-0911	Alder lake-N	-	N50	2	-	-	3.4GHz	6M	Intel UHD Graphics	6W
MB3J267-0921	Alder lake-N	-	N97	4	-	-	3.6GHz	6M	Intel UHD Graphics	12W
<b>MB3J267-0922</b>	<b>Alder lake-N</b>	<b>-</b>	<b>N100</b>	<b>4</b>	<b>4</b>	<b>-</b>	<b>3.4GHz</b>	<b>6M</b>	<b>Intel UHD Graphics</b>	<b>6W</b>
MB3J267-0923	Alder lake-N	-	N200	4	4	-	3.7GHz	6M	Intel UHD Graphics	6W
MB3J267-0931	Alder lake-N	Core i3	N300	8	8	-	3.8GHz	6M	Intel UHD Graphics	7W
MB3J267-0932	Alder lake-N	Core i3	N305	8	8	-	3.8GHz	6M	Intel UHD Graphics	15W
MB3J267-1022	Twin Lake-N	-	N150	4	4	-	3.6GHz	6M	Intel Graphics	6W
MB3J267-1023	Twin Lake-N	-	N250	4	4	-	3.8GHz	6M	Intel Graphics	6W
MB3J267-1031	Twin Lake-N	Core i3	N350	8	8	-	3.9GHz	6M	Intel Graphics	7W
MB3J267-1032	Twin Lake-N	Core i3	N355	8	8	-	3.9GHz	6M	Intel Graphics	15W

## Custom Options

Category	Description

# MB2U246-0400 Series



## Main Features

- Intel 4<sup>th</sup> Haswell -U/Y Processor
- Intel 5<sup>th</sup> Broadwell-U Processor
- 2 × HDMI, 4 × RS-232
- 4 × USB 3.0, 2 × USB 2.0, 1 × SATA 3.0
- 2 × Mini-PCIe, 1 × mSATA
- 2 × Realtek Gigabit LAN

## Specifications

### Processor System

Dimension	120 × 130mm
CPU	• Intel 4 <sup>th</sup> Haswell -U/Y Processor • Intel 5 <sup>th</sup> Broadwell-U Processor
Core Number	By CPU
Max. Speed	By CPU
L2 Cache	By CPU
Chipset	By CPU
BIOS	UEFI

### Expansion Slot

Mini-PCIe	1 × Full-length Mini PCIe for 4G
Mini-PCIe	1 × Half-length Mini PCIe for Wi-Fi Module
mSATA	1 × Full-length Mini PCIe for SSD

### Memory

Technology	DDR3L 1333/1600MHz SDRAM
Max.	8GB
Socket	1 × SO-DIMM

### Graphics

Controller	By CPU
VRAM	Shared Memory
LVDS	1 (Option)
HDMI	2 (Support HDMI 1.4a)
Multi Display	Yes

### Ethernet

Interface	10/100/1000Mbps
Controller	2 × Realtek Gigabit LAN
Connector	2 × RJ-45

### Audio

Controller	Realtek HD Audio
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### SATA

Max. Data Transfer Rate	SATA 3.0 (6.0Gb/S)
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### Accessories

Accessories	Cable for HDD, Cable for Serial Port
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### Rear I/O

DC-IN	1
HDMI	2
Ethernet	2
USB	2 × USB 3.0
Audio	2 (Mic-in, Line-out)

### Front I/O

Power Button	1
LED	1 × Power LED
USB	2 × USB 3.0, 2 × USB 2.0

### Internal Connector

LVDS	1, 2 × 10Pin, Pitch 1.0mm (Option)
VGA Header	0
Serial Port	4, 2 × 5Pin, Pitch 2.0mm
RS-485	0
SATA	1, SATA 3.0 (6.0Gb/S)
SATA PWR Connector	1, 1 × 4Pin, Pitch PH2.0mm
SIM Slot	1
AutoStart Jumper	Yes, 1 × 3Pin, Pitch 2.54mm
Clear CMOS Jumper	0
GPIO Header	1, 2 × 5Pin, Pitch 2.0mm
USB Header	1, 1 × 4Pin, Pitch 2.54mm
Front Panel Header	1, 2 × 5Pin, Pitch 2.0mm
Speakers Header	1, 2 × 5Pin, Pitch 2.54mm
Power Header	1, 1 × 2Pin, Pitch 5.5mm (Option)

### Watchdog Timer

Output	From Super I/O to Drag RESETCON#
Interval	256 Segments, 0, 1, 2, 3, ..., 255 sec/min

### Power Requirement

Input PWR	12V DC in, 5.5mm/2.5mm
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### Environment

Operating Temperature	0-50 °C
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### OS Support

OS	Windows 7, Windows 10, Linux
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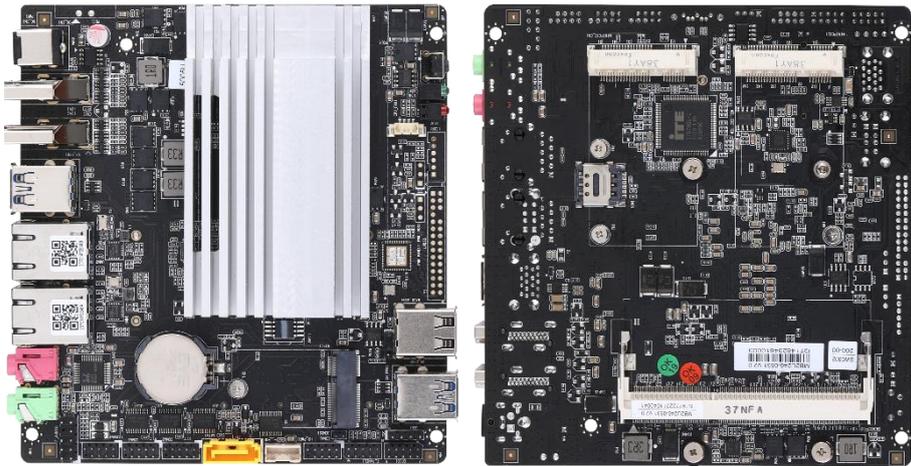
## Ordering and Specifications Information

Quick Order Model: Q5005UG2-H

Ordering Code	Code Name	Processor Type	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Processor Graphics	TDP
Q2955UG2-H	Haswell	Celeron	2955U	2	2	1.4GHz	/	2M	Intel HD Graphics	15W
Q4005UG2-H	Haswell	Core i3	4005U	2	4	1.7GHz	/	3M	Intel HD 4400	15W
Q4200UG2-H	Haswell	Core i5	4200U	2	4	1.6GHz	2.6GHz	3M	Intel HD 4400	15W
Q4500UG2-H	Haswell	Core i7	4500U	2	4	1.8GHz	3.0GHz	4M	Intel HD 4400	15W
Q4010YG2-H	Haswell	Core i3	4010Y	2	4	1.3GHz	/	3M	Intel HD 4200	11.5W
Q4200YG2-H	Haswell	Core i5	4200Y	2	4	1.4GHz	1.9GHz	3M	Intel HD 4200	11.5W
Q3205UG2-H	Broadwell	Celeron	3205U	2	2	1.5GHz	/	2M	Intel HD Graphics	15W
Q3215UG2-H	Broadwell	Celeron	3215U	2	2	1.7GHz	/	2M	Intel HD Graphics	15W
Q3805UG2-H	Broadwell	Pentium	3805U	2	2	1.9GHz	/	2M	Intel HD Graphics	15W
Q5005UG2-H	Broadwell	Core i3	5005U	2	4	2.0GHz	/	3M	Intel HD 5500	15W
Q5200UG2-H	Broadwell	Core i5	5200U	2	4	2.2GHz	2.7GHz	3M	Intel HD 5500	15W
Q5500UG2-H	Broadwell	Core i7	5500U	2	4	2.4GHz	3.0GHz	4M	Intel HD 5500	15W

## Custom Options

Category	Description
USB 2.0	2



# MB2U246-0500 Series

## Main Features

- Intel 4<sup>th</sup> Haswell -U/Y Processor
- Intel 5<sup>th</sup> Broadwell-U Processor
- 2 × HDMI, 4 × RS-232
- 4 × USB 3.0, 2 × USB 2.0, 1 × SATA 3.0
- 1 × Mini-PCIe, 1 × mSATA, 1 × M.2
- 2 × Realtek Gigabit LAN

## Specifications

Processor System	
Dimension	120 × 130mm
CPU	• Intel 4 <sup>th</sup> Haswell -U/Y Processor • Intel 5 <sup>th</sup> Broadwell-U Processor
Core Number	By CPU
Max. Speed	By CPU
L2 Cache	By CPU
Chipset	By CPU
BIOS	UEFI
Expansion Slot	
Mini-PCIe	1 × Mini PCIe, Half-length Mini PCIe for Wi-Fi, Full-length Mini PCIe for 4G by Default
M.2	1 × M.2 for Wi-Fi (E key, Type: 2230)
mSATA	1 × Full-length Mini PCIe for SSD
Memory	
Technology	DDR3L 1333/1600MHz SDRAM
Max.	8GB
Socket	1 × SO-DIMM
Graphics	
Controller	By CPU
VRAM	Shared Memory
LVDS	1 (Option)
HDMI	2 (Support HDMI 1.4a)
Multi Display	Yes
Ethernet	
Interface	10/100/1000Mbps
Controller	2 × Realtek Gigabit LAN
Connector	2 × RJ-45
Audio	
Controller	Realtek HD Audio
SATA	
Max. Data Transfer Rate	SATA 3.0 (6.0Gb/S)
Accessories	
Accessories	Cable for HDD, Cable for Serial Port

Rear I/O	
DC-IN	1
HDMI	2
Ethernet	2
USB	2 × USB 3.0
Audio	2 (Mic-in, Line-out)
Front I/O	
Power Button	1
LED	1 × Power LED, 1 × HDD LED
USB	2 × USB 3.0, 2 × USB 2.0
Internal Connector	
LVDS	1, 2 × 10Pin, Pitch 1.0mm (Option)
VGA Header	0
Serial Port	4, 2 × 5Pin, Pitch 2.0mm
RS-485	0
SATA	1, SATA 3.0 (6.0Gb/S)
SATA PWR Connector	1, 1 × 4Pin, Pitch PH2.0mm
SIM Slot	1
AutoStart Jumper	Yes, 1 × 3Pin, Pitch 2.54mm
Clear CMOS Jumper	Yes, 1 × 2Pin, Pitch 2.0mm
GPIO Header	1, 2 × 5Pin, Pitch 2.0mm
USB Header	1, 1 × 4Pin, Pitch 2.54mm
Front Panel Header	1, 2 × 5Pin, Pitch 2.0mm
Speakers Header	1, 2 × 5Pin, Pitch 2.54mm
Power Header	1, 1 × 2Pin, Pitch 3.5mm, Phoenix 2Pin (Option)
Watchdog Timer	
Output	From Super I/O to Drag RESETCON#
Interval	256 Segments, 0, 1, 2, 3, ..., 255 sec/min
Power Requirement	
Input PWR	12V DC in, 5.5mm/2.5mm
Environment	
Operating Temperature	0-50 °C
OS Support	
OS	Windows 7, Windows 10, Linux

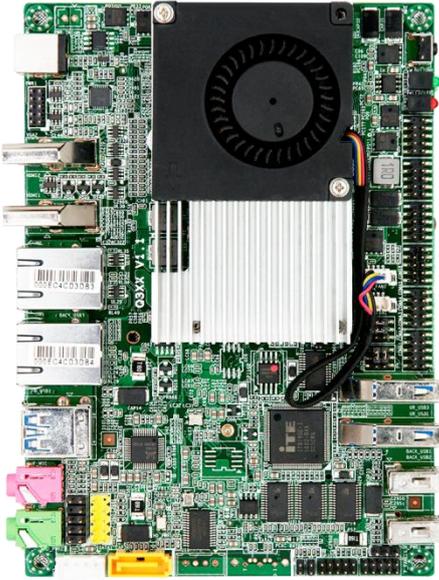
# Ordering and Specifications Information

Quick Order Model: MB2U246-0531

Ordering Code	Code Name	Processor Type	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Processor Graphics	TDP
MB2U246-0411	Haswell	Celeron	2955U	2	2	1.4GHz	/	2M	Intel HD Graphics	15W
MB2U246-0431	Haswell	Core i3	4005U	2	4	1.7GHz	/	3M	Intel HD 4400	15W
MB2U246-0451	Haswell	Core i5	4200U	2	4	1.6GHz	2.6GHz	3M	Intel HD 4400	15W
MB2U246-0471	Haswell	Core i7	4500U	2	4	1.8GHz	3.0GHz	4M	Intel HD 4400	15W
MB2U246-0432	Haswell	Core i3	4010Y	2	4	1.3GHz	/	3M	Intel HD 4200	11.5W
MB2U246-0452	Haswell	Core i5	4200Y	2	4	1.4GHz	1.9GHz	3M	Intel HD 4200	11.5W
MB2U246-0511	Broadwell	Celeron	3205U	2	2	1.5GHz	/	2M	Intel HD Graphics	15W
MB2U246-0512	Broadwell	Celeron	3215U	2	2	1.7GHz	/	2M	Intel HD Graphics	15W
MB2U246-0521	Broadwell	Pentium	3805U	2	2	1.9GHz	/	2M	Intel HD Graphics	15W
MB2U246-0531	Broadwell	Core i3	5005U	2	4	2.0GHz	/	3M	Intel HD 5500	15W
MB2U246-0551	Broadwell	Core i5	5200U	2	4	2.2GHz	2.7GHz	3M	Intel HD 5500	15W
MB2U246-0571	Broadwell	Core i7	5500U	2	4	2.4GHz	3.0GHz	4M	Intel HD 5500	15W

## Custom Options

Category	Description
USB 2.0	2



# MB3U267-0400 Series

## Main Features

- Intel 4<sup>th</sup> Haswell -U/Y Processor
- Intel 5<sup>th</sup> Broadwell-U Processor
- 2 × HDMI, 1 × VGA (Header)
- 6 × RS-232, 1 × RS-485
- 4 × USB 3.0, 2 × USB 2.0, 1 × SATA 3.0
- 1 × Mini-PCIe, 1 × mSATA
- 2 × Intel I211-AT/I210-AT Gigabit LAN

## Specifications

### Processor System

Dimension	148 × 104mm
CPU	• Intel 4 <sup>th</sup> Haswell -U/Y Processor • Intel 5 <sup>th</sup> Broadwell-U Processor
Core Number	By CPU
Max. Speed	By CPU
L2 Cache	By CPU
Chipset	By CPU
BIOS	UEFI

### Expansion Slot

Mini-PCIe	1 × Mini PCIe, Half-length Mini PCIe for Wi-Fi by Default, Full-length Mini PCIe for 4G
mSATA	1 × Full-length Mini PCIe for SSD

### Memory

Technology	DDR3L 1333/1600MHz SDRAM
Max.	8GB
Socket	1 × SO-DIMM

### Graphics

Controller	By CPU
VRAM	Shared Memory
VGA	1 (Header)
HDMI	2 (Support HDMI 1.4a)
Multi Display	Yes

### Ethernet

Interface	10/100/1000Mbps
Controller	2 × Intel I211-AT/I210-AT Gigabit LAN
Connector	2 × RJ-45

### Audio

Controller	Realtek HD Audio
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### SATA

Max. Data Transfer Rate	SATA 3.0 (6.0Gb/S)
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### Accessories

Accessories	Cable for HDD, Cable for Serial Port
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### Rear I/O

DC-IN	1
HDMI	2
Ethernet	2
USB	2 × USB 3.0
Audio	2 (Mic-in, Line-out)

### Front I/O

Power Button	1
LED	1 × Power LED, 1 × HDD LED
USB	2 × USB 3.0, 2 × USB 2.0

### Internal Connector

VGA Header	1, 2 × 5Pin, Pitch 2.0mm
Serial Port	6, 2 × 5Pin, Pitch 2.0mm
RS-485	1, COM2 Supports RS-485
SATA	1 × SATA 3.0 (6.0Gb/S), 1, Only for Core i5/i7 (Option)
SATA PWR Connector	1, 1 × 4Pin, Pitch PH2.0mm
SIM Slot	1
AutoStart Jumper	Yes, 1 × 3Pin, Pitch 2.54mm
GPIO Header	1, 2 × 5Pin, Pitch 2.0mm
USB Header	1, 2 × 5Pin, Pitch 2.54mm
Front Panel Header	1, 2 × 5Pin, Pitch 2.0mm
Speakers Header	1, 2 × 5Pin, Pitch 2.54mm
Power Header	1, 1 × 2Pin, Pitch 2.5mm (Option)

### Watchdog Timer

Output	From Super I/O to Drag RESETCON#
Interval	256 egments,0,1,2,3,,,255 sec/min

### Power Requirement

Input PWR	12V DC in, 5.5mm/2.5mm
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### Environment

Operating Temperature	0-50 °C
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### OS Support

OS	Windows 7, Windows 10, Linux
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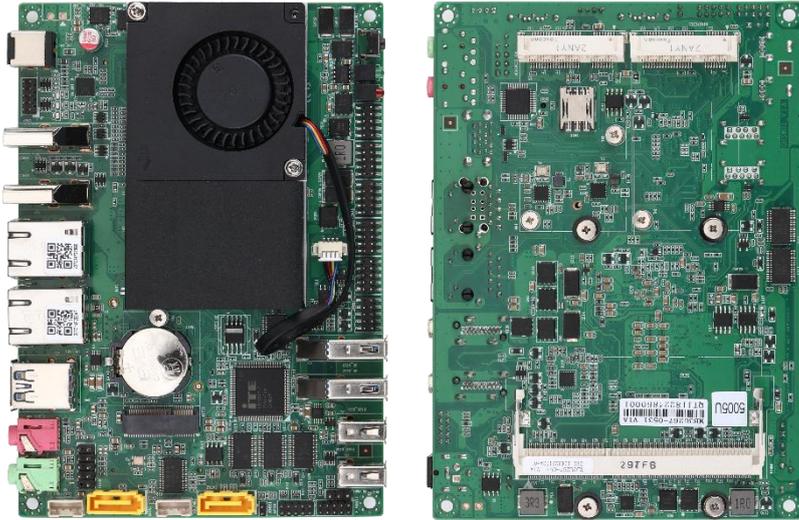
## Ordering and Specifications Information

Quick Order Model: Q5005UG2-P

Ordering Code	Code Name	Processor Type	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Processor Graphics	TDP
Q2955UG2-P	Haswell	Celeron	2955U	2	2	1.4GHz	/	2M	Intel HD Graphics	15W
Q4005UG2-P	Haswell	Core i3	4005U	2	4	1.7GHz	/	3M	Intel HD 4400	15W
Q4200UG2-P	Haswell	Core i5	4200U	2	4	1.6GHz	2.6GHz	3M	Intel HD 4400	15W
Q4500UG2-P	Haswell	Core i7	4500U	2	4	1.8GHz	3.0GHz	4M	Intel HD 4400	15W
Q4010YG2-P	Haswell	Core i3	4010Y	2	4	1.3GHz	/	3M	Intel HD 4200	11.5W
Q4200YG2-P	Haswell	Core i5	4200Y	2	4	1.4GHz	1.9GHz	3M	Intel HD 4200	11.5W
Q3205UG2-P	Broadwell	Celeron	3205U	2	2	1.5GHz	/	2M	Intel HD Graphics	15W
Q3215UG2-P	Broadwell	Celeron	3215U	2	2	1.7GHz	/	2M	Intel HD Graphics	15W
Q3805UG2-P	Broadwell	Pentium	3805U	2	2	1.9GHz	/	2M	Intel HD Graphics	15W
Q5005UG2-P	Broadwell	Core i3	5005U	2	4	2.0GHz	/	3M	Intel HD 5500	15W
Q5200UG2-P	Broadwell	Core i5	5200U	2	4	2.2GHz	2.7GHz	3M	Intel HD 5500	15W
Q5500UG2-P	Broadwell	Core i7	5500U	2	4	2.4GHz	3.0GHz	4M	Intel HD 5500	15W

## Custom Options

Category	Description
USB 2.0	2



# MB3U267-0500 Series

## Main Features

- Intel 4<sup>th</sup> Haswell -U/Y Processor
- Intel 5<sup>th</sup> Broadwell-U Processor
- 2 × HDMI, 1 × VGA (Header)
- 6 × RS-232, 1 × RS-485
- 4 × USB 3.0, 2 × USB 2.0, 1 × SATA 3.0
- 1 × Mini-PCIe, 1 × mSATA , 1 × M.2
- 2 × Realtek Gigabit LAN

## Specifications

### Processor System

Dimension	148 × 104mm
CPU	• Intel 4 <sup>th</sup> Haswell -U/Y Processor • Intel 5 <sup>th</sup> Broadwell-U Processor
Core Number	By CPU
Max. Speed	By CPU
L2 Cache	By CPU
Chipset	By CPU
BIOS	UEFI

### Expansion Slot

Mini-PCIe	1 × Mini PCIe, Half-length Mini PCIe for Wi-Fi by Default, Full-length Mini PCIe for 4G
mSATA	1 × Full-length Mini PCIe for SSD
M.2	1 × M.2 for Wi-Fi (E key, Type: 2230)

### Memory

Technology	DDR3L 1333/1600MHz SDRAM
Max.	8GB
Socket	1 × SO-DIMM

### Graphics

Controller	By CPU
VRAM	Shared Memory
VGA	1 (Header)
HDMI	2 (Support HDMI 1.4a)
Multi Display	Yes

### Ethernet

Interface	10/100/1000Mbps
Controller	2 × Realtek Gigabit LAN
Connector	2 × RJ-45

### Audio

Controller	Realtek HD Audio
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### SATA

Max. Data Transfer Rate	SATA 3.0 (6.0Gb/S)
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### Accessories

Accessories	Cable for HDD, Cable for Serial Port
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### Rear I/O

DC-IN	1
HDMI	2
Ethernet	2
USB	2 × USB 3.0
Audio	2 (Mic-in, Line-out)

### Front I/O

Power Button	1
LED	1 × Power LED, 1 × HDD LED
USB	2 × USB 3.0, 2 × USB 2.0

### Internal Connector

VGA Header	1, 2 × 5Pin, Pitch 2.0mm
Serial Port	6, 2 × 5Pin, Pitch 2.0mm
RS-485	1, COM2 Supports RS-485
SATA	1 × SATA 3.0 (6.0Gb/S), 1, Only for Core i5/i7 (Option)
SATA PWR Connector	1, 1 × 4Pin, Pitch PH2.0mm
SIM Slot	1
AutoStart Jumper	Yes, 1 × 3Pin, Pitch 2.54mm
GPIO Header	1, 2 × 5Pin, Pitch 2.0mm
USB Header	1, 2 × 5Pin, Pitch 2.54mm
Front Panel Header	1, 2 × 5Pin, Pitch 2.0mm
Speakers Header	1, 2 × 5Pin, Pitch 2.54mm
Power Header	1, 1 × 2Pin, Pitch 2.5mm (Option)

### Watchdog Timer

Output	From Super I/O to Drag RESETCON#
Interval	256 egments,0,1,2,3,,,255 sec/min

### Power Requirement

Input PWR	12V DC in, 5.5mm/2.5mm
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### Environment

Operating Temperature	0-50 °C
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### OS Support

OS	Windows 7, Windows 10, Linux
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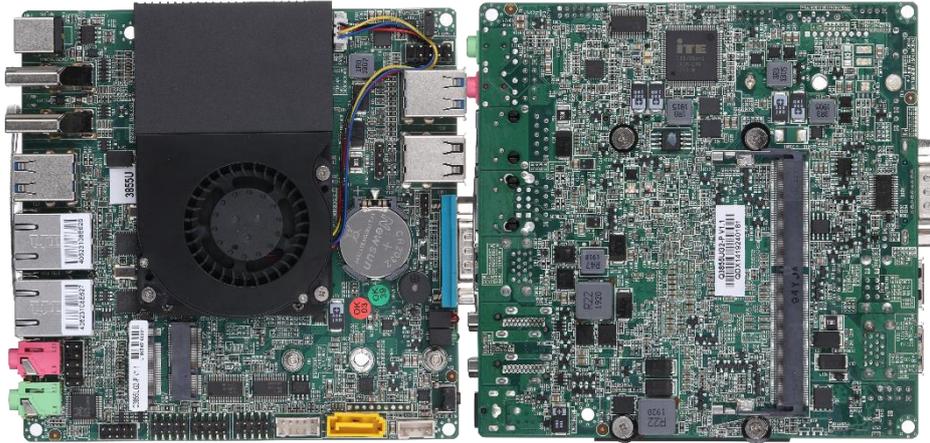
## Ordering and Specifications Information

Quick Order Model: MB3U267-0531

Ordering Code	Code Name	Processor Type	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Processor Graphics	TDP
MB3U267-0411	Haswell	Celeron	2955U	2	2	1.4GHz	/	2M	Intel HD Graphics	15W
MB3U267-0431	Haswell	Core i3	4005U	2	4	1.7GHz	/	3M	Intel HD 4400	15W
<b>MB3U267-0451</b>	<b>Haswell</b>	<b>Core i5</b>	<b>4200U</b>	<b>2</b>	<b>4</b>	<b>1.6GHz</b>	<b>2.6GHz</b>	<b>3M</b>	<b>Intel HD 4400</b>	<b>15W</b>
MB3U267-0471	Haswell	Core i7	4500U	2	4	1.8GHz	3.0GHz	4M	Intel HD 4400	15W
<b>MB3U267-0432</b>	<b>Haswell</b>	<b>Core i3</b>	<b>4010Y</b>	<b>2</b>	<b>4</b>	<b>1.3GHz</b>	<b>/</b>	<b>3M</b>	<b>Intel HD 4200</b>	<b>11.5W</b>
MB3U267-0452	Haswell	Core i5	4200Y	2	4	1.4GHz	1.9GHz	3M	Intel HD 4200	11.5W
MB3U267-0511	Broadwell	Celeron	3205U	2	2	1.5GHz	/	2M	Intel HD Graphics	15W
MB3U267-0512	Broadwell	Celeron	3215U	2	2	1.7GHz	/	2M	Intel HD Graphics	15W
MB3U267-0521	Broadwell	Pentium	3805U	2	2	1.9GHz	/	2M	Intel HD Graphics	15W
<b>MB3U267-0531</b>	<b>Broadwell</b>	<b>Core i3</b>	<b>5005U</b>	<b>2</b>	<b>4</b>	<b>2.0GHz</b>	<b>/</b>	<b>3M</b>	<b>Intel HD 5500</b>	<b>15W</b>
MB3U267-0551	Broadwell	Core i5	5200U	2	4	2.2GHz	2.7GHz	3M	Intel HD 5500	15W
MB3U267-0571	Broadwell	Core i7	5500U	2	4	2.4GHz	3.0GHz	4M	Intel HD 5500	15W

## Custom Options

Category	Description
USB 2.0	2



# MB2U247-0600 Series

## Main Features

- Intel 6<sup>th</sup> skylake-U Processor
- Intel 7<sup>th</sup> Kabylake-U Processor
- 2 × HDMI, 1 × VGA (Header)
- 4 × RS-232
- 4 × USB 3.0, 2 × USB 2.0
- 2 × M.2, 1 × SATA 3.0
- 2 × Realtek Gigabit LAN

## Specifications

### Processor System

Dimension	120 × 120mm
CPU	• Intel 6 <sup>th</sup> Skylake-U Processor • Intel 7 <sup>th</sup> Kabylake-U Processor
Core Number	By CPU
Max. Speed	By CPU
L2 Cache	By CPU
Chipset	By CPU
BIOS	UEFI

### Expansion Slot

M.2	1 × M.2 for SSD (M key, Type: 2280)
	1 × M.2 for Wi-Fi (E key, Type: 2230)

### Memory

Technology	DDR4 2133MHz SDRAM
Max.	16GB
Socket	1 × SO-DIMM

### Graphics

Controller	By CPU
VRAM	Shared Memory
VGA	1 (Option)
HDMI	2 (Support HDMI 1.4a)
Multi Display	Yes

### Ethernet

Interface	10/100/1000Mbps
Controller	2 × Realtek Gigabit LAN
Connector	2 × RJ-45

### Audio

Controller	Realtek HD Audio
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### SATA

Max. Data Transfer Rate	SATA 3.0 (6.0Gb/s)
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### Accessories

Accessories	Cable for HDD, Cable for Serial Port
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### Rear I/O

DC-IN	1
HDMI	2
Serial Port	3 × RS-232
Ethernet	2
USB	2 × USB 3.0
Audio	2 (Mic-in, Line-out)

### Front I/O

Power Button	1
LED	1 × Power LED, 1 × HDD LED
USB	2 × USB 3.0, 2 × USB 2.0
Serial Port	1 × RS-232

### Internal Connector

TPM	1 (Option)
VGA Header	1, 2 × 5Pin, Pitch 2.0mm
Serial Port	3, 2 × 5Pin, Pitch 2.0mm
SATA	1, SATA 3.0 (6.0Gb/s)
SATA PWR Connector	1, 1 × 4Pin, Pitch PH2.0mm
AutoStart Jumper	Yes, 1 × 3Pin, Pitch 2.54mm
Clear CMOS Jumper	Yes, 1 × 3Pin, Pitch 2.0mm
GPIO Header	1, 2 × 5Pin, Pitch 2.0mm
USB Header	1, 1 × 4Pin, Pitch 2.54mm
Front Panel Header	1, 2 × 5Pin, Pitch 2.54mm
Speakers Header	1, 2 × 5Pin, Pitch 2.54mm
Power Header	1, 1 × 2Pin, Pitch 5.5mm (Option)

### Watchdog Timer

Output	From Super I/O to Drag RESETCON#
Interval	256 Segments, 0, 1, 2, 3, ..., 255 sec/min

### Power Requirement

Input PWR	12V DC in, 5.5mm/2.5mm
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### Environment

Operating Temperature	0-50 °C
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### OS Support

OS	Windows 10, Linux Windows 7 (Only for 6th Gen Skylake)
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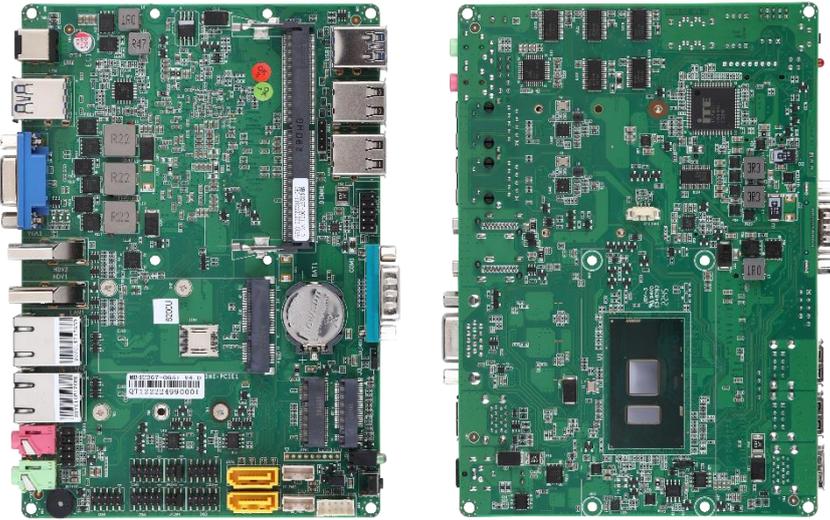
# Ordering and Specifications Information

Quick Order Model: Q7100UG2-P

Ordering Code	Code Name	Processor Type	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Processor Graphics	TDP
Q3855UG2-P (MB2U247-0611)	Skylake	Celeron	3855U	2	2	1.6GHz	/	2M	Intel HD 510	15W
Q3955UG2-P (MB2U247-0612)	Skylake	Celeron	3955U	2	2	2.0GHz	/	2M	Intel HD 510	15W
Q6100UG2-P (MB2U247-0631)	Skylake	Core i3	6100U	2	4	2.3GHz	/	3M	Intel HD 520	15W
Q6200UG2-P (MB2U247-0651)	Skylake	Core i5	6200U	2	4	2.3GHz	2.8GHz	3M	Intel HD 520	15W
Q6500UG2-P (MB2U247-0671)	Skylake	Core i7	6500U	2	4	2.5GHz	3.1GHz	4M	Intel HD 520	15W
Q3865UG2-P (MB2U247-0711)	Kaby Lake	Celeron	3865U	2	2	1.8GHz	/	2M	Intel HD 610	15W
Q3965UG2-P (MB2U247-0712)	Kaby Lake	Celeron	3965U	2	2	2.2GHz	/	2M	Intel HD 610	15W
Q7100UG2-P (MB2U247-0731)	Kaby Lake	Core i3	7100U	2	4	2.4GHz	/	3M	Intel HD 620	15W
Q7200UG2-P (MB2U247-0751)	Kaby Lake	Core i5	7200U	2	4	2.5GHz	3.1GHz	3M	Intel HD 620	15W
Q7500UG2-P (MB2U247-0771)	Kaby Lake	Core i7	7500U	2	4	2.7GHz	3.5GHz	4M	Intel HD 620	15W

## Custom Options

Category	Description
USB 2.0	2



# MB4U267-0600 Series

## Main Features

- Intel 6<sup>th</sup> Skylake-U Processor
- Intel 7<sup>th</sup> Kabylake-U Processor
- Intel 8<sup>th</sup> Kabylake-R-U Processor
- 1 × VGA, 2 × HDMI, 6 × RS-232, 2 × RS-485
- 4 × USB 3.0, 4 × USB 2.0, 1 × SATA 3.0
- 1 × Mini-PCIe, 2 × M.2
- 2 × Realtek Gigabit LAN

## Specifications

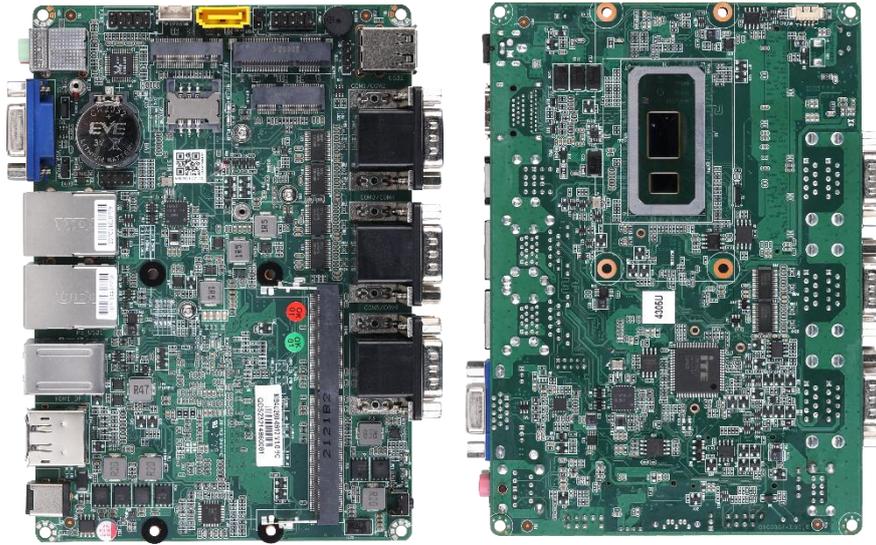
Processor System	
Dimension	165 × 115mm
CPU	<ul style="list-style-type: none"> <li>• Intel 6<sup>th</sup> Skylake-U Processor</li> <li>• Intel 7<sup>th</sup> Kabylake-U Processor</li> <li>• Intel 8<sup>th</sup> Kabylake-R-U Processor</li> </ul>
Core Number	By CPU
Max. Speed	By CPU
L2 Cache	By CPU
Chipset	By CPU
BIOS	UEFI
Expansion Slot	
Mini-PCIe	1 × Mini PCIe, Half-length Mini PCIe for Wi-Fi, Full-length Mini PCIe for 4G by Default
M.2	1 × M.2 for SSD (M key, Type: 2280)
M.2	1 × M.2 for Wi-Fi (E key, Type: 2230)
Memory	
Technology	DDR4 2133MHz SDRAM
Max.	16GB
Socket	1 × SO-DIMM
Graphics	
Controller	By CPU
VRAM	Shared Memory
VGA	1
LVDS	No
HDMI	2 (Support HDMI 1.4a)
Multi Display	Yes
Ethernet	
Interface	10/100/1000Mbps
Controller	2 × Realtek Gigabit LAN
Connector	2 × RJ-45
Audio	
Controller	Realtek HD Audio
SATA	
Max. Data Transfer Rate	SATA 3.0 (6.0Gb/S)
Accessories	
Accessories	Cable for HDD, Cable for Serial Port

Rear I/O	
DC-IN	1
HDMI	2
VGA	1
Ethernet	2
USB	2 × USB 3.0
Audio	2 (Mic-in, Line-out)
Front I/O	
Power Button	1
LED	1 × Power LED, 1 × HDD LED
USB	2 × USB 3.0, 4 × USB 2.0
Serial Port	1 × RS-232
Internal Connector	
TPM	1 (Option)
VGA Header	1, 2 × 5Pin, Pitch 2.0mm
Serial Port	5, 2 × 5Pin, Pitch 2.0mm COM3/COM4 support 5V/12V
RS-485	COM3/4 can be set up as RS-485
SATA	1 × SATA 3.0 (6.0Gb/S), 1, Only for Corei5/i7(Option)
SATA PWR Connector	1, 1 × 4Pin, Pitch PH2.0mm
SIM Slot	1
AutoStart Jumper	Yes, 1 × 3Pin, Pitch 2.54mm
Clear CMOS Jumper	Yes, 1 × 3Pin, Pitch 2.0mm
GPIO Header	1, 2 × 5Pin, Pitch 2.0mm
USB Header	1, 1 × 4Pin, Pitch 2.54mm
Front Panel Header	1, 2 × 5Pin, Pitch 2.54mm
Speakers Header	1, 2 × 5Pin, Pitch 2.54mm
Power Header	1, 1 × 2Pin, Pitch 3.5mm, Phoenix 2Pin (Option)
Watchdog Timer	
Output	From Super I/O to Drag RESETCON#
Interval	256 Segments, 0, 1, 2, 3, ..., 255 sec/min
Power Requirement	
Input PWR	12V DC in, 5.5mm/2.5mm
Environment	
Operating Temperature	0-50 °C
OS Support	
OS	Windows 10, Linux Windows 7 (Only for 6th Gen Skylake)

# Ordering and Specifications Information

Quick Order Model: MB4U267-0651

Ordering Code	Code Name	Processor Type	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Processor Graphics	TDP
MB4U267-0611	Skylake	Celeron	3855U	2	2	1.6GHz	/	2M	Intel HD 510	15W
MB4U267-0612	Skylake	Celeron	3955U	2	2	2.0GHz	/	2M	Intel HD 510	15W
MB4U267-0631	Skylake	Core i3	6100U	2	4	2.3GHz	/	3M	Intel HD 520	15W
MB4U267-0651	Skylake	Core i5	6200U	2	4	2.3GHz	2.8GHz	3M	Intel HD 520	15W
MB4U267-0671	Skylake	Core i7	6500U	2	4	2.5GHz	3.1GHz	4M	Intel HD 520	15W
MB4U267-0711	Kaby Lake	Celeron	3865U	2	2	1.8GHz	/	2M	Intel HD 610	15W
MB4U267-0712	Kaby Lake	Celeron	3965U	2	2	2.2GHz	/	2M	Intel HD 610	15W
MB4U267-0731	Kaby Lake	Core i3	7100U	2	4	2.4GHz	/	3M	Intel HD 620	15W
MB4U267-0751	Kaby Lake	Core i5	7200U	2	4	2.5GHz	3.1GHz	3M	Intel HD 620	15W
MB4U267-0771	Kaby Lake	Core i7	7500U	2	4	2.7GHz	3.5GHz	4M	Intel HD 620	15W
MB4U267-0811	Kaby Lake R	Celeron	3867U	2	2	1.8GHz	/	2M	Intel HD 610	15W
MB4U267-0821	Kaby Lake R	Pentium	4417U	2	2	2.3GHz	/	2M	Intel HD 610	15W
MB4U267-0831	Kaby Lake R	Core i3	8130U	2	4	2.0GHz	3.40GHz	4M	Intel UHD 620	15W
MB4U267-0851	Kaby Lake R	Core i5	8250U	4	8	1.6GHz	3.4GHz	6M	Intel UHD 620	15W
MB4U267-0871	Kaby Lake R	Core i7	8550U	4	8	1.8GHz	4.0GHz	8M	Intel UHD 620	15W



# MB4U260-0900 Series

## Main Features

- Intel 8<sup>th</sup> Whiskey Lake-U Processor
- Intel 8<sup>th</sup> Coffee Lake-U Processor
- Intel 10<sup>th</sup> Comet Lake-U Processor
- 1 × Display Port, 1 × HDMI, 1 × VGA
- 4 × USB 3.0, 4 × USB 2.0
- 2 × M.2, 1 × Mini-PCIe, 1 × SATA 3.0
- 6 × RS-232, 1 × PS/2
- 2 × Intel I225-V/I226-V 2.5 Gigabit LAN

## Specifications

Processor System	
Dimension	165 × 115mm
CPU	<ul style="list-style-type: none"> <li>• Intel 8<sup>th</sup> Whiskey Lake-U Processor</li> <li>• Intel 8<sup>th</sup> Coffee Lake-U Processor</li> <li>• Intel 10<sup>th</sup> Comet Lake-U Processor</li> </ul>
Core Number	By CPU
Max. Speed	By CPU
L2 Cache	By CPU
Chipset	By CPU
BIOS	UEFI
Expansion Slot	
Mini-PCIe	1 × Mini PCIe, Half-length Mini PCIe for Wi-Fi, Full-length Mini PCIe for 4G by Default
M.2	1 × M.2 for SSD (M key, Type: 2280)
M.2	1 × M.2 for Wi-Fi (E key, Type: 2230)
Memory	
Technology	DDR4 2133/2400MHz SDRAM
Max.	32GB
Socket	1 × SO-DIMM
Graphics	
Controller	By CPU
VRAM	Shared Memory
VGA	1
Display Port	1
HDMI	1 (Support HDMI 1.4a)
Multi Display	Yes
Ethernet	
Interface	100/1000/2500Mbps
Controller	2 × Intel I225-V/I226-V 2.5 Gigabit LAN
Connector	2 × RJ-45
Audio	
Controller	Realtek HD Audio
SATA	
Max. Data Transfer Rate	SATA 3.0 (6.0Gb/S)
Accessories	
Accessories	Cable for HDD

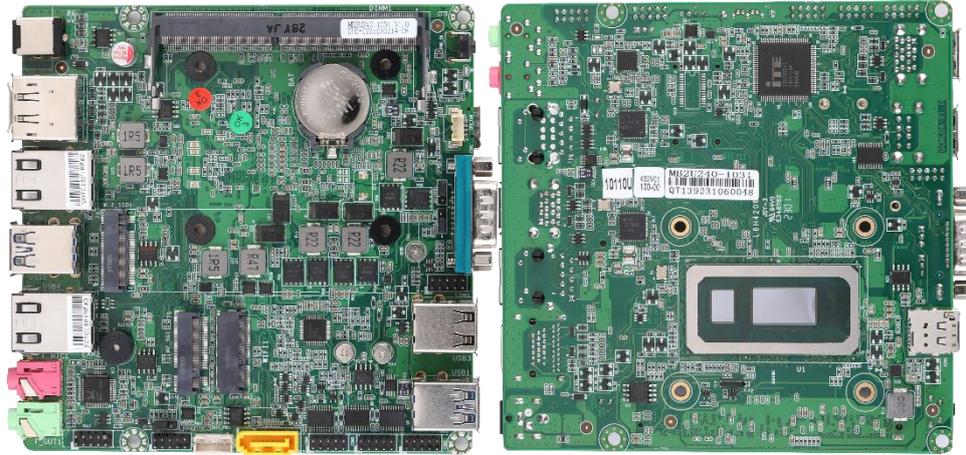
Front I/O	
Power Button	1
Serial Port	6 × RS-232
USB	2 × USB 2.0, <b>Not for 5405U</b>
Real I/O	
DC-IN	1
Display Port	1
HDMI	1
Ethernet	2
USB	4 × USB 3.0, 2 × USB 2.0
PS/2	1 (Mouse or Keyboard)
Audio	2 (Mic-in, Line-out)
Internal Connector	
Serial Port	COM1/COM2 support 5V/12V
RS-485	COM1/2 can be set up as RS-485
SATA	1, SATA 3.0 (6.0Gb/S)
SATA PWR Connector	1, 1 × 4Pin, Pitch PH2.0mm
SIM Slot	1
AutoStart Jumper	Yes, 1 × 3Pin, Pitch 2.0mm
Clear CMOS Jumper	Yes, 1 × 3Pin, Pitch 2.0mm
GPIO Header	1, 2 × 5Pin, Pitch 2.0mm
GPIO Power Select	Yes, 1 × 3Pin, Pitch 2.0mm
USB Header	1, 1 × 4Pin, Pitch 2.54mm
Front Panel Header	1, 2 × 5Pin, Pitch 2.54mm
Speakers Header	1, 2 × 5Pin, Pitch 2.54mm
Power Header	1, 1 × 2Pin, Pitch 3.5mm, Phoenix 2Pin (Option)
Watchdog Timer	
Output	From Super I/O to Drag RESETCON#
Interval	256 Segments, 0,1,2,3,,,255 sec/min
Power Requirement	
Input PWR	12V DC in, 5.5mm/2.5mm
Environment	
Operating Temperature	0-50 °C
OS Support	
OS	Windows 10, Linux

# Ordering and Specifications Information

Quick Order Model: MB4U260-0912

Ordering Code	Code Name	Processor Type	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Processor Graphics	TDP
<b>MB4U260-0912</b>	Whiskey Lake	Celeron	4305U	2	2	2.2GHz	/	2M	Intel UHD Graphics	15W
<b>MB4U260-0921</b>	Whiskey Lake	Pentium	5405U	2	4	2.3GHz	/	2M	Intel UHD Graphics	15W
<b>MB4U260-0931</b>	Whiskey Lake	Core i3	8145U	2	4	2.1GHz	3.9GHz	4M	Intel UHD Graphics	15W
<b>MB4U260-0951</b>	Whiskey Lake	Core i5	8265U	4	8	1.6GHz	3.9GHz	6M	Intel UHD Graphics	15W
<b>MB4U260-0971</b>	Whiskey Lake	Core i7	8565U	4	8	1.8GHz	4.6GHz	8M	Intel UHD Graphics	15W
<b>MB4U260-0952</b>	Coffee Lake	Core i5	8260U	4	8	1.6GHz	3.9GHz	6M	Intel UHD Graphics 620	15W
<b>MB4U260-1011</b>	Comet Lake	Celeron	5205U	2	2	1.9GHz	/	2M	Intel UHD Graphics	15W
<b>MB4U260-1012</b>	Comet Lake	Celeron	5305U	2	2	2.3GHz	/	2M	Intel UHD Graphics	15W
<b>MB4U260-1021</b>	Comet Lake	Pentium	6405U	2	4	2.4GHz	/	2M	Intel UHD Graphics	15W
<b>MB4U260-1031</b>	Comet Lake	Core i3	10110U	2	4	2.1GHz	4.1GHz	4M	Intel UHD Graphics	15W
<b>MB4U260-1051</b>	Comet Lake	Core i5	10210U	4	8	1.6GHz	4.2GHz	6M	Intel UHD Graphics	15W
<b>MB4U260-1071</b>	Comet Lake	Core i7	10610U	4	8	1.8GHz	4.9GHz	8M	Intel UHD Graphics	15W
<b>MB4U260-1072</b>	Comet Lake	Core i7	10810U	6	12	1.1GHz	4.9GHz	12M	Intel UHD Graphics	15W
<b>MB4U260-1073</b>	Comet Lake	Core i7	10710U	6	12	1.1GHz	4.7GHz	12M	Intel UHD Graphics	15W

# MB2U240-0900 Series



## Main Features

- Intel 8<sup>th</sup> Whiskey Lake-U Processor
- Intel 8<sup>th</sup> Coffee Lake-U Processor
- Intel 10<sup>th</sup> Comet Lake-U Processor
- 1 × Display Port, 1 × HDMI, 1 × VGA (Header)
- 4 × USB 3.0, 2 × USB 2.0
- 3 × M.2, 1 × SATA 3.0
- 4 × RS-232
- 2 × Intel I225-V/I226-V 2.5 Gigabit LAN

## Specifications

Processor System	
Dimension	120 × 120mm
CPU	<ul style="list-style-type: none"> <li>• Intel 8<sup>th</sup> Whiskey Lake-U Processor</li> <li>• Intel 8<sup>th</sup> Coffee Lake-U Processor</li> <li>• Intel 10<sup>th</sup> Comet Lake-U Processor</li> </ul>
Core Number	By CPU
Max. Speed	By CPU
L2 Cache	By CPU
Chipset	By CPU
BIOS	UEFI
Expansion Slot	
M.2	1 × M.2 for SSD (M key, Type: 2280)
M.2	1 × M.2 for 4G/5G (B key, Type: 3042/3052), <b>4205U,5405U,5205U,5305U don't support 5G</b>
M.2	1 × M.2 for Wi-Fi (E key, Type: 2230)
Memory	
Technology	DDR4 2133/2400MHz SDRAM
Max.	32GB
Socket	1 × SO-DIMM
Graphics	
Controller	By CPU
VRAM	Shared Memory
VGA	1
Display Port	1
HDMI	1 (Support HDMI 1.4a)
Multi Display	Yes
Ethernet	
Interface	100/1000/2500Mbps
Controller	2 × Intel I225-V/I226-V 2.5 Gigabit LAN
Connector	2 × RJ-45
Audio	
Controller	Realtek HD Audio
SATA	
Max. Data Transfer Rate	SATA 3.0 (6.0Gb/s)
Accessories	
Accessories	Cable for HDD, Cable for Serial Port

Front I/O	
Power Button	1
LED	1 × Power LED, 1 × HDD LED
Serial Port	1 × RS-232
USB	2 × USB 3.0, 2 × USB 2.0
SIM Slot	1
Real I/O	
DC-IN	1
Display Port	1
HDMI	1
Ethernet	2
USB	2 × USB 3.0
Audio	2 (Mic-in, Line-out)
Internal Connector	
TPM	1 (Option)
VGA Header	1, 2 × 5Pin, Pitch 2.0mm
Serial Port	3, 2 × 5Pin, Pitch 2.0mm
SATA	1, SATA 3.0 (6.0Gb/s)
SATA PWR Connector	1, 1 × 4Pin, Pitch PH2.0mm
AutoStart Jumper	Yes, 1 × 3Pin, Pitch 2.0mm
Clear CMOS Jumper	Yes, 1 × 3Pin, Pitch 2.0mm
GPIO Header	1, 2 × 5Pin, Pitch 2.0mm
GPIO Power Select	Yes, 1 × 3Pin, Pitch 2.0mm
USB Header	0
Front Panel Header	1, 2 × 5Pin, Pitch 2.0mm
Power Header	1, 1 × 2Pin, Pitch 3.5mm, Phoenix 2Pin (Option)
Watchdog Timer	
Output	From Super I/O to Drag RESETCON#
Interval	256 Segments, 0, 1, 2, 3, ..., 255 sec/min
Power Requirement	
Input PWR	12V DC in, 5.5mm/2.5mm
Environment	
Operating Temperature	0-50 °C
OS Support	
OS	Windows 10, Linux

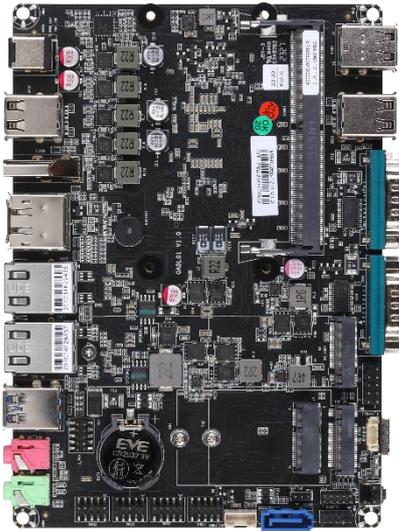
# Ordering and Specifications Information

Quick Order Model: MB2U240-0912

Ordering Code	Code Name	Processor Type	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Processor Graphics	TDP
<b>MB2U240-0912</b>	Whiskey Lake	Celeron	4305U	2	2	2.2GHz	/	2M	Intel UHD Graphics	15W
<b>MB2U240-0921</b>	Whiskey Lake	Pentium	5405U	2	4	2.3GHz	/	2M	Intel UHD Graphics	15W
<b>MB2U240-0931</b>	Whiskey Lake	Core i3	8145U	2	4	2.1GHz	3.9GHz	4M	Intel UHD Graphics	15W
<b>MB2U240-0951</b>	Whiskey Lake	Core i5	8265U	4	8	1.6GHz	3.9GHz	6M	Intel UHD Graphics	15W
<b>MB2U240-0971</b>	Whiskey Lake	Core i7	8565U	4	8	1.8GHz	4.6GHz	8M	Intel UHD Graphics	15W
<b>MB2U240-0952</b>	Coffee Lake	Core i5	8260U	4	8	1.6GHz	3.9GHz	6M	Intel UHD Graphics 620	15W
<b>MB2U240-1011</b>	Comet Lake	Celeron	5205U	2	2	1.9GHz	/	2M	Intel UHD Graphics	15W
<b>MB2U240-1012</b>	Comet Lake	Celeron	5305U	2	2	2.3GHz	/	2M	Intel UHD Graphics	15W
<b>MB2U240-1021</b>	Comet Lake	Pentium	6405U	2	4	2.4GHz	/	2M	Intel UHD Graphics	15W
<b>MB2U240-1031</b>	Comet Lake	Core i3	10110U	2	4	2.1GHz	4.1GHz	4M	Intel UHD Graphics	15W
<b>MB2U240-1051</b>	Comet Lake	Core i5	10210U	4	8	1.6GHz	4.2GHz	6M	Intel UHD Graphics	15W
<b>MB2U240-1071</b>	Comet Lake	Core i7	10610U	4	8	1.8GHz	4.9GHz	8M	Intel UHD Graphics	15W
<b>MB2U240-1072</b>	Comet Lake	Core i7	10810U	6	12	1.1GHz	4.9GHz	12M	Intel UHD Graphics	15W
<b>MB2U240-1073</b>	Comet Lake	Core i7	10710U	6	12	1.1GHz	4.7GHz	12M	Intel UHD Graphics	15W

## Custom Options

Category	Description
USB 2.0	2



# MB4U26B-1200 Series

## Main Features

- Intel 12<sup>th</sup> Alder Lake-P Processor
- Intel 13<sup>th</sup> Raptor Lake-P Processor
- 1 × Display Port, 2 × HDMI, 1 × VGA (Header)
- 6 × RS-232, 2 × RS-485
- 3 × USB 3.0, 5 × USB 2.0, 1 × SATA 3.0
- 1 × Mini-PCIe, 2 × M.2
- 2 × Intel I225-V/I226-V 2.5 Gigabit LAN

## Specifications

Processor System	
Dimension	165 × 115mm
CPU	• Intel 12 <sup>th</sup> Alder Lake-P Processor • Intel 13 <sup>th</sup> Raptor Lake-P Processor
Core Number	By CPU
Max. Speed	By CPU
L2 Cache	By CPU
Chipset	By CPU
BIOS	UEFI
Expansion Slot	
M.2	1 × M.2 for SSD (M key, Type: 2280, PCIe 4.0 × 4)
M.2	1 × M.2 for 4G/5G (B key, Type: 3042/3052)
M.2	1 × M.2 for Wi-Fi (E key, Type: 2230)
Memory	
Technology	DDR4 2133MHz SDRAM
Max.	32GB
Socket	1 × SO-DIMM
Graphics	
Controller	By CPU
VRAM	Shared Memory
VGA	1 (Header)
Display Port	1
HDMI	2 (Support HDMI 1.4a)
Multi Display	Yes
Ethernet	
Interface	100/1000/2500Mbps
Controller	2 × Intel I225-V/I226-V 2.5 Gigabit LAN
Connector	2 × RJ-45
Audio	
Controller	Realtek HD Audio
SATA	
Max. Data Transfer Rate	SATA 3.0 (6.0Gb/S)
Accessories	
Accessories	Cable for HDD, Cable for Serial Port

Rear I/O	
DC-IN	1
USB	2 × USB 3.0, 2 × USB 2.0
HDMI	2
Display Port	1
Ethernet	2
Audio	2 (Mic-in, Line-out)
Front I/O	
Power Button	1
LED	1 × Power LED, 1 × HDD LED
USB	1 × USB 3.0, 3 × USB 2.0
Serial Port	2 × RS-232
Internal Connector	
TPM	1 (Option)
VGA Header	1, 2 × 5Pin, Pitch 2.0mm
Serial Port	4, 2 × 5Pin, Pitch 2.0mm, COM1/2 Support 5V/12V
RS-485	COM1/2 can be set up as RS-485
PS/2	1, 2 × 5Pin, Pitch 2.0mm
SATA	1, SATA 3.0 (6.0Gb/S)
SATA PWR Connector	1, 1 × 4Pin, Pitch PH2.0mm
AutoStart Jumper	Yes, 1 × 3Pin, Pitch 2.0mm
Clear CMOS Jumper	Yes, 1 × 3Pin, Pitch 2.0mm
GPIO Header	1, 2 × 5Pin, Pitch 2.0mm
Front Panel Header	1, 2 × 5Pin, Pitch 2.54mm
Power Header	1, 1 × 2Pin, Pitch 3.5mm, Phoenix 2Pin (Option)
Watchdog Timer	
Output	From Super I/O to Drag RESETCON#
Interval	256 Segments, 0, 1, 2, 3, ..., 255 sec/min
Power Requirement	
Input PWR	12V/19V DC in, 5.5mm/2.5mm
Environment	
Operating Temperature	0-50 °C
OS Support	
OS	UEFI Windows 10, UEFI Linux

# Ordering and Specifications Information

Quick Order Model: MB4U26B-1231

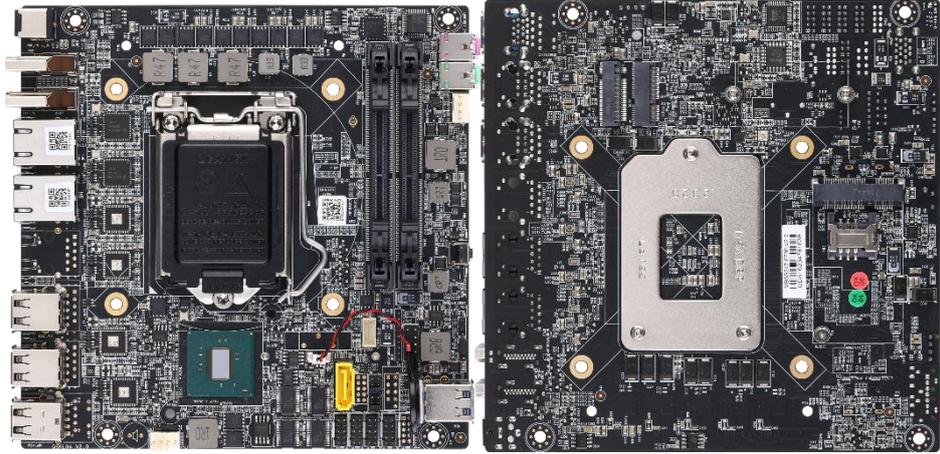
Ordering Code	MB4U26B-1211	MB4U26B-1221	MB4U26B-1231	MB4U26B-1251	MB4U26B-1271
Code Name	Alder Lake U	Alder Lake U	Alder Lake U	Alder Lake U	Alder Lake U
Processor Type	Celeron	Pentium	Core i3	Core i5	Core i7
Processor Number	7305	8505	1215U	1235U	1255U
Total Cores	5	5	6	10	10
# of Performance-cores	1	1	2	2	2
# of Efficient-cores	4	4	4	8	8
# of Threads	5	6	8	12	12
Max Turbo Frequency	-	4.40 GHz	4.40 GHz	4.40 GHz	4.70 GHz
Performance-core Base Frequency	1.10 GHz	1.20 GHz	1.20 GHz	1.30 GHz	1.70 GHz
Performance-core Max Turbo Frequency	-	4.40 GHz	4.40 GHz	4.40 GHz	4.70 GHz
Efficient-core Base Frequency	0.9 GHz	0.9 GHz	0.9 GHz	0.9 GHz	1.20 GHz
Efficient-core Max Turbo Frequency	-	3.30 GHz	3.30 GHz	3.30 GHz	3.50 GHz
Cache	8M	8M	10M	12M	12M
Processor Graphics	Intel UHD Graphics	Intel UHD Graphics	Intel UHD Graphics	Intel Iris Xe Graphics eligible	Intel Iris Xe Graphics eligible
TDP	15-55W	15-55W	15-55W	15-55W	15-55W

Ordering Code	MB4P26B-1231	MB4P26B-1251	MB4P26B-1271
Code Name	Alder Lake P	Alder Lake P	Alder Lake P
Processor Type	Core i3	Core i5	Core i7
Processor Number	1220P	1240P	1260P
Total Cores	10	12	12
# of Performance-cores	2	4	4
# of Efficient-cores	8	8	8
# of Threads	12	16	16
Max Turbo Frequency	4.40 GHz	4.40 GHz	4.70 GHz
Performance-core Base Frequency	1.50 GHz	1.70 GHz	2.10 GHz
Performance-core Max Turbo Frequency	4.40 GHz	4.40 GHz	4.70 GHz
Efficient-core Base Frequency	1.10 GHz	1.20 GHz	1.50 GHz
Efficient-core Max Turbo Frequency	3.30 GHz	3.30 GHz	3.40 GHz
Cache	12M	12M	18M
Processor Graphics	Intel UHD Graphics	Intel Iris Xe Graphics eligible	Intel Iris Xe Graphics eligible
TDP	28-64W	28-64W	28-64W

# Ordering and Specifications Information

Quick Order Model: MB4U26B-1231

Ordering Code	MB4H26B-1231	MB4H26B-1251	MB4H26B-1271	MB4H26B-1291
Code Name	Alder Lake H	Alder Lake H	Alder Lake H	Alder Lake H
Processor Type	Core i3	Core i5	Core i7	Core i9
Processor Number	12300HE	12450H	12650H	12900H
Total Cores	8	8	10	14
# of Performance-cores	4	4	6	6
# of Efficient-cores	4	4	4	8
# of Threads	12	12	16	20
Max Turbo Frequency		4.40 GHz	4.70 GHz	5.00 GHz
Performance-core Base Frequency	1.90 GHz	2.00 GHz	2.30 GHz	2.50 GHz
Performance-core Max Turbo Frequency	4.30 GHz	4.40 GHz	4.70 GHz	5.00 GHz
Efficient-core Base Frequency	1.90 GHz	1.50 GHz	1.70 GHz	1.80 GHz
Efficient-core Max Turbo Frequency	3.30 GHz	3.30 GHz	3.50 GHz	3.80 GHz
Cache	12M	12M	24M	24M
Processor Graphics	Intel UHD Graphics	Intel UHD Graphics	Intel Iris Xe Graphics eligible	Intel Iris Xe Graphics eligible
TDP	45-115W	45-95W	45-115W	45-115W



# MB5S247-0700 Series

## Main Features

- Intel 6<sup>th</sup> Skylake-S Processor
- Intel 7<sup>th</sup> KabyLake-S Processor
- Intel 8<sup>th</sup> Coffee Lake-S Processor
- Intel 9<sup>th</sup> Coffee Lake-R-S Processor
- 2 × HDMI, 1 × VGA (Header)
- 4 × RS-232, 2 × RS-485
- 3 × USB 3.0, 5 × USB 2.0, 1 × SATA 3.0
- 1 × Mini-PCIe, 2 × M.2
- 2 × Intel I211-AT/I210-AT Gigabit LAN

## Specifications

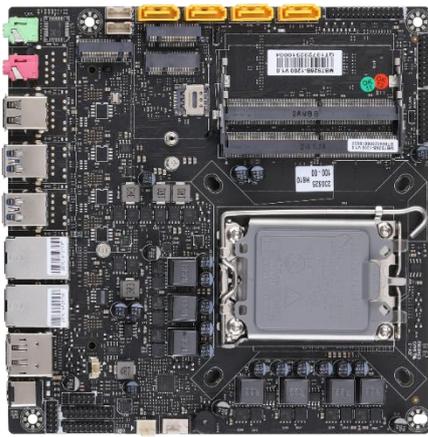
Processor System	
Dimension	155 × 155mm
CPU	<ul style="list-style-type: none"> <li>• Intel 6<sup>th</sup> Skylake-S Processor</li> <li>• Intel 7<sup>th</sup> KabyLake-S Processor</li> <li>• Intel 8<sup>th</sup> Coffee Lake-S Processor</li> <li>• Intel 9<sup>th</sup> Coffee Lake-R-S Processor</li> </ul>
Core Number	By CPU
Max. Speed	By CPU
L2 Cache	By CPU
Chipset	Intel H110
Expansion Slot	
Mini-PCIe	1 × Mini PCIe, Half-length Mini PCIe for Wi-Fi, Full-length Mini PCIe for 4G by Default
M.2	1 × M.2 for SSD (M key, Type: 2280)
M.2	1 × M.2 for Wi-Fi (E key, Type: 2230)
Memory	
Technology	DDR4 2133MHz SDRAM
Max.	64GB
Socket	2 × SO-DIMMs
Graphics	
Controller	By CPU
VRAM	Shared Memory
VGA	1 (Option)
HDMI	2 (Support HDMI 1.4a)
Multi Display	Yes
Ethernet	
Interface	10/100/1000Mbps
Controller	2x Intel I211-AT/I210-AT Gigabit LAN
Connector	2 × RJ-45
Audio	
Controller	Realtek HD Audio
SATA	
Max. Data Transfer Rate	SATA 3.0 (6.0Gb/S)
Accessories	
Accessories	Cable for HDD, Cable for Serial Port

Rear I/O	
DC-IN	1
HDMI	2
Ethernet	2
USB	1 × USB 3.0, 5 × USB 2.0
Front I/O	
Power Button	1
LED	1 × Power LED, 1 × HDD LED
USB	2 × USB 3.0
Audio	2 (Mic-in, Line-out)
Internal Connector	
TPM	1 (Option)
VGA Header	1, 2 × 5Pin, Pitch 2.0mm (Option)
Serial Port	4, 2 × 5Pin, Pitch 2.0mm, COM1/2 Support 5V/12V
RS-485	COM1/2 can be set up as RS-485
SATA	1, SATA 3.0 (6.0Gb/S)
SATA PWR Connector	1, 1 × 4Pin, Pitch PH2.0mm
SIM Slot	1
AutoStart Jumper	Yes, 1 × 3Pin, Pitch 2.54mm
Clear CMOS Jumper	Yes, 1 × 3Pin, Pitch 2.0mm
GPIO Header	1, 2 × 5Pin, Pitch 2.0mm
USB Header	1, 2 × 5Pin, Pitch 2.54mm
Front Panel Header	1, 2 × 5Pin, Pitch 2.0mm
Power Header	1, 1 × 2Pin, Pitch 4.2mm (Option)
Watchdog Timer	
Output	From Super I/O to Drag RESETCON#
Interval	256 Segments, 0, 1, 2, 3, ..., 255 sec/min
Power Requirement	
Input PWR	12V DC in, 5.5mm/2.5mm
Environment	
Operating Temperature	0-50 °C
OS Support	
OS	Windows 10, Linux Windows 7 (Only for 6th Gen Skylake)

# Ordering and Specifications Information

Quick Order Model: MB5S247-0700

Ordering Code	Code Name	Processor Type	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Processor Graphics	TDP
	Skylake	Celeron	G3900	2	2	2.8GHz	/	2M	Intel HD 510	51W
	Skylake	Pentium	G4500	2	2	3.5GHz	/	3M	Intel HD 530	51W
	Skylake	Core i3	6100	2	4	3.7GHz	/	3M	Intel HD 530	51W
	Skylake	Core i5	6400	4	4	2.7GHz	3.3GHz	6M	Intel HD 530	65W
	Kaby Lake	Celeron	G3930	2	2	2.9GHz	/	2M	Intel HD 610	51W
	Kaby Lake	Pentium	G4560	2	4	3.5GHz	/	3M	Intel HD 610	54W
	Kaby Lake	Core i3	7100	2	4	3.9GHz	/	3M	Intel HD 630	51W
	Kaby Lake	Core i5	7500	4	4	3.4GHz	3.8GHz	6M	Intel HD 630	65W
	Coffee Lake	Celeron	G4900	2	2	3.1GHz	/	2M	Intel® UHD Graphics 610	54W
	Coffee Lake	Pentium	G5400	2	4	3.7GHz	/	4M	Intel® UHD Graphics 610	58W
	Coffee Lake	Core i3	8100	4	4	3.6GHz	/	6M	Intel® UHD Graphics 630	65W
	Coffee Lake	Core i5	8400	6	6	2.9GHz	4.1GHz	9M	Intel® UHD Graphics 630	65W
	Coffee Lake	Celeron	G4930	2	2	3.2GHz	/	2M	Intel® UHD Graphics 610	54W
	Coffee Lake	Pentium	G5420	2	4	3.8GHz	/	4M	Intel® UHD Graphics 610	54W
	Coffee Lake	Core i3	9100	4	4	3.6GHz	4.2GHz	6M	Intel® UHD Graphics 630	65W
	Coffee Lake	Core i5	9400	6	6	2.9GHz	4.1GHz	9M	Intel® UHD Graphics 630	65W



# MB7S26B-1200 Series

## Main Features

- Intel 12<sup>th</sup> Alder lake -S Processor
- Intel 13<sup>th</sup> Raptor Lake-S Processor
- 1 × HDMI, 1 × Display Port, 1 × VGA (Header)
- 6 × RS-232, 2 × RS-485
- 4 × USB 3.0, 2 × USB 2.0
- 3 × M.2, 4 × SATA 3.0
- 2 × Intel I225-V/I226-V 2.5 Gigabit LAN

## Specifications

### Processor System

Dimension	170 × 170mm
CPU	• Intel 12 <sup>th</sup> Alder lake -S Processor • Intel 13 <sup>th</sup> Raptor Lake-S Processor
Core Number	By CPU
Max. Speed	By CPU
L2 Cache	By CPU
Chipset	Intel H610
BIOS	UEFI

### Expansion Slot

M.2	1 × M.2 for SSD (M key, Type: 2280, PCIe 4.0 × 4)
M.2	1 × M.2 for 4G/5G (B key, Type: 3042/3052), 5G Defaults to PCIe Mode, USB 3.0 Mode Requires Customization
M.2	1 × M.2 for Wi-Fi (E key, Type: 2230)

### Memory

Technology	DDR4 2400Mhz SDRAM
Max.	64GB
Socket	2 × SO-DIMMs

### Graphics

Controller	By CPU
VRAM	Shared Memory
VGA	1 (Header)
Display Port	1
HDMI	1 (Support HDMI 1.4a)
EDP	1
Multi Display	Yes

### Ethernet

Interface	100/1000/2500Mbps
Controller	2 × Intel I225-V/I226-V 2.5 Gigabit LAN
Connector	2 × RJ-45

### Audio

Controller	Realtek HD Audio
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### SATA

Max. Data Transfer Rate	SATA 3.0 (6.0Gb/S)
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### Rear I/O

DC-IN	1
HDMI	1
Display Port	1
Ethernet	2
USB	4 × USB 3.0, 2 × USB 2.0
Audio	2 (Mic-in, Line-out)

### Internal Connector

TPM	1 (Option)
EDP	1, 2 × 15Pin, Pitch 1.0mm
VGA Header	1, 2 × 5Pin, Pitch 2.0mm
Serial Port	6, 2 × 5Pin, Pitch 2.0mm
RS-485	COM3/4 can be set up as RS-422/RS-485
PS/2	0
SATA	4, SATA 3.0 (6.0Gb/S)
SATA PWR Connector	2, 1 × 4Pin, Pitch PH2.0mm
SIM Slot	1
AutoStart Jumper	Yes, 1 × 3Pin, Pitch 2.0mm
Clear CMOS Jumper	Yes, 1 × 2Pin, Pitch 2.0mm
USB Header	1, 2 × 5Pin, Pitch 2.0mm
Front Panel Header	1, 2 × 5Pin, Pitch 2.0mm
Power Header	1, 1 × 2Pin, Pitch 5.0mm (Option)

### Watchdog Timer

Output	From Super I/O to Drag RESETCON#
Interval	256 Segments, 0, 1, 2, 3, ..., 255 sec/min

### Power Requirement

Input PWR	12V/19V DC in, 5.5mm/2.5mm
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### Environment

Operating Temperature	0-50 °C
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### Accessories

Accessories	Cable for HDD, Cable for Serial Port
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### OS Support

OS	UEFI Windows 10, UEFI Linux
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## Quick Order Model: MB7S26B-1200

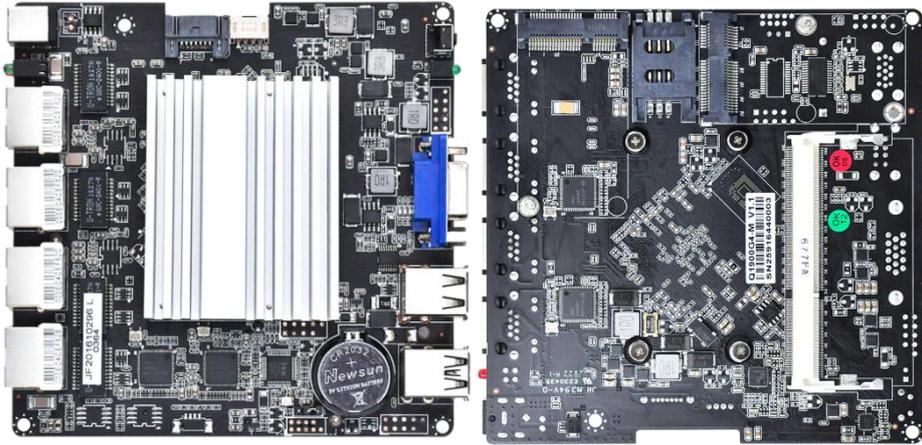
Ordering Code					
Code Name	Alder Lake S				
Processor Type	Celeron	Pentium	Core i3	Core i5	Core i7
Processor Number	G6900	G7400	12100	12400	12700
Total Cores	2	2	4	6	12
# of Performance-cores	2	2	4	6	8
# of Efficient-cores					4
# of Threads	2	4	8	12	20
Max Turbo Frequency			4.30 GHz	4.40 GHz	4.80 GHz
Performance-core Base Frequency	3.40 GHz	3.70 GHz	3.30 GHz	2.50 GHz	2.10 GHz
Performance-core Max Turbo Frequency	-	-	4.30 GHz	4.40 GHz	4.80 GHz
Efficient-core Base Frequency					1.60 GHz
Efficient-core Max Turbo Frequency					3.60 GHz
Cache	4M	6M	12M	18M	25M
Processor Graphics	Intel UHD Graphics 710	Intel UHD Graphics 710	Intel UHD Graphics 730	Intel UHD Graphics 730	Intel UHD Graphics 770
TDP	46W	46W	60W-89W	65W-117W	65W-180W

Ordering Code					
Code Name	Raptor Lake S	Raptor Lake S	Raptor Lake S	Raptor Lake S	Raptor Lake S
Processor Type	Celeron	Pentium	Core i3	Core i5	Core i7
Processor Number			13100	13400	13700
Total Cores			4	10	16
# of Performance-cores			4	6	8
# of Efficient-cores				4	8
# of Threads			8	16	24
Max Turbo Frequency			4.50 GHz	4.60 GHz	5.10 GHz
Performance-core Base Frequency			3.40 GHz	2.50 GHz	2.10 GHz
Performance-core Max Turbo Frequency			4.50 GHz	4.60 GHz	5.10 GHz
Efficient-core Base Frequency					1.50 GHz
Efficient-core Max Turbo Frequency					4.10 GHz
Cache			12M	20M	30M
Processor Graphics			Intel UHD Graphics 730	Intel UHD Graphics 730	Intel UHD Graphics 770
TDP			60W-110W	65-148W	65W-219W

# Multi-Network Port Series

NO.	New Series	Model	Code Name	Page No.	Default CPU	RJ45 1G	RJ45 2.5G	RJ45 10G	SFP+ 10G	RS-232	5G	LVDS EDP	Remark
1	MB2J401-0100	Q1900G4-M	Bay Trail	<a href="#">42</a>	J1900	4				1			
2	MB3J613-0100	MB3J613-0121		<a href="#">44</a>	J1900	6				1			
3	MB3J422-0400	Q3455G4-P	Apollo Lake	<a href="#">46</a>	J3455	4				2			
4	MB2J513-0500	MB2J513-0521	Gemini Lake Gemini Lake-R	<a href="#">48</a>	J4105		5			1			
5	MB2J400-0700	MB2J400-0722	Jasper Lake	<a href="#">50</a>	N5105	4				0	Yes		New
6	MB3J403-0800	MB3J403-0821	Elkhart Lake	<a href="#">52</a>	J6412	4				1	Yes		
7	MB2J510-0800	MB2J510-0821		<a href="#">54</a>	J6412		5			1	Yes		
8	MB3J407-0900	MB3J407-0922	Alder Lake-N Twin Lake-N	<a href="#">56</a>	N100		4			0	Yes		New
9	MB2J61A-0900	MB2J61A-0900		<a href="#">58</a>	N100		6			1	Yes		New
10	MB4J61Z-0900	MB4J61Z-0900		<a href="#">60</a>	N100		4	2		1	Yes		New
11	MB4J61X-0900	MB4J61X-0900		<a href="#">62</a>	N100		2	2	2	1			
12	MB4C911-0300	MB4C911-0332	Denverton	<a href="#">66</a>	C3758		5		4	1	Yes		
13	MB3U422-0400	Q5005UG4-M	Haswell Broadwell	<a href="#">68</a>	5005U	4				2			
14	MB3U422-0500	MB3U422-0531		<a href="#">70</a>	5005U	4				2			
15	MB4U863-0400	MB4U863-0531		<a href="#">72</a>	5005U	8				6			
16	MB3U623-0600	Q7100UG6-P	Skylake Kaby Lake	<a href="#">74</a>	7100U	6				2			
17	MB4U863-0600	MB4U863-0831	Skylake Kaby Lake	<a href="#">76</a>	8130U	8				6			
18	MB4U860-0600	MB4U860-0711	Skylake Kaby Lake Kaby Lake-R	<a href="#">78</a>	3865U	8				6			New
19	MB4U860-0900	MB4U860-0912	Whiskey Lake Coffee Lake Comet Lake	<a href="#">80</a>	4305U		8			6			
20	MB2U61A-0900	MB2U61A-0912		<a href="#">82</a>	4305U		6			1			
21	MB6U419-0900	MB6U419-0912		<a href="#">84</a>	4305U		4			1			
22	MB4U81Y-0900	MB4U81Y-0921		<a href="#">86</a>	5405U		6		2	1	Yes		New
23	MB6U40A-1100	MB6U40A-1151	Tiger Lake	<a href="#">90</a>	1135G7		4			1			New
24	MB7UT1X-1500	MB7UT1X-1551	Meteor Lake Arrow Lake	<a href="#">92</a>	125U		6	2	2	1	Yes		New
25	MB5S647-0700	MB5S647-0700	Skylake-S Kaby Lake-S Coffee Lake-S	<a href="#">96</a>	B150	6				4			
26	MB7S60A-1200	MB7S60A-1200	Alder Lake-S Raptor Lake-S	<a href="#">98</a>	H610		6			2	Yes	EDP	New

# MB2J401-0100 Series



## Main Features

- Intel Bay Trail Processor
- 1 × VGA
- 2 × USB 3.0, 2 × USB 2.0, 1 × SATA 3.0
- 1 × Mini-PCIe, 1 × mSATA
- 4 × Intel I211-AT/I210-AT Gigabit LAN

## Specifications

### Processor System

Dimension	120 × 120mm
CPU	Intel Bay Trail Processor
Core Number	By CPU
Max. Speed	By CPU
L2 Cache	By CPU
Chipset	By CPU
BIOS	UEFI

### Expansion Slot

Mini-PCIe	1 × Mini PCIe, Full-length Mini PCIe for 4G Half-length Mini PCIe for Wi-Fi by Default ( <b>Only for USB Device</b> )
mSATA	1 × Full-length Mini PCIe for SSD

### Memory

Technology	DDR3L 1333/1600MHz SDRAM
Max.	8GB
Socket	1 × SO-DIMM

### Graphics

Controller	By CPU
VRAM	Shared Memory
VGA	1
Multi Display	No

### Ethernet

Interface	10/100/1000Mbps
Controller	4 × Intel I211-AT/I210-AT Gigabit LAN
Connector	4 × RJ-45

### Audio

Controller	No
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### Rear I/O

DC-IN	1
LED	1 × Power LED, 1 × HDD LED
Ethernet	4

### Front I/O

Power Button	1
LED	1 × Power LED
VGA	1
USB	1 × USB 3.0, 3 × USB 2.0

### Internal Connector

Serial Port	1, 2 × 5Pin, Pitch 2.0mm (Option)
SATA	1, SATA 3.0 (6.0Gb/S)
SATA PWR Connector	1, 1 × 4Pin, Pitch PH2.0mm
SIM Slot	1
AutoStart Jumper	Yes, 1 × 3Pin, Pitch 2.54mm
USB Header	1, 2 × 5Pin, Pitch 2.54mm (Option)
Front Panel Header	1, 2 × 5Pin, Pitch 2.54mm (Option)
Power Header	1, 1 × 2Pin, Pitch 2.5mm (Option)

### Power Requirements

Input PWR	12V DC in, 5.5mm/2.5mm
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### Environment

Operating Temperature	0-50 °C
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### Accessories

Accessories	Cable for HDD
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### SATA

Max. Data Transfer Rate	SATA 3.0 (6.0Gb/S)
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### OS Support

OS	Windows 7, Windows 10, Linux
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## Ordering and Specifications Information

Quick Order Model: Q1900G4-M

Ordering Code	Code Name	Processor Type	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Processor Graphics	TDP
Q1800G4-M (MB2J401-0111)	Bay trail	Celeron	J1800	2	2	2.41Ghz	2.58Ghz	1M	Intel HD Graphics	10W
Q1900G4-M (MB2J401-0121)	Bay trail	Celeron	J1900	4	4	2.00Ghz	2.42Ghz	2M	Intel HD Graphics	7.5W
MB2J401-0122	Bay trail	Celeron	N2920	4	4	1.86Ghz	2.00Ghz	2M	Intel HD Graphics	7.5W
MB2J401-0123	Bay trail	Celeron	N2930	4	4	1.83Ghz	2.16Ghz	2M	Intel HD Graphics	7.5W
MB2J401-0125 (MB2J401-0134)	Bay trail	Pentium	N3540	4	4	2.16Ghz	2.66Ghz	2M	Intel HD Graphics	7.5W

# MB3J613-0100 Series

## Main Features

- Intel Bay Trail Processor
- 1 × HDMI, 1x RS-232 (RJ-45)
- 1 × USB 3.0, 3 × USB 2.0, 1 × SATA 3.0
- 1 × Mini-PCIe, 1 × mSATA
- 6 × Intel I211-AT/I210-AT Gigabit LAN



## Specifications

### Processor System

Dimension	148 × 104mm
CPU	Intel Bay Trail Processor
Core Number	By CPU
Max. Speed	By CPU
L2 Cache	By CPU
Chipset	By CPU
BIOS	UEFI

### Expansion Slot

Mini-PCIe	1 × Full-length Mini PCIe for 4G
mSATA	1 × Full-length Mini PCIe for SSD
M.2	1 × M.2 for Wi-Fi (E key, Type: 2230)

### Memory

Technology	DDR3L 1333/1600MHz SDRAM
Max.	8GB
Socket	1 × SO-DIMM

### Graphics

Controller	By CPU
VRAM	Shared Memory
HDMI	1
Multi Display	No

### Ethernet

Interface	10/100/1000Mbps
Controller	6 × Intel I211-AT/I210-AT Gigabit LAN
Connector	6 × RJ-45

### Audio

Controller	No
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### SATA

Max. Data Transfer Rate	SATA 3.0 (6.0Gb/S)
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### Accessories

Accessories	Cable for HDD
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### Rear I/O

DC-IN	1
USB	1 × USB 3.0, 1 × USB 2.0
Ethernet	6

### Front I/O

Power Button	1 × Power Button, 1 × Reset Button
LED	1 × Power LED, 1 × HDD LED
HDMI	1
Serial Port	1 × RS-232 (RJ-45)
SIM Slot	1
USB	2 × USB 2.0

### Internal Connector

VGA	1, 2 × 5Pin, Pitch 2.0mm (Option)
Serial Port	3, 2 × 5Pin, Pitch 2.0mm (Option)
RS-485	COM3/4 can be set up as RS-485 (Option)
SATA	1, SATA 3.0 (6.0Gb/S)
SATA PWR Connector	1
SIM Slot	0
AutoStart Jumper	Yes, 1 × 3Pin, Pitch 2.54mm
Clear CMOS Jumper	0
GPIO Header	1, 2 × 5Pin, Pitch 2.0mm
USB Header	1, 1 × 4Pin, Pitch 2.54mm
Front Panel Header	1, 2 × 5Pin, Pitch 2.54mm
Speakers Header	No
Power Header	1, 1 × 2Pin, Pitch 5.08mm (Option)

### Watchdog Timer

Output	From Super I/O to Drag RESETCON#
Interval	256 Segments, 0, 1, 2, 3, ..., 255 sec/min

### Power Requirement

Input PWR	12V DC in, 5.5mm/2.5mm
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### Environment

Operating Temperature	0-50 °C
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### OS Support

OS	Windows 7, Windows 10, Linux
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## Ordering and Specifications Information

Quick Order Model: MB3J613-0121

Ordering Code	Code Name	Processor Type	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Processor Graphics	TDP
MB3J613-0111	Bay trail	Celeron	J1800	2	2	2.41Ghz	2.58Ghz	1M	Intel HD Graphics	10W
MB3J613-0121	Bay trail	Celeron	J1900	4	4	2.00Ghz	2.42Ghz	2M	Intel HD Graphics	10W



# MB3J422-0400 Series

## Main Features

- Intel Apollo Lake Processor
- 1 × HDMI
- 2 × USB 3.0, 2 × USB 2.0
- 1 × mSATA, 1 × Mini-PCIe, 1 × SATA 3.0
- 4 × Intel WGI211-AT/I210-AT Gigabit LAN
- 4 × POE Out

## Specifications

### Processor System

Dimension	148 × 104mm
CPU	Intel Apollo Lake Processor
Core Number	By CPU
Max. Speed	By CPU
L2 Cache	By CPU
Chipset	By CPU
BIOS	UEFI

### Expansion Slot

mSATA	1 × Full-length Mini PCIe for SSD
Mini-PCIe	1 × Full-length Mini PCIe for 4G

### Memory

Technology	DDR3 1333/1600MHz SDRAM
Max.	8GB
Socket	1 × SO-DIMM

### Graphics

Controller	By CPU
VRAM	Shared Memory
VGA	1 (Option)
HDMI	1 (Support HDMI 1.4a)
Multi Display	Yes

### Ethernet

Interface	10/100/1000Mbps
Controller	4 × Intel I211-AT/I210-AT Gigabit LAN (With POE)
Connector	4 × RJ-45

### Audio

Controller	No
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### SATA

Max. Data Transfer Rate	SATA 3.0 (6.0Gb/S)
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### Accessories

Accessories	Cable for HDD
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### Rear I/O

Ethernet	4
DC-IN 1	1, 12V
DC-IN 2	1, 48V Mini Din

### Front I/O

Power Button	1 × Power Button, 1 × Reset Button
HDMI	1
LED	1 × Power LED, 1 × HDD LED
USB	2 × USB 3.0, 2 × USB 2.0
Serial Port	1 × Connector, RS-232 (RJ-45) by Default RS-232 (DB9) (Option)

### Internal Connector

VGA Header	1, 2 × 5Pin, Pitch 2.0mm (Option)
Serial Port	3, 2 × 5Pin, Pitch 2.0mm (Option)
RS-485	0
SATA	1, SATA 3.0 (6.0Gb/S)
SATA PWR Connector	1, 1 × 4Pin, Pitch PH2.0mm
SIM Slot	1
AutoStart Jumper	No
Clear CMOS Jumper	Yes, 1 × 3Pin, Pitch 2.0mm
GPIO Header	1, 2 × 5Pin, Pitch 2.0mm
USB Header	1, 2 × 5Pin, Pitch 2.54mm
Front Panel Header	1, 2 × 5Pin, Pitch 2.54mm
Power Header	1, 12V, 1 × 2Pin, Pitch 5.08mm (Option)
Power Header	1, 48V, 1 × 2Pin, Pitch 5.08mm (Option)

### Watchdog Timer

Output	From Super I/O to Drag RESETCON#
Interval	256 Segments, 0, 1, 2, 3, ..., 255 sec/min

### Power Requirement

Input PWR	12V DC in, 5.5mm/2.5mm 48V Mini Din DC in
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### Environment

Operating Temperature	0-50 °C
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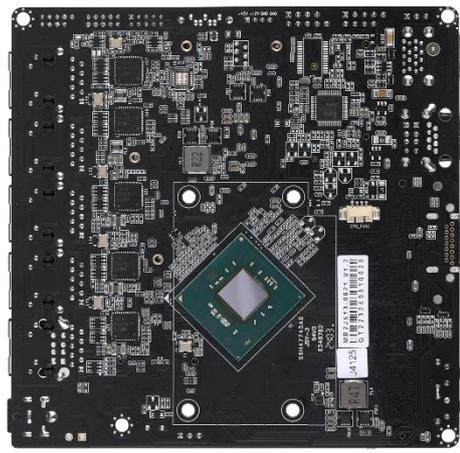
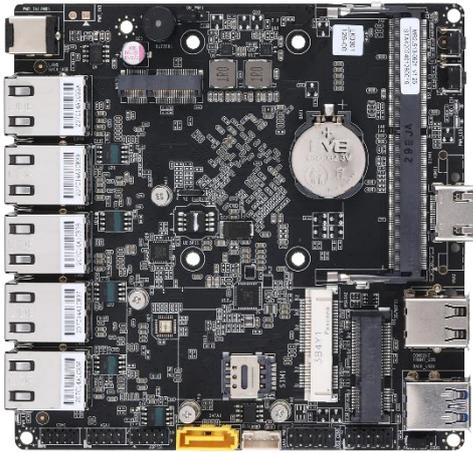
### OS Support

OS	Windows 10, Linux
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## Ordering and Specifications Information

Quick Order Model: Q3455G4-P

Ordering Code	Code Name	Processor Type	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Processor Graphics	TDP
<b>Q3355G4-P</b> (MB3/422-0411)	Apollo Lake	Celeron	J3355	2	2	2.00Ghz	2.50Ghz	2M	Intel HD 500	10W
<b>Q3455G4-P</b> (MB3/422-0421)	Apollo Lake	Celeron	J3455	4	4	1.50Ghz	2.50Ghz	2M	Intel HD 500	10W



# MB2J513-0500 Series

## Main Features

- Intel Gemini Lake Processor
- Intel Gemini Lake-R Processor
- 1 × HDMI
- 2 × USB 3.0, 2 × USB 2.0
- 1 × M.2, 1 × mSATA, 1 × Mini PCIe
- 5 × Intel I225-V/I226-V 2.5 Gigabit LAN

## Specifications

### Processor System

Dimension	120 × 120mm
CPU	• Intel Gemini Lake Processor • Intel Gemini Lake-R Processor
Core Number	By CPU
Max. Speed	By CPU
L2 Cache	By CPU
Chipset	By CPU
BIOS	UEFI

### Expansion Slot

M.2	1 × M.2 for Wi-Fi (E key, Type: 2230)
Mini-PCIe	1 × Full-length Mini PCIe for 4G
mSATA	1 × Full-length Mini PCIe for SSD

### Memory

Technology	DDR4 2133/2400MHz SDRAM <b>Only Supports a Single 1G Memory Chip</b>
Max.	16GB
Socket	1 × SO-DIMM

### Graphics

Controller	By CPU
VGA	1 (Option)
HDMI	1
Multi Display	Yes

### Ethernet

Interface	100/1000/2500Mbps
Controller	5 × Intel I225-V/I226-V 2.5 Gigabit LAN
Connector	5 × RJ-45

### Audio

Controller	No
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### SATA

Max. Data Transfer Rate	SATA 3.0 (6.0Gb/s)
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### Accessories

Accessories	Cable for HDD
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### Rear I/O

DC-IN	1
Ethernet	5

### Front I/O

Power Button	1 × Power Button, 1 × Reset Button
LED	1 × Power LED, 1 × HDD LED
Display	1 × Connector, HDMI by Default <b>VGA (Option)</b>
USB	2 × USB 3.0, 2 × USB 2.0

### Internal Connector

VGA Header	1, 2 × 5Pin, Pitch 2.0mm (Option)
Serial Port	1, 2 × 5Pin, Pitch 2.0mm (Option)
SATA	1, SATA 3.0 (6.0Gb/s)
SATA PWR Connector	1, 1 × 4Pin, Pitch PH2.0mm
SIM Slot	1
AutoStart Jumper	Yes, 1 × 3Pin, Pitch 2.54mm
Clear CMOS Jumper	Yes, 1 × 3Pin, Pitch 2.54mm
GPIO Header	1, 2 × 5Pin, Pitch 2.0mm
USB Header	1, 2 × 5Pin, Pitch 2.54mm
Front Panel Header	1, 2 × 5Pin, Pitch 2.54mm
Power Header	1, 1 × 2Pin, Pitch 3.5mm, Phoenix 2Pin (Option)

### Watchdog Timer

Output	From Super I/O to Drag RESETCON#
Interval	256 Segments, 0, 1, 2, 3, ..., 255 sec/min

### Power Requirement

Input PWR	12V DC in, 5.5mm/2.5mm
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### Environment

Operating Temperature	0-50 °C
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### OS Support

OS	Windows 10, Linux
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## Ordering and Specifications Information

Quick Order Model: MB2J513-0521

Ordering Code	Code Name	Processor Type	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Processor Graphics	TDP
MB2J513-0511	Gemini Lake	Celeron	J4005	2	2	2.0GHz	2.7GHz	4M	Intel UHD Graphics 600	10W
MB2J513-0512	Gemini Lake	Celeron	N4000	2	2	1.1GHz	2.6GHz	4M	Intel UHD Graphics 600	6W
MB2J513-0521	Gemini Lake	Celeron	J4105	4	4	1.5GHz	2.5GHz	4M	Intel UHD Graphics 600	10W
MB2J513-0611	Gemini Lake Refresh	Celeron	N4020	2	2	1.1GHz	2.8GHz	4M	Intel UHD Graphics 600	6W
MB2J513-0621	Gemini Lake Refresh	Celeron	J4125	4	4	2.0GHz	2.7GHz	4M	Intel UHD Graphics 600	10W

## Custom Options

Category	Description
USB 2.0	2

# MB2J400-0700 Series

## Main Features

- *Intel Jasper Lake Processor*
- 1 × HDMI, 1 × Display Port, 1 × VGA (Header)
- 1 × USB 3.0, 5 × USB 2.0, 1 × Type C
- 3 × M.2, 1 × SATA 3.0
- 4 × Realtek Gigabit LAN



## Specifications

### Processor System

Dimension	120 × 120mm
CPU	<i>Intel Jasper Lake Processor</i>
Core Number	<i>By CPU</i>
Speed	<i>By CPU</i>
L2 Cache	<i>By CPU</i>
Chipset	<i>By CPU</i>
BIOS	UEFI

### Expansion Slot

M.2	1 × M.2 for SSD (M key, Type: 2280, PCIe 3.0 × 1)
M.2	1 × M.2 for 4G/5G (B key, Type: 3042/3052)
M.2	1 × M.2 for Wi-Fi (E key, Type: 2230)

### Memory

Technology	DDR4 2666MHz SDRAM
Max.	32GB
Socket	1 × SO-DIMM

### Graphics

Controller	<i>By CPU</i>
VRAM	Shared Memory
Display Port	1 × Display Port
HDMI	1 (Support HDMI 1.4a)
Multi Display	Yes

### Ethernet

Interface	100/1000Mbps
Controller	4 × Realtek Gigabit LAN
Connector	4 × RJ-45

### Audio

Controller	No
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### SATA

Max. Data Transfer Rate	SATA 3.0 (6.0Gb/s)
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### Accessories

Accessories	Cable for HDD
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### Front I/O

Power Button	1 × Power Button, 1 × Reset Button
LED	1 × Power LED, 1 × HDD LED
USB	1 × USB 3.0, 1 × USB 2.0
Type C	1, USB 3.0 and Display Port

### Real I/O

DC-IN	1
Display	1 × HDMI, 1 × Display Port
Ethernet	4

### Internal Connector

PS/2	2, 1 × 4Pin, Pitch 2.0mm
SATA	1, SATA 3.0 (6.0Gb/s)
SATA PWR Connector	1, 1 × 4Pin, Pitch PH2.0mm
SIM Slot	1
AutoStart Jumper	Yes, 1 × 3Pin, Pitch 2.0mm
Clear CMOS Jumper	Yes, 1 × 3Pin, Pitch 2.0mm
USB 2.0	2, 2 × 5Pin, Pitch 2.0mm
Front Panel Header	2, 1 × 4Pin, Pitch 2.0mm
Power Header	1, Phoenix 1 × 2Pin, Pitch 3.5mm (Option)
CPU FAN Connector	1, 1 × 4Pin, Pitch PH 1.25mm
SYS FAN Connector	1, 1 × 4Pin, Pitch PH 1.25mm

### Watchdog Timer

Output	From Super I/O to Drag RESETCON#
Interval	256 Segments, 0,1,2,3,,,255 sec/min

### Power Requirement

Input PWR	12V DC in, 5.5mm/2.5mm
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### Environment

Operating Temperature	0-50 °C
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### OS Support

OS	UEFI Windows 10, UEFI Linux
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## Ordering and Specifications Information

Quick Order Model: MB2J400-0722

Ordering Code	Code Name	Processor Type	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Processor Graphics	TDP
MB2J400-0711	Jasper Lake	Celeron	N4500	2	2	1.1GHz	2.8GHz	4M	Intel UHD Graphics	6W
MB2J400-0712	Jasper Lake	Celeron	N4505	2	2	2.0GHz	2.9GHz	4M	Intel UHD Graphics	10W
MB2J400-0721	Jasper Lake	Celeron	N5100	4	4	1.1GHz	2.8GHz	4M	Intel UHD Graphics	6W
<b>MB2J400-0722</b>	<b>Jasper Lake</b>	<b>Celeron</b>	<b>N5105</b>	<b>4</b>	<b>4</b>	<b>2.0GHz</b>	<b>2.9GHz</b>	<b>4M</b>	<b>Intel UHD Graphics</b>	<b>10W</b>
MB2J400-0723	Jasper Lake	Celeron	N5095	4	4	2.0GHz	2.9GHz	4M	Intel UHD Graphics	15W
MB2J400-0731	Jasper Lake	Pentium	N6000	4	4	1.1GHz	3.0GHz	4M	Intel UHD Graphics	6W
MB2J400-0732	Jasper Lake	Pentium	N6005	4	4	2.0GHz	3.3GHz	4M	Intel UHD Graphics	10W

## Custom Options

Category	Description



# MB3J403-0800 Series

## Main Features

- Intel Elkhart Lake Processor
- 1 × HDMI
- 2 × USB 3.0, 2 × USB 2.0
- 2 × M.2, 1 × mSATA, 1 × SATA 3.0
- 4 × Realtek Gigabit LAN

## Specifications

### Processor System

Dimension	148 × 104mm
CPU	Intel Elkhart Lake Processor
Core Number	By CPU
Speed	By CPU
L2 Cache	By CPU
Chipset	By CPU
BIOS	UEFI

### Expansion Slot

mSATA	1 × Full-length Mini PCIe for SSD
M.2	1 × M.2 for 4G/5G (B key, Type: 3042/3052), 5G Defaults to PCIe Mode, USB 3.0 Mode Requires Customization
M.2	1 × M.2 for Wi-Fi (E key, Type: 2230)

### Memory

Technology	DDR4 2133/2400MHz SDRAM
Max.	32GB
Socket	1 × SO-DIMM

### Graphics

Controller	By CPU
VRAM	Shared Memory
VGA	0
HDMI	1 (Support HDMI 1.4a)
Multi Display	No

### Ethernet

Interface	10/100/1000Mbps
Controller	4 × Realtek Gigabit LAN
Connector	4 × RJ-45

### Audio

Controller	No
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### SATA

Max. Data Transfer Rate	SATA 3.0 (6.0Gb/s)
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### Accessories

Accessories	Cable for HDD
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### Front I/O

Power Button	1 × Power Button, 1 × Reset Button
LED	1 × Power LED, 1 × HDD LED
Serial Port	0
USB	2 × USB 3.0, 2 × USB 2.0

### Real I/O

DC-IN	1
Phoenix 2Pin	0
HDMI	1
Ethernet	4
USB	0
Audio	0

### Internal Connector

VGA Header	0
Serial Port	0
RS-485	0
PS/2	0
SATA	1, SATA 3.0 (6.0Gb/s)
SATA PWR Connector	1, 1 × 4Pin, Pitch PH2.0mm
SIM Slot	1
AutoStart Jumper	Yes, 1 × 3Pin, Pitch 2.54mm
Clear CMOS Jumper	Yes, 1 × 3Pin, Pitch 2.54mm
GPIO Header	0
GPIO Power Select	0
Front Panel Header	0

### Power Header

1, 1 × 2Pin, Pitch 3.5mm, Phoenix 2Pin (Option)

### Watchdog Timer

Output	From Super I/O to Drag RESETCON#
Interval	256 Segments, 0,1,2,3,,,255 sec/min

### Power Requirement

Input PWR	12V DC in, 5.5mm/2.5mm
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### Environment

Operating Temperature	0-50 °C
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### OS Support

OS	UEFI Windows 10, UEFI Linux
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# Ordering and Specifications Information

Quick Order Model: MB3J403-0821

Ordering Code	Code Name	Processor Type	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Processor Graphics	TDP
MB3J403-0811	Elkhart Lake	Celeron	N6210	2	2	1.20Ghz	2.6Ghz	1.5M	Intel UHD Graphics	6.5W
MB3J403-0821	Elkhart Lake	Celeron	J6412	4	4	2.00Ghz	2.60Ghz	1.5M	Intel UHD Graphics	10W

# MB2J510-0800 Series

## Main Features

- Intel Elkhart Lake Processor
- 1 × HDMI, 1 × Display Port, 1 × VGA
- 1 × USB 3.0, 1x USB 2.0
- 2 × M.2, 1 × mSATA, 1 × SATA3.0
- 1 × RS-232 (RJ-45)
- 5 × Intel I225-V/I226-V 2.5 Gigabit LAN



## Specifications

### Processor System

Dimension	120 × 120mm
CPU	Intel Elkhart Lake Processor
Core Number	By CPU
Speed	By CPU
L2 Cache	By CPU
Chipset	By CPU
BIOS	UEFI

### Expansion Slot

mSATA	1 × Full-length Mini PCIe for SSD
M.2	1 × M.2 for 4G/5G (B key, Type: 3042/3052)
M.2	1 × M.2 for SSD (M key, Type: 2280, PCIe 3.0 × 2) Wi-Fi support via a Converter Card

### Memory

Technology	DDR4 2133/2400MHz SDRAM
Max.	32GB
Socket	1 × SO-DIMM

### Graphics

Controller	By CPU
VRAM	Shared Memory
VGA	1
HDMI	1 (Support HDMI 1.4a)
Display Port	1
Multi Display	Yes

### Ethernet

Interface	100/1000/2500Mbps
Controller	5 × Intel I225-V/I226-V 2.5 Gigabit LAN
Connector	5 × RJ-45

### Audio

Controller	Realtek HD Audio
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### SATA

Max. Data Transfer Rate	SATA 3.0 (6.0Gb/s)
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### Front I/O

Power Button	1 × Power Button, 1 × Reset Button
LED	1 × Power LED, 1 × HDD LED
Display	1 × VGA, 1 × HDMI, 1 × Display Port
Serial Port/USB	1 × Connector, RS-232 (RJ-45) by Default, 2 × USB 2.0 (Option)
SIM Slot	1

### Real I/O

DC-IN	1
Ethernet	5
USB	1 × USB 3.0, 1x USB 2.0

### Internal Connector

Serial Port	1, 2 × 5Pin, Pitch 2.0mm
SATA	1, SATA 3.0 (6.0Gb/s)
SATA PWR Connector	1, 1 × 4Pin, Pitch PH2.0mm
AutoStart Jumper	Yes, 1 × 3Pin, Pitch 2.54mm
Clear CMOS Jumper	Yes, 1 × 3Pin, Pitch 2.54mm
GPIO Header	1, 2 × 5Pin, Pitch 2.0mm
GPIO Power Select	Yes, 1 × 3Pin, Pitch 2.54mm
USB Header	1, 2 × 5Pin, Pitch 2.54mm
Front Panel Header	1, 2 × 5Pin, Pitch 2.0mm
Power Header	1, 1 × 2Pin, Pitch 3.5mm, Phoenix 2Pin (Option)

### Watchdog Timer

Output	From Super I/O to Drag RESETCON#
Interval	256 Segments, 0, 1, 2, 3, ..., 255 sec/min

### Power Requirement

Input PWR	12V DC in, 5.5mm/2.5mm
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### Environment

Operating Temperature	0-50 °C
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### Accessories

Accessories	Cable for HDD
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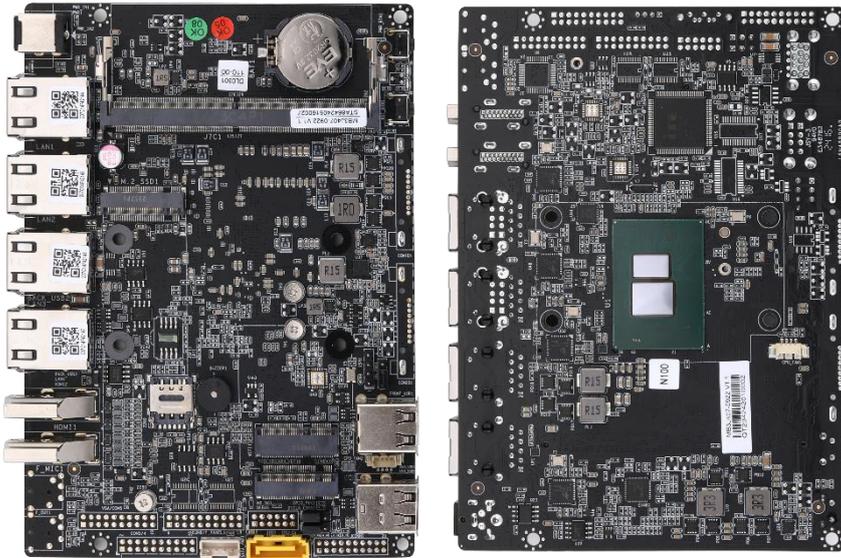
### OS Support

OS	UEFI Windows 10, UEFI Linux
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# Ordering and Specifications Information

Quick Order Model: MB2J510-0821

Ordering Code	Code Name	Processor Type	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Processor Graphics	TDP
MB2J510-0811	Elkhart Lake	Celeron	N6210	2	2	1.20Ghz	2.6Ghz	1.5M	Intel UHD Graphics	6.5W
MB2J510-0821	Elkhart Lake	Celeron	J6412	4	4	2.00Ghz	2.60Ghz	1.5M	Intel UHD Graphics	10W



# MB3J407-0900 Series

## Main Features

- Intel Alder Lake-N Processor
- Intel Twin Lake-N Processor
- 2 × HDMI
- 1 × USB 3.0, 3 × USB 2.0
- 3 × M.2, 1 × SATA 3.0
- 4 × Realtek 2.5 Gigabit LAN

## Specifications

### Processor System

Dimension	148 × 104mm
CPU	Intel Alder Lake-N Processor Intel Twin Lake-N Processor
Core Number	By CPU
Speed	By CPU
L2 Cache	By CPU
Chipset	By CPU
BIOS	UEFI

### Expansion Slot

M.2	1 × M.2 for SSD (M key, Type: 2280, PCIe 3.0 × 1)
M.2	1 × M.2 for 4G/5G (B key, Type: 3042/3052)
M.2	1 × M.2 for Wi-Fi (E key, Type: 2230)

### Memory

Technology	DDR5 4800MHz SDRAM
Max.	48GB
Socket	1 × SO-DIMM

### Graphics

Controller	By CPU
VRAM	Shared Memory
VGA	0
HDMI	2 (Support HDMI 1.4a)
Multi Display	Yes

### Ethernet

Interface	100/1000/2500Mbps
Controller	4 × Realtek 2.5 Gigabit LAN
Connector	4 × RJ-45

### Audio

Controller	No
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### SATA

Max. Data Transfer Rate	SATA 3.0 (6.0Gb/s)
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### Accessories

Accessories	Cable for HDD
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### Front I/O

Power Button	1 × Power Button, 1 × Reset Button
LED	1 × Power LED, 1 × HDD LED
USB	1 × USB 3.0, 3 × USB 2.0

### Real I/O

DC-IN	1
HDMI	2
Ethernet	4

### Internal Connector

PS/2	1, 2 × 5Pin, Pitch 2.0mm
USB 2.0	1, 1 × 4Pin, Pitch 2.54mm
SATA	1, SATA 3.0 (6.0Gb/s)
SATA PWR Connector	1, 1 × 4Pin, Pitch PH2.0mm
SIM Slot	1
AutoStart Jumper	Yes, 1 × 3Pin, Pitch 2.54mm
Clear CMOS Jumper	Yes, 1 × 3Pin, Pitch 2.54mm
GPIO Header	1, 2 × 5Pin, Pitch 2.0mm
GPIO Power Select	Yes, 1 × 3Pin, Pitch 2.54mm
Front Panel Header	1, 2 × 5Pin, Pitch 2.0mm
Power Header	1, 1 × 2Pin, Pitch 3.5mm, Phoenix 2Pin (Option)
CPU FAN Connector	1, 1 × 4Pin, Pitch PH 1.25mm
SYS FAN Connector	1, 1 × 4Pin, Pitch PH 1.25mm

### Watchdog Timer

Output	From Super I/O to Drag RESETCON#
Interval	256 Segments, 0, 1, 2, 3, ..., 255 sec/min

### Power Requirement

Input PWR	12V DC in, 5.5mm/2.5mm
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### Environment

Operating Temperature	0-50 °C
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### OS Support

OS	UEFI Windows 10, UEFI Linux
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# Ordering and Specifications Information

Quick Order Model: MB3J407-0922

Ordering Code	Code Name	Processor Type	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Processor Graphics	TDP
MB3J407-0911	Alder lake-N	-	N50	2	-	-	3.4GHz	6M	Intel UHD Graphics	6W
MB3J407-0921	Alder lake-N	-	N97	4	-	-	3.6GHz	6M	Intel UHD Graphics	12W
<b>MB3J407-0922</b>	<b>Alder lake-N</b>	<b>-</b>	<b>N100</b>	<b>4</b>	<b>4</b>	<b>-</b>	<b>3.4GHz</b>	<b>6M</b>	<b>Intel UHD Graphics</b>	<b>6W</b>
MB3J407-0923	Alder lake-N	-	N200	4	4	-	3.7GHz	6M	Intel UHD Graphics	6W
MB3J407-0931	Alder lake-N	Core i3	N300	8	8	-	3.8GHz	6M	Intel UHD Graphics	7W
MB3J407-0932	Alder lake-N	Core i3	N305	8	8	-	3.8GHz	6M	Intel UHD Graphics	15W
MB3J407-1022	Twin Lake-N	-	N150	4	4	-	3.6GHz	6M	Intel Graphics	6W
MB3J407-1023	Twin Lake-N	-	N250	4	4	-	3.8GHz	6M	Intel Graphics	6W
MB3J407-1031	Twin Lake-N	Core i3	N350	8	8	-	3.9GHz	6M	Intel Graphics	7W
MB3J407-1032	Twin Lake-N	Core i3	N355	8	8	-	3.9GHz	6M	Intel Graphics	15W

## Custom Options

Category	Description



# MB2J61A-0900 Series

## Main Features

- Intel Alder Lake-N Processor
- Intel Twin Lake-N Processor
- 1 × HDMI, 2 × Display Port
- 1 × Type C, 1 × USB 3.0 , 1 × USB 2.0
- 3 × M.2, 1 × SATA3.0
- 1 × RS-232 (DB9)
- 6 × Intel I226-V 2.5 Gigabit LAN

## Specifications

### Processor System

Dimension	120 × 120mm
CPU	Intel Alder Lake-N Processor Intel Twin Lake-N Processor
Core Number	By CPU
Speed	By CPU
L2 Cache	By CPU
Chipset	By CPU
BIOS	UEFI

### Expansion Slot

M.2	1 × M.2 for SSD (M key, Type: 2280, PCIe 3.0 × 1)
M.2	1 × M.2 for 4G/5G (B key, Type: 3042/3052) (Option)
M.2	1 × M.2 for Wi-Fi (E key, Type: 2230)

### Memory

Technology	DDR5 4800MHz SDRAM
Max.	48GB
Socket	1 × SO-DIMM

### Graphics

Controller	By CPU
VRAM	Shared Memory
Type C	1 × Display Port
HDMI	1 (Support HDMI 1.4a)
Display Port	1
Multi Display	Yes

### Ethernet

Interface	100/1000/2500Mbps
Controller	6 × I226-V 2.5 Gigabit LAN
Connector	6 × RJ-45

### Audio

Controller	No
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### SATA

Max. Data Transfer Rate	SATA 3.0 (6.0Gb/S)
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### Front I/O

Power Button	1 × Power Button, 1 × Reset Button
LED	1 × Power LED, 1 × HDD LED
SIM Slot	1 × Nano Sim Slot
Serial Port	1 × Connector, RS-232 (DB9)
USB	1 × USB 3.0, 1 × USB 2.0
Type C	1, USB 3.0 and Display Port
Display	1 × HDMI, 1 × Display Port

### Real I/O

DC-IN	1
Ethernet	6

### Internal Connector

SATA	1, SATA 3.0 (6.0Gb/S)
SATA PWR Connector	1, 1 × 4Pin, Pitch PH2.0mm
AutoStart Jumper	Yes, 1 × 3Pin, Pitch 2.0mm
Clear CMOS Jumper	Yes, 1 × 3Pin, Pitch 2.0mm
Front Panel Header	1, 2 × 5Pin, Pitch 2.0mm
USB Header	1, 1 × 4Pin, Pitch 2.0mm
Power Header	1, 1 × 2Pin, Pitch 3.5mm, Phoenix 2Pin

### Watchdog Timer

Output	From Super I/O to Drag RESETCON#
Interval	256 Segments, 0, 1, 2, 3, ..., 255 sec/min

### Power Requirement

Input PWR	12V DC in, 5.5mm/2.5mm
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### Environment

Operating Temperature	0-50 °C
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### Accessories

Accessories	Cable for HDD
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### OS Support

OS	UEFI Windows 10, UEFI Linux
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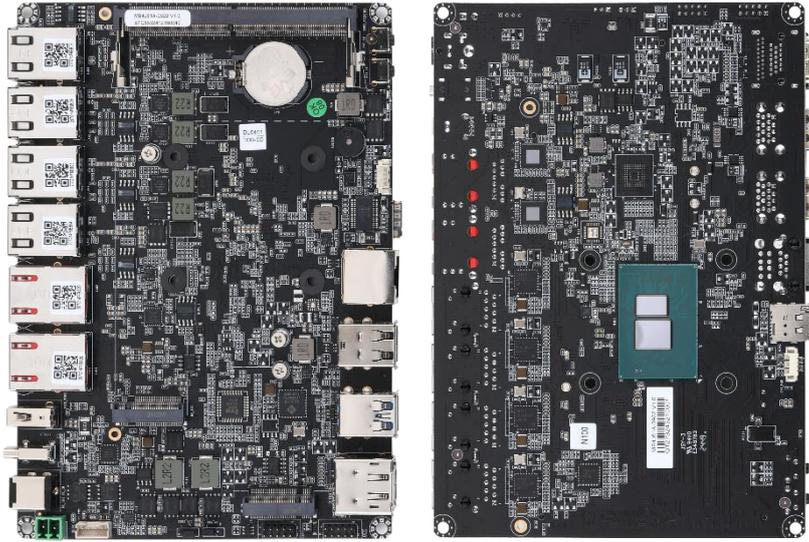
# Ordering and Specifications Information

Quick Order Model: MB2J61A-0922

Ordering Code	Code Name	Processor Type	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Processor Graphics	TDP
MB2J61A-0911	Alder lake-N	-	N50	2	-	-	3.4GHz	6M	Intel UHD Graphics	6W
MB2J61A-0921	Alder lake-N	-	N97	4	-	-	3.6GHz	6M	Intel UHD Graphics	12W
<b>MB2J61A-0922</b>	<b>Alder lake-N</b>	<b>-</b>	<b>N100</b>	<b>4</b>	<b>4</b>	<b>-</b>	<b>3.4GHz</b>	<b>6M</b>	<b>Intel UHD Graphics</b>	<b>6W</b>
MB2J61A-0923	Alder lake-N	-	N200	4	4	-	3.7GHz	6M	Intel UHD Graphics	6W
MB2J61A-0931	Alder lake-N	Core i3	N300	8	8	-	3.8GHz	6M	Intel UHD Graphics	7W
MB2J61A-0932	Alder lake-N	Core i3	N305	8	8	-	3.8GHz	6M	Intel UHD Graphics	15W
MB2J61A-1022	Twin Lake-N	-	N150	4	4	-	3.6GHz	6M	Intel Graphics	6W
MB2J61A-1023	Twin Lake-N	-	N250	4	4	-	3.8GHz	6M	Intel Graphics	6W
MB2J61A-1031	Twin Lake-N	Core i3	N350	8	8	-	3.9GHz	6M	Intel Graphics	7W
MB2J61A-1032	Twin Lake-N	Core i3	N355	8	8	-	3.9GHz	6M	Intel Graphics	15W

## Custom Options

Category	Description
USB 2.0	2



# MB4J61Z-0900 Series

## Main Features

- Intel Alder Lake-N Processor
- Intel Twin Lake-N Processor
- 1 × HDMI, 2 × Display Port
- 1 × Type C, 3 × USB 3.0 , 2 × USB 2.0
- 2 × M.2 , 1 × RS-232 (RJ45)
- 4 × Intel I226-V 2.5 Gigabit LAN
- 2 × Marvell AQC113C 10 Gigabit LAN

## Specifications

### Processor System

Dimension	165 × 115mm
CPU	Intel Alder Lake-N Processor Intel Twin Lake-N Processor
Core Number	By CPU
Speed	By CPU
L2 Cache	By CPU
Chipset	By CPU
BIOS	UEFI

### Expansion Slot

M.2	1 × M.2 for SSD (M key, Type: 2280, PCIe 3.0 × 1)
M.2	1 × M.2 for 4G/5G (B key, Type: 3042/3052)

### Memory

Technology	DDR5 4800MHz SDRAM
Max.	48GB
Socket	1 × SO-DIMM

### Graphics

Controller	By CPU
VRAM	Shared Memory
Type C	1 × Display Port
HDMI	1 (Support HDMI 1.4a)
Display Port	1
Multi Display	Yes

### Ethernet

Controller	4 × I226-V 2.5 Gigabit LAN
Controller	2 × Marvell AQC113C 10 Gigabit LAN
Connector	6 × RJ-45

### Audio

Controller	No
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### SATA

Max. Data Transfer Rate	No
-------------------------	----

### Front I/O

Power Button	1 × Power Button, 1 × Reset Button
LED	1 × Power LED, 1 × HDD LED
SIM Slot	1 × Nano Sim Card
Serial Port	1 × Connector, RS-232 (RJ-45)
USB	3 × USB 3.0, 1 × USB 2.0
Display	1 × HDMI, 1 × Display Port

### Real I/O

DC-IN	1
Type C	1, USB 3.0 and Display Port
USB	1 × USB 2.0
Ethernet	2 × 10G, 4 × 2.5G

### Internal Connector

SATA	SATA support via a Converter Card
SATA PWR Connector	1, 1 × 4Pin, Pitch PH2.0mm
AutoStart Jumper	Yes, 1 × 3Pin, Pitch 2.0mm
Clear CMOS Jumper	Yes, 1 × 3Pin, Pitch 2.0mm
Front Panel Header	1, 2 × 5Pin, Pitch 2.0mm
USB Header	1, 2 × 5Pin, Pitch 2.0mm
Power Header	1, 1 × 2Pin, Pitch 3.5mm, Phoenix 2Pin

### Watchdog Timer

Output	From Super I/O to Drag RESETCON#
Interval	256 Segments, 0, 1, 2, 3, ..., 255 sec/min

### Power Requirement

Input PWR	12V DC in, 5.5mm/2.5mm
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### Environment

Operating Temperature	0-50 °C
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### Accessories

Accessories	Cable for HDD
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### OS Support

OS	UEFI Windows 10, UEFI Linux
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# Ordering and Specifications Information

Quick Order Model: MB4J61Z-0922

Ordering Code	Code Name	Processor Type	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Processor Graphics	TDP
MB4J61Z-0911	Alder lake-N	-	N50	2	-	-	3.4GHz	6M	Intel UHD Graphics	6W
MB4J61Z-0921	Alder lake-N	-	N97	4	-	-	3.6GHz	6M	Intel UHD Graphics	12W
MB4J61Z-0922	Alder lake-N	-	N100	4	4	-	3.4GHz	6M	Intel UHD Graphics	6W
MB4J61Z-0923	Alder lake-N	-	N200	4	4	-	3.7GHz	6M	Intel UHD Graphics	6W
MB4J61Z-0931	Alder lake-N	Core i3	N300	8	8	-	3.8GHz	6M	Intel UHD Graphics	7W
MB4J61Z-0932	Alder lake-N	Core i3	N305	8	8	-	3.8GHz	6M	Intel UHD Graphics	15W
MB4J61Z-1022	Twin Lake-N	-	N150	4	4	-	3.6GHz	6M	Intel Graphics	6W
MB4J61Z-1023	Twin Lake-N	-	N250	4	4	-	3.8GHz	6M	Intel Graphics	6W
MB4J61Z-1031	Twin Lake-N	Core i3	N350	8	8	-	3.9GHz	6M	Intel Graphics	7W
MB4J61Z-1032	Twin Lake-N	Core i3	N355	8	8	-	3.9GHz	6M	Intel Graphics	15W

## Custom Options

Category	Description
USB 2.0	2
eMMC	Option

# MB4J61X-0900 Series

## Main Features

- Intel Alder Lake-N Processor
- Intel Twin Lake-N Processor
- 1 × HDMI, 1 × Display Port
- 2 × USB 3.0 , 2 × USB 2.0
- 2 × M.2 , 1 × RS-232 (RJ45)
- 2 × Intel I226-V 2.5 Gigabit LAN
- 2, Intel X540 10 Gigabit LAN
- 2, Intel JL82599ES 10 Gigabit SFP+

## Specifications

### Processor System

Dimension	165 × 115mm
CPU	Intel Alder Lake-N Processor Intel Twin Lake-N Processor
Core Number	By CPU
Speed	By CPU
L2 Cache	By CPU
Chipset	By CPU
BIOS	UEFI

### Expansion Slot

M.2	1 × M.2 for SSD (M key, Type: 2280, PCIe 3.0 × 1)
M.2	1 × M.2 for Wi-Fi (E key, Type: 2230)

### Memory

Technology	DDR5 4800MHz SDRAM
Max.	48GB
Socket	1 × SO-DIMM

### Graphics

Controller	By CPU
VRAM	Shared Memory
HDMI	1 (Support HDMI 1.4a)
Display Port	1
Multi Display	Yes

### Ethernet

RJ45/2.5G	2 × Intel I226-V 2.5 Gigabit LAN
RJ45/10G	2, Intel JLX540-AT2/BT2 10 Gigabit LAN <b>Max. speed of 12Gbps for both interfaces</b>
SFP+ / 10G	2, Intel JL82599ES 10 Gigabit LAN <b>Max. speed of 12Gbps for both interfaces</b>

### Audio

Controller	No
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### SATA

Max. Data Transfer Rate	No
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### Front I/O

Power Button	1 × Power Button, 1 × Reset Button
LED	1 × Power LED, 1 × HDD LED
Serial Port	1 × Connector, RS-232 (RJ-45)
USB	2 × USB 3.0, 2 × USB 2.0

### Real I/O

DC-IN	1
Display	1 × HDMI, 1 × Display Port
SFP+	2 × 10G SFP+
Ethernet	2 × 10G
Ethernet	2 × 2.5G

### Internal Connector

SATA	<a href="#">SATA support via a Converter Card</a>
SATA PWR Connector	1, 1 × 4Pin, Pitch PH2.0mm
AutoStart Jumper	Yes, 1 × 3Pin, Pitch 2.0mm
Clear CMOS Jumper	Yes, 1 × 3Pin, Pitch 2.0mm
Front Panel Header	1, 2 × 5Pin, Pitch 2.0mm
USB 2.0 Header	2, 2 × 5Pin, Pitch 2.0mm
USB 3.0 Header	<a href="#">1, 2 × 5Pin, Pitch 2.0mm(Option)</a>
Power Header	1, 1 × 2Pin, Pitch 3.5mm, Phoenix 2Pin

### Watchdog Timer

Output	From Super I/O to Drag RESETCON#
Interval	256 Segments, 0, 1, 2, 3, ..., 255 sec/min

### Power Requirement

Input PWR	12V DC in, 5.5mm/2.5mm
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### Environment

Operating Temperature	0-50 °C
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### Accessories

Accessories	Cable for HDD
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### OS Support

OS	UEFI Windows 10, UEFI Linux
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## Ordering and Specifications Information

Quick Order Model: MB4J61X-0922

Ordering Code	Code Name	Processor Type	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Processor Graphics	TDP
MB4J61X-0911	Alder lake-N	-	N50	2	-	-	3.4GHz	6M	Intel UHD Graphics	6W
MB4J61X-0921	Alder lake-N	-	N97	4	-	-	3.6GHz	6M	Intel UHD Graphics	12W
<b>MB4J61X-0922</b>	<b>Alder lake-N</b>	<b>-</b>	<b>N100</b>	<b>4</b>	<b>4</b>	<b>-</b>	<b>3.4GHz</b>	<b>6M</b>	<b>Intel UHD Graphics</b>	<b>6W</b>
MB4J61X-0923	Alder lake-N	-	N200	4	4	-	3.7GHz	6M	Intel UHD Graphics	6W
MB4J61X-0931	Alder lake-N	Core i3	N300	8	8	-	3.8GHz	6M	Intel UHD Graphics	7W
MB4J61X-0932	Alder lake-N	Core i3	N305	8	8	-	3.8GHz	6M	Intel UHD Graphics	15W
MB4J61X-1022	Twin Lake-N	-	N150	4	4	-	3.6GHz	6M	Intel Graphics	6W
MB4J61X-1023	Twin Lake-N	-	N250	4	4	-	3.8GHz	6M	Intel Graphics	6W
MB4J61X-1031	Twin Lake-N	Core i3	N350	8	8	-	3.9GHz	6M	Intel Graphics	7W
MB4J61X-1032	Twin Lake-N	Core i3	N355	8	8	-	3.9GHz	6M	Intel Graphics	15W

## Custom Options

Category	Description
USB 2.0	3
eMMC	Option

# MB4J61X-090U Series

## Main Features

- Intel Alder Lake-N Processor
- Intel Twin Lake-N Processor
- 1 × HDMI, 1 × Display Port
- 2 × USB 3.0 , 2 × USB 2.0
- 2 × M.2 , 1 × RS-232 (RJ45)
- 2 × Intel I226-V 2.5 Gigabit LAN
- 2, Intel X540 10 Gigabit LAN
- 2, Intel X710-BM2 10 Gigabit SFP+

## Specifications

### Processor System

Dimension	165 × 115mm
CPU	Intel Alder Lake-N Processor Intel Twin Lake-N Processor
Core Number	By CPU
Speed	By CPU
L2 Cache	By CPU
Chipset	By CPU
BIOS	UEFI

### Expansion Slot

M.2	1 × M.2 for SSD (M key, Type: 2280, PCIe 3.0 × 1)
M.2	1 × M.2 for Wi-Fi (E key, Type: 2230)

### Memory

Technology	DDR5 4800MHz SDRAM
Max.	48GB
Socket	1 × SO-DIMM

### Graphics

Controller	By CPU
VRAM	Shared Memory
HDMI	1 (Support HDMI 1.4a)
Display Port	1
Multi Display	Yes

### Ethernet

RJ45/2.5G	2 × Intel I226-V 2.5 Gigabit LAN
RJ45/10G	2, Intel J LX540-AT2/BT2 10 Gigabit LAN <b>Max. speed of 12Gbps for both interfaces</b>
SFP+ / 10G	2, Intel X710-BM2 10 Gigabit SFP+

### Audio

Controller	No
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### SATA

Max. Data Transfer Rate	No
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### Front I/O

Power Button	1 × Power Button, 1 × Reset Button
LED	1 × Power LED, 1 × HDD LED
Serial Port	1 × Connector, RS-232 (RJ-45)
USB	2 × USB 3.0, 2 × USB 2.0

### Real I/O

DC-IN	1
Display	1 × HDMI, 1 × Display Port
SFP+	2 × 10G SFP+
Ethernet	2 × 10G
Ethernet	2 × 2.5G

### Internal Connector

SATA	<a href="#">SATA support via a Converter Card</a>
SATA PWR Connector	1, 1 × 4Pin, Pitch PH2.0mm
AutoStart Jumper	Yes, 1 × 3Pin, Pitch 2.0mm
Clear CMOS Jumper	Yes, 1 × 3Pin, Pitch 2.0mm
Front Panel Header	1, 2 × 5Pin, Pitch 2.0mm
USB 2.0 Header	2, 2 × 5Pin, Pitch 2.0mm
USB 3.0 Header	<a href="#">1, 2 × 5Pin, Pitch 2.0mm(Option)</a>
Power Header	1, 1 × 2Pin, Pitch 3.5mm, Phoenix 2Pin

### Watchdog Timer

Output	From Super I/O to Drag RESETCON#
Interval	256 Segments,0,1,2,3,,,255 sec/min

### Power Requirement

Input PWR	12V DC in, 5.5mm/2.5mm
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### Environment

Operating Temperature	0-50 °C
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### Accessories

Accessories	Cable for HDD
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### OS Support

OS	UEFI Windows 10, UEFI Linux
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## Ordering and Specifications Information

Quick Order Model: MB4J61X-092B

Ordering Code	Code Name	Processor Type	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Processor Graphics	TDP
MB4J61X-091A	Alder lake-N	-	N50	2	-	-	3.4GHz	6M	Intel UHD Graphics	6W
MB4J61X-092A	Alder lake-N	-	N97	4	-	-	3.6GHz	6M	Intel UHD Graphics	12W
MB4J61X-092B	Alder lake-N	-	N100	4	4	-	3.4GHz	6M	Intel UHD Graphics	6W
MB4J61X-092C	Alder lake-N	-	N200	4	4	-	3.7GHz	6M	Intel UHD Graphics	6W
MB4J61X-093A	Alder lake-N	Core i3	N300	8	8	-	3.8GHz	6M	Intel UHD Graphics	7W
MB4J61X-093B	Alder lake-N	Core i3	N305	8	8	-	3.8GHz	6M	Intel UHD Graphics	15W
MB4J61X-102B	Twin Lake-N	-	N150	4	4	-	3.6GHz	6M	Intel Graphics	6W
MB4J61X-102C	Twin Lake-N	-	N250	4	4	-	3.8GHz	6M	Intel Graphics	6W
MB4J61X-103A	Twin Lake-N	Core i3	N350	8	8	-	3.9GHz	6M	Intel Graphics	7W
MB4J61X-103B	Twin Lake-N	Core i3	N355	8	8	-	3.9GHz	6M	Intel Graphics	15W

## Custom Options

Category	Description
USB 2.0	3
eMMC	Option

# MB4C911-0300 Series

## Main Features

- Intel Denverton Processor
- 1 × VGA, 1 × RS-232 (RJ-45)
- 1 × USB 3.0, 1 × USB 2.0, 1 × Type C (USB 3.0)
- 2 × M.2 (PCIe 3.0 × 2)
- 1 × Mini SAS, 2 × SATA 3.0
- 4 × 10G SFP+
- 5 × Intel I225-V/I226-V 2.5 Gigabit LAN



## Specifications

### Processor System

Dimension	165 × 115mm
CPU	Intel Denverton Processor
Core Number	By CPU
Max. Speed	By CPU
L2 Cache	By CPU
Chipset	By CPU
BIOS	UEFI

### Expansion Slot

M.2	2 × M.2 for SSD (M key, Type: 2280, PCIe 3.0 × 2)
M.2	1 × M.2 for 4G/5G (B key, Type: 3042/3052),

### Memory

Technology	DDR4 2133MHz SDRAM
Max.	64GB
Socket	2 × SO-DIMMs

### Graphics

Controller	-
VRAM	-
VGA	1

### Ethernet

Interface	100/1000/2500Mbps
Controller	5 × Intel I225-V/I226-V 2.5 Gigabit LAN
Connector	5 × RJ-45
Interface	1000Mbps/10Gbps
Controller	4 × 10G
Connector	4 × SFP+

### Audio

Controller	No
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### SATA

Max. Data Transfer Rate	SATA 3.0 (6.0Gb/s)
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### Accessories

Accessories	Cable for HDD
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### Rear I/O

DC-IN	1
Serial Port	1 × RS-232 (RJ-45)
USB	1 × USB 3.0, 1 × USB 2.0
Ethernet	5
SFP+	4 × 10G SFP+

### Front I/O

Power Button	1 × Power Button, 1 × Reset Button
LED	1 × Power LED, 1 × HDD LED
VGA	1
SIM Card Slot	1
Type C	1 × Type C (USB 3.0)
Mini SAS	1 × Mini SAS (SFF8087)

### Internal Connector

TPM	1 (Option)
VGA Header	1, 2 × 5Pin, Pitch 2.0mm
SATA	2, SATA 3.0 (6.0Gb/s)
SATA PWR Connector	2, 1 × 4Pin, Pitch PH2.0mm
SIM Card Slot	1
AutoStart Jumper	0
Clear CMOS Jumper	0
USB Header	1, 2 × 5Pin, Pitch 2.0mm (Option)
Front Panel Header	1, 2 × 5Pin, Pitch 2.0mm
Power Header	1, 1 × 2Pin, Pitch 5.0mm (Option)

### Watchdog Timer

Output	From Super I/O to Drag RESETCON#
Interval	256 Segments, 0, 1, 2, 3, ..., 255 sec/min

### Power Requirement

Input PWR	12V DC in, 5.5mm/2.5mm
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### Environment

Operating Temperature	0-50 °C
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### OS Support

OS	Windows 10, Linux
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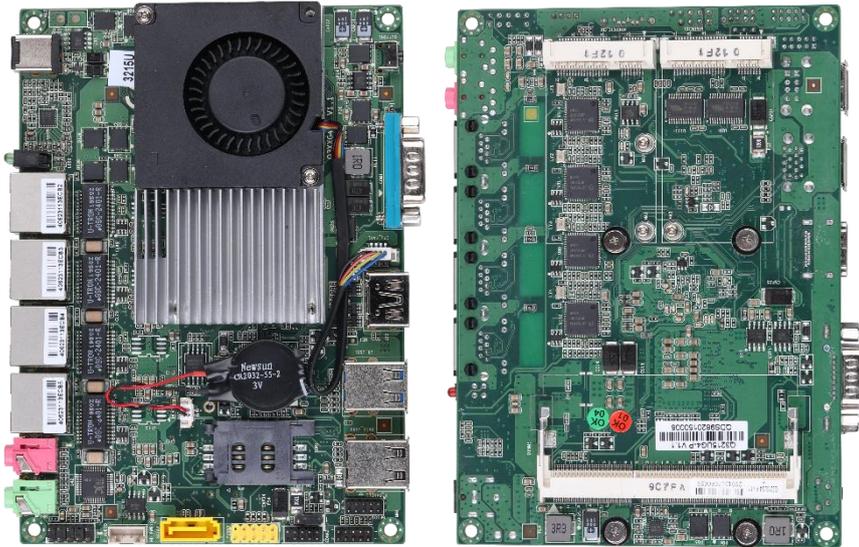
## Ordering and Specifications Information

Quick Order Model: MB4C911-0332

Ordering Code	Code Name	Processor Type	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Processor Graphics	Cache	TDP
MB4C911-0311	Denverton	Atom	C3338R	2	2	1.80Ghz	2.20Ghz		4M	10.5W
MB4C911-0321	Denverton	Atom	C3558R	4	4	2.40Ghz			8M	17W
MB4C911-0322	Denverton	Atom	C3558	4	4	2.20Ghz			8M	16W
MB4C911-0331	Denverton	Atom	C3758R	8	8	2.40Ghz			16M	26W
MB4C911-0332	Denverton	Atom	C3758	8	8	2.2Ghz			16M	25W
MB4C911-0342	Denverton	Atom	C3808	12	12	2.0Ghz			12M	25W
MB4C911-0352	Denverton	Atom	C3908	16	16	2.0Ghz			16M	31W

## Functional Differences

Ordering Code	SFP+ 10G	SFP 1G (2.5G)	M.2 M Key (PCIe 3.0 × 2)	M.2 M Key (PCIe 3.0 × 1)	RJ-45	VGA	SATA 3.0	5G	Mini SAS	USB 3.0	Type C
MB4C911-0311	-	4	-	2	5	1	1	1	-	-	1
MB4C911-0321	2	2	2	-	5	1	2	1	1	1	1
MB4C911-0322	2	2	2	-	5	1	1	1	-	-	-
MB4C911-0331	4	-	2	-	5	1	2	1	1	1	1
MB4C911-0332	4	-	2	-	5	1	2	1	1	1	1
MB4C911-0342	4	-	2	-	5	1	2	1	1	1	1
MB4C911-0352	4	-	2	-	5	1	2	1	1	1	1



# MB3U422-0400 Series

## Main Features

- Intel 4<sup>th</sup> Haswell -U/Y Processor
- Intel 5<sup>th</sup> Broadwell-U Processor
- 1 × HDMI, 1 × RS-232
- 2 × USB 3.0, 2 × USB 2.0, 1 × SATA 3.0
- 1 × Mini-PCIe, 1 × mSATA
- 4 × Intel I211-AT/I210-AT Gigabit LAN

## Specifications

### Processor System

Dimension	148 × 104mm
CPU	• Intel 4 <sup>th</sup> Haswell -U/Y Processor • Intel 5 <sup>th</sup> Broadwell-U Processor
Core Number	By CPU
Max. Speed	By CPU
L2 Cache	By CPU
Chipset	By CPU
BIOS	UEFI

### Expansion Slot

Mini-PCIe	1 × Mini PCIe Full-length Mini PCIe for 4G Half-length Mini PCIe for Wi-Fi by Default
mSATA	1 × Full-length Mini PCIe for SSD

### Memory

Technology	DDR3L 1333/1600MHz SDRAM
Max.	8GB
Socket	1 × SO-DIMM

### Graphics

Controller	By CPU
VRAM	Shared Memory
HDMI	1 (Support HDMI 1.4a)
Multi Display	No

### Ethernet

Interface	10/100/1000Mbps
Controller	4 × Intel I211-AT/I210-AT Gigabit LAN
Connector	4 × RJ-45

### Audio

Controller	Realtek HD Audio (Option)
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### SATA

Max. Data Transfer Rate	SATA 3.0 (6.0Gb/s)
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### Accessories

Accessories	Cable for HDD
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### Rear I/O

DC-IN	1
LED	1 × Power LED, 1 × HDD LED
Ethernet	4
Audio	2 (Mic-in, Line-out) (Option)

### Front I/O

Power Button	1
Serial Port	1 × RS-232
HDMI	1
USB	2 × USB 3.0, 2 × USB 2.0

### Internal Connector

Serial Port	1, 2 × 5Pin, Pitch 2.0mm (Option)
SATA	1, SATA 3.0 (6.0Gb/s)
SATA PWR Connector	1, 1 × 4Pin, Pitch PH2.0mm
SIM Slot	1
AutoStart Jumper	Yes, 1 × 3Pin, Pitch 2.54mm
GPIO Header	1, 2 × 5Pin, Pitch 2.0mm
USB Header	1, 2 × 5Pin, Pitch 2.54mm
Front Panel Header	1, 2 × 5Pin, Pitch 2.0mm
Speakers Header	1, 2 × 5Pin, Pitch 2.54mm (Option)
Power Header	1, 1 × 2Pin, Pitch 4.2mm (Option)

### Watchdog Timer

Output	From Super I/O to Drag RESETCON#
Interval	256 Segments, 0, 1, 2, 3, ..., 255 sec/min

### Power Requirement

Input PWR	12V DC in, 5.5mm/2.5mm
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### Environment

Operating Temperature	0-50 °C
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### OS Support

OS	Windows 7, Windows 10, Linux
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# Ordering and Specifications Information

Quick Order Model: Q5005UG4-M

Ordering Code	Code Name	Processor Type	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Processor Graphics	TDP
Q2955UG4-M	Haswell	Celeron	2955U	2	2	1.4GHz	/	2M	Intel HD Graphics	15W
Q4005UG4-M	Haswell	Core i3	4005U	2	4	1.7GHz	/	3M	Intel HD 4400	15W
Q4200UG4-M	Haswell	Core i5	4200U	2	4	1.6GHz	2.6GHz	3M	Intel HD 4400	15W
Q4500UG4-M	Haswell	Core i7	4500U	2	4	1.8GHz	3.0GHz	4M	Intel HD 4400	15W
Q4010YG4-M	Haswell	Core i3	4010Y	2	4	1.3GHz	/	3M	Intel HD 4200	11.5W
Q4200YG4-M	Haswell	Core i5	4200Y	2	4	1.4GHz	1.9GHz	3M	Intel HD 4200	11.5W
Q3205UG4-M	Broadwell	Celeron	3205U	2	2	1.5GHz	/	2M	Intel HD Graphics	15W
Q3215UG4-M	Broadwell	Celeron	3215U	2	2	1.7GHz	/	2M	Intel HD Graphics	15W
Q3805UG4-M	Broadwell	Pentium	3805U	2	2	1.9GHz	/	2M	Intel HD Graphics	15W
Q5005UG4-M	Broadwell	Core i3	5005U	2	4	2.0GHz	/	3M	Intel HD 5500	15W
Q5200UG4-M	Broadwell	Core i5	5200U	2	4	2.2GHz	2.7GHz	3M	Intel HD 5500	15W
Q5500UG4-M	Broadwell	Core i7	5500U	2	4	2.4GHz	3.0GHz	4M	Intel HD 5500	15W



# MB3U422-0500 Series

## Main Features

- Intel 4<sup>th</sup> Haswell -U/Y Processor
- Intel 5<sup>th</sup> Broadwell-U Processor
- 1 × HDMI, 1 × RS-232
- 2 × USB 3.0, 2 × USB 2.0, 1 × SATA 3.0
- 1 × Mini-PCIe, 1 × mSATA
- 4 × Intel I225-V/I226-V 2.5 Gigabit LAN

## Specifications

### Processor System

Dimension	148 × 104mm
CPU	• Intel 4 <sup>th</sup> Haswell -U/Y Processor • Intel 5 <sup>th</sup> Broadwell-U Processor
Core Number	By CPU
Max. Speed	By CPU
L2 Cache	By CPU
Chipset	By CPU
BIOS	UEFI

### Expansion Slot

Mini-PCIe	1 × Mini PCIe Full-length Mini PCIe for 4G Half-length Mini PCIe for Wi-Fi by Default
mSATA	1 × Full-length Mini PCIe for SSD

### Memory

Technology	DDR3L 1333/1600MHz SDRAM
Max.	8GB
Socket	1 × SO-DIMM

### Graphics

Controller	By CPU
VRAM	Shared Memory
HDMI	1 (Support HDMI 1.4a)
Multi Display	No

### Ethernet

Interface	100/1000/2500Mbps
Controller	4 × Intel I225-V/I226-V 2.5 Gigabit LAN
Connector	4 × RJ-45

### Audio

Controller	Realtek HD Audio (Option)
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### SATA

Max. Data Transfer Rate	SATA 3.0 (6.0Gb/S)
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### Accessories

Accessories	Cable for HDD
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### Rear I/O

DC-IN	1
LED	1 × Power LED, 1 × HDD LED
Ethernet	4
Audio	2 (Mic-in, Line-out) (Option)

### Front I/O

Power Button	1 × Power Button, 1 × Reset Button
Serial Port	1 × RS-232
HDMI	1
USB	2 × USB 3.0, 2 × USB 2.0

### Internal Connector

Serial Port	1, 2 × 5Pin, Pitch 2.0mm (Option)
SATA	1 × SATA 3.0 (6.0Gb/S) 1, Only for Core i5/i7 (Option)
SATA PWR Connector	1, 1 × 4Pin, Pitch PH2.0mm, 1, Only for Core i5/i7 (Option)
SIM Slot	1
AutoStart Jumper	Yes, 1 × 3Pin, Pitch 2.54mm
GPIO Header	1, 2 × 5Pin, Pitch 2.0mm
USB Header	1, 2 × 5Pin, Pitch 2.54mm
Front Panel Header	1, 2 × 5Pin, Pitch 2.0mm
Power Header	1, 1 × 2Pin, Pitch 3.5mm (Option)

### Watchdog Timer

Output	From Super I/O to Drag RESETCON#
Interval	256 Segments, 0, 1, 2, 3, ..., 255 sec/min

### Power Requirement

Input PWR	12V DC in, 5.5mm/2.5mm
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### Environment

Operating Temperature	0-50 °C
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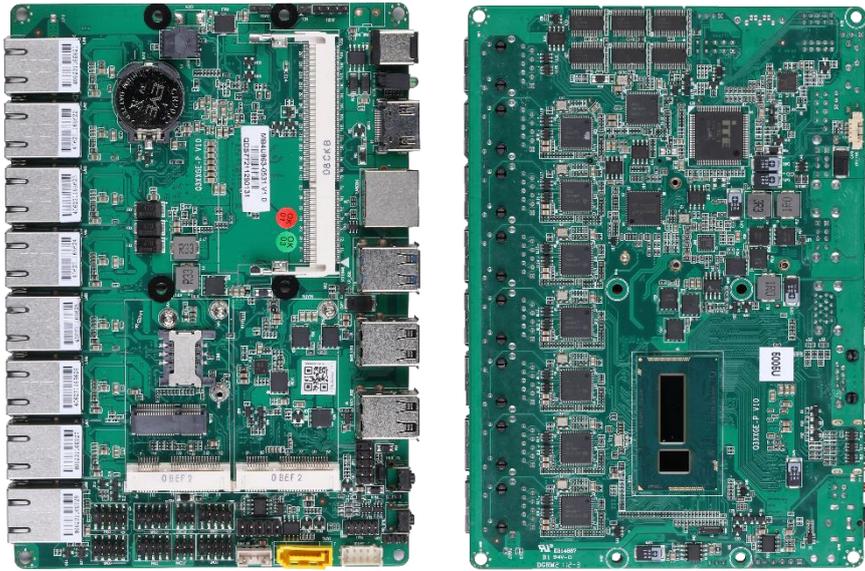
### OS Support

OS	Windows 7, Windows 10, Linux
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## Ordering and Specifications Information

Quick Order Model: MB3U422-0531

Ordering Code	Code Name	Processor Type	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Processor Graphics	TDP
MB3U422-0411	Haswell	Celeron	2955U	2	2	1.4GHz	/	2M	Intel HD Graphics	15W
MB3U422-0431	Haswell	Core i3	4005U	2	4	1.7GHz	/	3M	Intel HD 4400	15W
MB3U422-0451	Haswell	Core i5	4200U	2	4	1.6GHz	2.6GHz	3M	Intel HD 4400	15W
MB3U422-0471	Haswell	Core i7	4500U	2	4	1.8GHz	3.0GHz	4M	Intel HD 4400	15W
MB3U422-0432	Haswell	Core i3	4010Y	2	4	1.3GHz	/	3M	Intel HD 4200	11.5W
MB3U422-0452	Haswell	Core i5	4200Y	2	4	1.4GHz	1.9GHz	3M	Intel HD 4200	11.5W
MB3U422-0511	Broadwell	Celeron	3205U	2	2	1.5GHz	/	2M	Intel HD Graphics	15W
MB3U422-0512	Broadwell	Celeron	3215U	2	2	1.7GHz	/	2M	Intel HD Graphics	15W
MB3U422-0521	Broadwell	Pentium	3805U	2	2	1.9GHz	/	2M	Intel HD Graphics	15W
MB3U422-0531	Broadwell	Core i3	5005U	2	4	2.0GHz	/	3M	Intel HD 5500	15W
MB3U422-0551	Broadwell	Core i5	5200U	2	4	2.2GHz	2.7GHz	3M	Intel HD 5500	15W
MB3U422-0571	Broadwell	Core i7	5500U	2	4	2.4GHz	3.0GHz	4M	Intel HD 5500	15W



# MB4U863-0400 Series

## Main Features

- Intel 4<sup>th</sup> Haswell -U/Y Processor
- Intel 5<sup>th</sup> Broadwell-U Processor
- 1 × HDMI
- 2 × USB 3.0, 4 × USB 2.0
- 1 × M.2, 1 × mSATA, 1 × Mini-PCle
- 1 × SATA 3.0
- 8 × Intel I211-AT/I210-AT Gigabit LAN

## Specifications

Processor System	
Dimension	165 × 115mm
CPU	• Intel 4 <sup>th</sup> Haswell -U/Y Processor • Intel 5 <sup>th</sup> Broadwell-U Processor
Core Number	By CPU
Max. Speed	By CPU
L2 Cache	By CPU
Chipset	By CPU
BIOS	UEFI
Expansion Slot	
mSATA	1 × Full-length Mini PCIe for SSD
Mini-PCle	1 × Mini PCIe, Full-length Mini PCIe for 4G by Default Half-length Mini PCIe for Wi-Fi (Only for USB Device, Option)
M.2	1 × M.2 for Wi-Fi (E key, Type: 2230)
Memory	
Technology	DDR4 2133MHz SDRAM
Max.	16GB
Socket	1 × SO-DIMM
Graphics	
Controller	By CPU
VRAM	Shared Memory
VGA	1 (Option)
LVDS	No
HDMI	1 (Support HDMI 1.4a)
Multi Display	No
Ethernet	
Interface	10/100/1000Mbps
Controller	8 × Intel I211-AT/I210-AT Gigabit LAN
Connector	8 × RJ-45
Audio	
Controller	No
SATA	
Max. Data Transfer Rate	SATA 3.0 (6.0Gb/S)

Rear I/O	
Ethernet	8
Front I/O	
DC-IN	1
LED	1 × Power LED, 1 × HDD LED
HDMI	1
Serial Port	1 × RS-232 (RJ-45)
USB	2 × USB 3.0, 4 × USB 2.0
Power Button	1 × Power Button, 1 × Reset Button
Internal Connector	
VGA Header	1, 2 × 5Pin, Pitch 2.0mm (Option)
Serial Port	6, 2 × 5Pin, Pitch 2.0mm, COM3/4 Support 5V/12V (Option)
RS-485	COM3/4 can be set up as RS-485 (Option)
SATA	1, SATA 3.0 (6.0Gb/S)
SATA PWR Connector	1, 1 × 4Pin, Pitch PH2.0mm
SIM Slot	1
AutoStart Jumper	Yes, 1 × 3Pin, Pitch 2.0mm
Clear CMOS Jumper	Yes, 1 × 3Pin, Pitch 2.0mm
GPIO Header	1, 2 × 5Pin, Pitch 2.0mm
USB Header	1, 1 × 4Pin, Pitch 2.54mm
Front Panel Header	1, 2 × 5Pin, Pitch 2.54mm
Power Header	1, 1 × 2Pin, Pitch 5.08mm (Option)
Watchdog Timer	
Output	From Super I/O to Drag RESETCON#
Interval	256 Segments,0,1,2,3,,,255 sec/min
Power Requirement	
Input PWR	12V DC in, 5.5mm/2.5mm
Environment	
Operating Temperature	0-50 °C
Accessories	
Accessories	Cable for HDD
OS Support	
OS	Windows 7, Windows 10, Linux

# Ordering and Specifications Information

Quick Order Model: MB4U863-0531

Ordering Code	Code Name	Processor Type	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Processor Graphics	TDP
MB4U863-0411	Haswell	Celeron	2955U	2	2	1.4GHz	/	2M	Intel HD Graphics	15W
MB4U863-0431	Haswell	Core i3	4005U	2	4	1.7GHz	/	3M	Intel HD 4400	15W
MB4U863-0451	Haswell	Core i5	4200U	2	4	1.6GHz	2.6GHz	3M	Intel HD 4400	15W
MB4U863-0471	Haswell	Core i7	4500U	2	4	1.8GHz	3.0GHz	4M	Intel HD 4400	15W
MB4U863-0432	Haswell	Core i3	4010Y	2	4	1.3GHz	/	3M	Intel HD 4200	11.5W
MB4U863-0452	Haswell	Core i5	4200Y	2	4	1.4GHz	1.9GHz	3M	Intel HD 4200	11.5W
MB4U863-0511	Broadwell	Celeron	3205U	2	2	1.5GHz	/	2M	Intel HD Graphics	15W
MB4U863-0512	Broadwell	Celeron	3215U	2	2	1.7GHz	/	2M	Intel HD Graphics	15W
MB4U863-0521	Broadwell	Pentium	3805U	2	2	1.9GHz	/	2M	Intel HD Graphics	15W
MB4U863-0531	Broadwell	Core i3	5005U	2	4	2.0GHz	/	3M	Intel HD 5500	15W
MB4U863-0551	Broadwell	Core i5	5200U	2	4	2.2GHz	2.7GHz	3M	Intel HD 5500	15W
MB4U863-0571	Broadwell	Core i7	5500U	2	4	2.4GHz	3.0GHz	4M	Intel HD 5500	15W

## Custom Options

Category	Description
USB 2.0	2



# MB3U623-0600 Series

## Main Features

- Intel 6<sup>th</sup> Skylake-U Processor
- Intel 7<sup>th</sup> Kabylake-U Processor
- 1 × HDMI, 1 × RS-232
- 2 × USB 3.0, 2 × USB 2.0, 1 × SATA 3.0
- 1 × Mini-PCIe, 1 × mSATA
- 6 × Intel I211-AT/I210-AT Gigabit LAN

## Specifications

### Processor System

Dimension	148 × 104mm
CPU	• Intel 6 <sup>th</sup> Skylake-U Processor • Intel 7 <sup>th</sup> Kabylake-U Processor
Core Number	By CPU
Max. Speed	By CPU
L2 Cache	By CPU
Chipset	By CPU
BIOS	UEFI

### Expansion Slot

mSATA	1 × Full-length Mini PCIe for SSD
Mini-PCIe	1 × Mini PCIe Full-length Mini PCIe for 4G Half-length Mini PCIe for Wi-Fi by Default

### Memory

Technology	DDR4 2133MHz SDRAM
Max.	32GB
Socket	1 × SO-DIMM

### Graphics

Controller	By CPU
VRAM	Shared Memory
VGA	1 (Option)
HDMI	1 (Support HDMI 1.4a)
Multi Display	No

### Ethernet

Interface	10/100/1000Mbps
Controller	6 × Intel I211-AT/I210-AT Gigabit LAN
Connector	6 × RJ-45

### Audio

Controller	No
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### SATA

Max. Data Transfer Rate	SATA 3.0 (6.0Gb/S)
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### Accessories

Accessories	Cable for HDD
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### Rear I/O

DC-IN	1
LED	1 × Power LED, 1 × HDD LED
Ethernet	6

### Front I/O

Power Button	1
HDMI	1
USB	2 × USB 3.0, 2 × USB 2.0
Serial Port	1 × RS-232

### Internal Connector

VGA Header	1, 2 × 5Pin, Pitch 2.0mm (Option)
Serial Port	2, 2 × 5Pin, Pitch 2.0mm, COM1/2 Support 5V/12V (Option)
RS-485	COM1/2 can be set up as RS-485 (Option)
SATA	1, SATA 3.0 (6.0Gb/S)
SATA PWR Connector	1, 1 × 4Pin, Pitch PH2.0mm
SIM Slot	1
AutoStart Jumper	Yes, 1 × 3Pin, Pitch 2.54mm
Clear CMOS Jumper	Yes, 1 × 3Pin, Pitch 2.0mm
GPIO Header	1, 2 × 5Pin, Pitch 2.0mm
USB Header	2, 2 × 5Pin, Pitch 2.54mm
Front Panel Header	1, 2 × 5Pin, Pitch 2.54mm
Power Header	1, 1 × 2Pin, Pitch 5.5mm (Option)

### Watchdog Timer

Output	From Super I/O to Drag RESETCON#
Interval	256 Segments, 0, 1, 2, 3, ..., 255 sec/min

### Power Requirement

Input PWR	12V DC in, 5.5mm/2.5mm
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### Environment

Operating Temperature	0-50 °C
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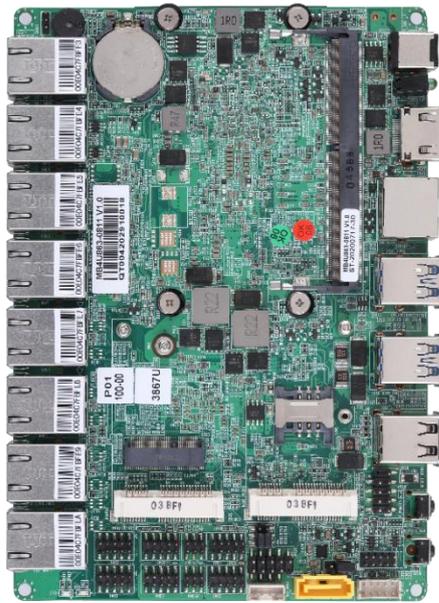
### OS Support

OS	Windows 10, Linux Windows 7 (Only for 6th Gen Skylake)
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# Ordering and Specifications Information

Quick Order Model: Q7100UG6-P

Ordering Code	Code Name	Processor Type	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Processor Graphics	TDP
Q3855UG6-P (MB3U623-0611)	Skylake	Celeron	3855U	2	2	1.6GHz	/	2M	Intel HD 510	15W
Q3955UG6-P (MB3U623-0612)	Skylake	Celeron	3955U	2	2	2.0GHz	/	2M	Intel HD 510	15W
Q6100UG6-P (MB3U623-0631)	Skylake	Core i3	6100U	2	4	2.3GHz	/	3M	Intel HD 520	15W
Q6200UG6-P (MB3U623-0651)	Skylake	Core i5	6200U	2	4	2.3GHz	2.8GHz	3M	Intel HD 520	15W
Q6500UG6-P (MB3U623-0671)	Skylake	Core i7	6500U	2	4	2.5GHz	3.1GHz	4M	Intel HD 520	15W
Q3865UG6-P (MB3U623-0711)	Kaby Lake	Celeron	3865U	2	2	1.8GHz	/	2M	Intel HD 610	15W
Q3965UG6-P (MB3U623-0712)	Kaby Lake	Celeron	3965U	2	2	2.2GHz	/	2M	Intel HD 610	15W
Q7100UG6-P (MB3U623-0731)	Kaby Lake	Core i3	7100U	2	4	2.4GHz	/	3M	Intel HD 620	15W
Q7200UG6-P (MB3U623-0751)	Kaby Lake	Core i5	7200U	2	4	2.5GHz	3.1GHz	3M	Intel HD 620	15W
Q7500UG6-P (MB3U623-0771)	Kaby Lake	Core i7	7500U	2	4	2.7GHz	3.5GHz	4M	Intel HD 620	15W



# MB4U863-0600 Series

## Main Features

- Intel 6<sup>th</sup> Skylake-U Processor
- Intel 7<sup>th</sup> Kabylake-U Processor
- Intel 8<sup>th</sup> Kabylake-R-U Processor
- 1 × HDMI, 1 × SATA 3.0
- 4 × USB 3.0, 2 × USB 2.0
- 1 × M.2, 1 × mSATA, 1 × Mini-PCle
- 8 × Intel I211-AT/I210-AT Gigabit LAN

## Specifications

### Processor System

Dimension	165 × 115mm
CPU	<ul style="list-style-type: none"> <li>• Intel 6<sup>th</sup> Skylake-U Processor</li> <li>• Intel 7<sup>th</sup> Kabylake-U Processor</li> <li>• Intel 8<sup>th</sup> Kabylake-R-U Processor</li> </ul>
Core Number	By CPU
Max. Speed	By CPU
L2 Cache	By CPU
Chipset	By CPU
BIOS	UEFI

### Expansion Slot

mSATA	1 × Full-length Mini PCIe for SSD
Mini-PCle	1 × Mini PCIe, Full-length Mini PCIe for 4G by Default Half-length Mini PCIe for Wi-Fi (Only for USB Device, Option)
M.2	1 × M.2 for Wi-Fi (E key, Type: 2230)

### Memory

Technology	DDR4 2133MHz SDRAM
Max.	32GB
Socket	1 × SO-DIMM

### Graphics

Controller	By CPU
VRAM	Shared Memory
VGA	1 (Option)
HDMI	1 (Support HDMI 1.4a)
Multi Display	No

### Ethernet

Interface	10/100/1000Mbps
Controller	8 × Intel I211-AT/I210-AT Gigabit LAN
Connector	8 × RJ-45

### Audio

Controller	No
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### SATA

Max. Data Transfer Rate	SATA 3.0 (6.0Gb/S)
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### Rear I/O

Ethernet	8
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### Front I/O

DC-IN	1
LED	1 × Power LED, 1 × HDD LED
HDMI	1
Serial Port	1 × RS-232 (RJ-45)
USB	4 × USB 3.0, 2 × USB 2.0
Power Button	1 × Power Button, 1 × Reset Button

### Internal Connector

VGA Header	1, 2 × 5Pin, Pitch 2.0mm (Option)
Serial Port	6, 2 × 5Pin, Pitch 2.0mm, COM3/4 Support 5V/12V (Option)
RS-485	COM3/4 can be set up as RS-485 (Option)
SATA	1, SATA 3.0 (6.0Gb/S)
SATA PWR Connector	1, 1 × 4Pin, Pitch PH2.0mm
SIM Slot	1
AutoStart Jumper	Yes, 1 × 3Pin, Pitch 2.54mm
Clear CMOS Jumper	Yes, 1 × 3Pin, Pitch 2.0mm
GPIO Header	1, 2 × 5Pin, Pitch 2.0mm
USB Header	1, 2 × 5Pin, Pitch 2.54mm
Front Panel Header	1, 2 × 5Pin, Pitch 2.54mm
Power Header	1, 1 × 2Pin, Pitch 5.08mm (Option)

### Watchdog Timer

Output	From Super I/O to Drag RESETCON#
Interval	256 Segments,0,1,2,3,,,255 sec/min

### Power Requirement

Input PWR	12V DC in, 5.5mm/2.5mm
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### Environment

Operating Temperature	0-50 °C
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### Accessories

Accessories	Cable for HDD
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### OS Support

OS	Windows 10, Linux Windows 7 (Only for 6th Gen Skylake)
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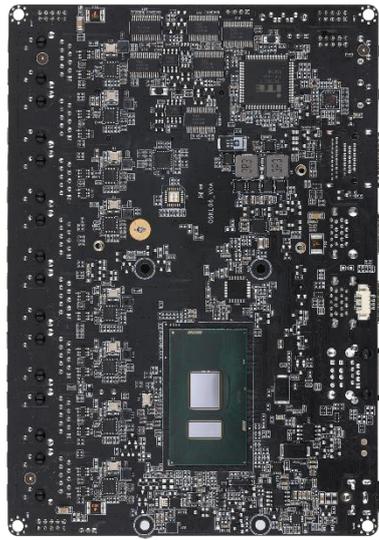
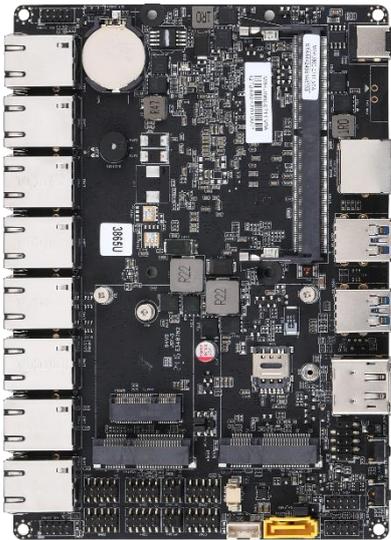
# Ordering and Specifications Information

Quick Order Model: MB4U863-0831

Ordering Code	Code Name	Processor Type	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Processor Graphics	TDP
MB4U863-0611	Skylake	Celeron	3855U	2	2	1.6GHz	/	2M	Intel HD 510	15W
MB4U863-0612	Skylake	Celeron	3955U	2	2	2.0GHz	/	2M	Intel HD 510	15W
MB4U863-0631	Skylake	Core i3	6100U	2	4	2.3GHz	/	3M	Intel HD 520	15W
MB4U863-0651	Skylake	Core i5	6200U	2	4	2.3GHz	2.8GHz	3M	Intel HD 520	15W
MB4U863-0671	Skylake	Core i7	6500U	2	4	2.5GHz	3.1GHz	4M	Intel HD 520	15W
MB4U863-0711	Kaby Lake	Celeron	3865U	2	2	1.8GHz	/	2M	Intel HD 610	15W
MB4U863-0712	Kaby Lake	Celeron	3965U	2	2	2.2GHz	/	2M	Intel HD 610	15W
MB4U863-0731	Kaby Lake	Core i3	7100U	2	4	2.4GHz	/	3M	Intel HD 620	15W
MB4U863-0751	Kaby Lake	Core i5	7200U	2	4	2.5GHz	3.1GHz	3M	Intel HD 620	15W
MB4U863-0771	Kaby Lake	Core i7	7500U	2	4	2.7GHz	3.5GHz	4M	Intel HD 620	15W
MB4U863-0811	Kaby Lake R	Celeron	3867U	2	2	1.8GHz	/	2M	Intel HD 610	15W
MB4U863-0821	Kaby Lake R	Pentium	4417U	2	2	2.3GHz	/	2M	Intel HD 610	15W
MB4U863-0831	Kaby Lake R	Core i3	8130U	2	4	2.0GHz	3.40GHz	4M	Intel UHD 620	15W
MB4U863-0851	Kaby Lake R	Core i5	8250U	4	8	1.6GHz	3.4GHz	6M	Intel UHD 620	15W
MB4U863-0871	Kaby Lake R	Core i7	8550U	4	8	1.8GHz	4.0GHz	8M	Intel UHD 620	15W

## Custom Options

Category	Description
USB 2.0	2



# MB4U860-0600 Series

## Main Features

- Intel 6<sup>th</sup> Skylake-U Processor
- Intel 7<sup>th</sup> Kabylake-U Processor
- Intel 8<sup>th</sup> KabyLake-R-U Processor
- 1 × Display Port, 1 × HDMI, 1 × VGA (Option)
- 4 × USB 3.0, 1 × SATA 3.0
- 1 × M.2, 1 × mSATA, 1 × Mini-PCle
- 8 × Realtek Gigabit LAN

## Specifications

Processor System	
Dimension	165 × 115mm
CPU	<ul style="list-style-type: none"> <li>• Intel 6<sup>th</sup> Skylake-U Processor</li> <li>• Intel 7<sup>th</sup> Kabylake-U Processor</li> <li>• Intel 8<sup>th</sup> KabyLake-R-U Processor</li> </ul>
Core Number	By CPU
Max. Speed	By CPU
L2 Cache	By CPU
Chipset	By CPU
BIOS	UEFI
Expansion Slot	
mSATA	1 × Full-length Mini PCIe for SSD
Mini-PCle	1 × Mini PCIe, Full-length Mini PCIe for 4G by Default Half-length Mini PCIe for Wi-Fi (Only for USB Device, Option)
M.2	1 × M.2 for Wi-Fi (E key, Type: 2230)
Memory	
Technology	DDR4 2133MHz SDRAM
Max.	32GB
Socket	1 × SO-DIMM
Graphics	
Controller	By CPU
VRAM	Shared Memory
Display	1 × Display Port 1 × HDMI 1 × VGA (Header)
Multi Display	Yes
Ethernet	
Interface	10/100/1000Mbps
Controller	8 × Realtek Gigabit LAN
Connector	8 × RJ-45
Audio	
Controller	No
SATA	
Max. Data Transfer Rate	SATA 3.0 (6.0Gb/S)

Rear I/O	
Ethernet	8
Front I/O	
Power Button	1 × Power Button, 1 × Reset Button
LED	1 × Power LED, 1 × HDD LED
Display	1 × Display Port, 1 × HDMI
Serial Port	1 × RS-232 (RJ-45)
USB	4 × USB 3.0, 2 × USB 2.0 (Option)
DC-IN	1
Internal Connector	
VGA Header	1, 2 × 5Pin, Pitch 2.0mm (Option)
Serial Port	6, 2 × 5Pin, Pitch 2.0mm, COM3/4 Support 5V/12V (Option)
RS-485	COM3/4 can be set up as RS-485 (Option)
SATA	1, SATA 3.0 (6.0Gb/S)
SATA PWR Connector	1, 1 × 4Pin, Pitch PH2.0mm
SIM Slot	1
AutoStart Jumper	Yes, 1 × 3Pin, Pitch 2.54mm
Clear CMOS Jumper	Yes, 1 × 3Pin, Pitch 2.0mm
GPIO Header	1, 2 × 5Pin, Pitch 2.0mm
USB 3.0 Header	2, 2 × 5Pin, Pitch 2.0mm
Front Panel Header	1, 2 × 5Pin, Pitch 2.54mm
Power Header	1, Phoenix 1 × 2Pin, Pitch 3.5mm (Option)
Watchdog Timer	
Output	From Super I/O to Drag RESETCON#
Interval	256 Segments,0,1,2,3,,,255 sec/min
Power Requirement	
Input PWR	12V DC in, 5.5mm/2.5mm
Environment	
Operating Temperature	0-50 °C
Accessories	
Accessories	Cable for HDD
OS Support	
OS	Windows 10, Linux Windows 7 (Only for 6th Gen Skylake)

# Ordering and Specifications Information

Quick Order Model: MB4U860-0711

Ordering Code	Code Name	Processor Type	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Processor Graphics	TDP
MB4U860-0611	Skylake	Celeron	3855U	2	2	1.6GHz	/	2M	Intel HD 510	15W
MB4U860-0612	Skylake	Celeron	3955U	2	2	2.0GHz	/	2M	Intel HD 510	15W
MB4U860-0631	Skylake	Core i3	6100U	2	4	2.3GHz	/	3M	Intel HD 520	15W
MB4U860-0651	Skylake	Core i5	6200U	2	4	2.3GHz	2.8GHz	3M	Intel HD 520	15W
MB4U860-0671	Skylake	Core i7	6500U	2	4	2.5GHz	3.1GHz	4M	Intel HD 520	15W
MB4U863-0711	Kaby Lake	Celeron	3865U	2	2	1.8GHz	/	2M	Intel HD 610	15W
MB4U860-0712	Kaby Lake	Celeron	3965U	2	2	2.2GHz	/	2M	Intel HD 610	15W
MB4U860-0731	Kaby Lake	Core i3	7100U	2	4	2.4GHz	/	3M	Intel HD 620	15W
MB4U860-0751	Kaby Lake	Core i5	7200U	2	4	2.5GHz	3.1GHz	3M	Intel HD 620	15W
MB4U860-0771	Kaby Lake	Core i7	7500U	2	4	2.7GHz	3.5GHz	4M	Intel HD 620	15W
MB4U860-0811	Kaby Lake R	Celeron	3867U	2	2	1.8GHz	/	2M	Intel HD 610	15W
MB4U860-0821	Kaby Lake R	Pentium	4417U	2	2	2.3GHz	/	2M	Intel HD 610	15W
MB4U860-0831	Kaby Lake R	Core i3	8130U	2	4	2.0GHz	3.40GHz	4M	Intel UHD 620	15W
MB4U860-0851	Kaby Lake R	Core i5	8250U	4	8	1.6GHz	3.4GHz	6M	Intel UHD 620	15W
MB4U860-0871	Kaby Lake R	Core i7	8550U	4	8	1.8GHz	4.0GHz	8M	Intel UHD 620	15W

## Custom Options

Category	Description



# MB4U860-0900 Series

## Main Features

- Intel 8<sup>th</sup> Whiskey Lake-U Processor
- Intel 8<sup>th</sup> Coffee Lake-U Processor
- Intel 10<sup>th</sup> Comet lake-U Processor
- 1 × Display Port, 1 × HDMI, 1 × VGA (Option)
- 4 × USB 3.0, 1 × SATA 3.0
- 1 × M.2, 1 × mSATA, 1 × Mini-PCIe
- 8 × Intel I225-V/I226-V 2.5 Gigabit LAN

## Specifications

Processor System	
Dimension	165 × 115mm
CPU	<ul style="list-style-type: none"> <li>• Intel 8<sup>th</sup> Whiskey Lake-U Processor</li> <li>• Intel 8<sup>th</sup> Coffee Lake-U Processor</li> <li>• Intel 10<sup>th</sup> Comet lake-U Processor</li> </ul>
Core Number	By CPU
Max. Speed	By CPU
L2 Cache	By CPU
Chipset	By CPU
BIOS	UEFI
Expansion Slot	
mSATA	1 × Full-length Mini PCIe for SSD
Mini-PCIe	1 × Mini PCIe, Half-length Mini PCIe for Wi-Fi (Only for USB Device, Option) Full-length Mini PCIe for 4G by Default
M.2	1 × M.2 for Wi-Fi (E key, Type: 2230)
Memory	
Technology	DDR4 2133/2400MHz SDRAM
Max.	32GB
Socket	1 × SO-DIMM
Graphics	
Controller	By CPU
VRAM	Shared Memory
Display Port	1
HDMI	1 (Support HDMI 1.4a)
Multi Display	Yes
Ethernet	
Interface	100/1000/2500Mbps
Controller	8 × Intel I225-V/I226-V 2.5 Gigabit LAN
Connector	8 × RJ-45
Audio	
Controller	No
SATA	
Max. Data Transfer Rate	SATA 3.0 (6.0Gb/S)
Accessories	
Accessories	Cable for HDD

Front I/O	
DC-IN	1
Serial Port	1 × Connector, RS-232 (RJ-45) by Default, 2 × USB 2.0 (Option)
USB	4 × USB 3.0
HDMI	1
Display Port	1
LED	1 × Power LED, 1 × HDD LED
Power Button	1 × Power Button, 1 × Reset Button
Real I/O	
Ethernet	8
Internal Connector	
TPM	1 (Option)
VGA Header	1, 2 × 5Pin, Pitch 2.0mm (Option)
Serial Port	6, 2 × 5Pin, Pitch 2.0mm, COM2/3 Support 5V/12V (Option)
RS-485	COM2/3 can be set up as RS-485 (Option)
SATA	1, SATA 3.0 (6.0Gb/S)
SATA PWR Connector	1, 1 × 4Pin, Pitch PH2.0mm
SIM Slot	1
AutoStart Jumper	Yes, 1 × 3Pin, Pitch 2.0mm
Clear CMOS Jumper	Yes, 1 × 3Pin, Pitch 2.0mm
GPIO Header	1, 2 × 5Pin, Pitch 2.0mm
USB Header	1, 2 × 5Pin, Pitch 2.54mm
Front Panel Header	1, 2 × 5Pin, Pitch 2.54mm
Power Header	1, 1 × 2Pin, Pitch 3.5mm, Phoenix 2Pin (Option)
Watchdog Timer	
Output	From Super I/O to Drag RESETCON#
Interval	256 Segments, 0, 1, 2, 3, ..., 255 sec/min
Power Requirement	
Input PWR	12V DC in, 5.5mm/2.5mm
Environment	
Operating Temperature	0-50 °C
OS Support	
OS	Windows 10, Linux

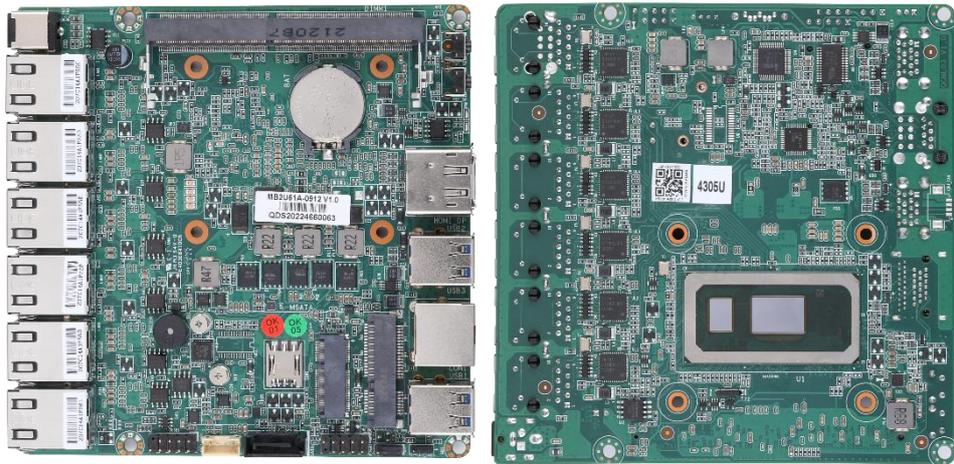
# Ordering and Specifications Information

Quick Order Model: MB4U860-0912

Ordering Code	Code Name	Processor Type	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Processor Graphics	TDP
<b>MB4U860-0912</b>	Whiskey Lake	Celeron	4305U	2	2	2.2GHz	/	2M	Intel UHD Graphics	15W
<b>MB4U860-0921</b>	Whiskey Lake	Pentium	5405U	2	4	2.3GHz	/	2M	Intel UHD Graphics	15W
<b>MB4U860-0931</b>	Whiskey Lake	Core i3	8145U	2	4	2.1GHz	3.9GHz	4M	Intel UHD Graphics	15W
<b>MB4U860-0951</b>	Whiskey Lake	Core i5	8265U	4	8	1.6GHz	3.9GHz	6M	Intel UHD Graphics	15W
<b>MB4U860-0971</b>	Whiskey Lake	Core i7	8565U	4	8	1.8GHz	4.6GHz	8M	Intel UHD Graphics	15W
<b>MB4U860-0952</b>	Coffee Lake	Core i5	8260U	4	8	1.6GHz	3.9GHz	6M	Intel UHD Graphics 620	15W
<b>MB4U860-1011</b>	Comet Lake	Celeron	5205U	2	2	1.9GHz	/	2M	Intel UHD Graphics	15W
<b>MB4U860-1012</b>	Comet Lake	Celeron	5305U	2	2	2.3GHz	/	2M	Intel UHD Graphics	15W
<b>MB4U860-1021</b>	Comet Lake	Pentium	6405U	2	4	2.4GHz	/	2M	Intel UHD Graphics	15W
<b>MB4U860-1031</b>	Comet Lake	Core i3	10110U	2	4	2.1GHz	4.1GHz	4M	Intel UHD Graphics	15W
<b>MB4U860-1051</b>	Comet Lake	Core i5	10210U	4	8	1.6GHz	4.2GHz	6M	Intel UHD Graphics	15W
<b>MB4U860-1071</b>	Comet Lake	Core i7	10610U	4	8	1.8GHz	4.9GHz	8M	Intel UHD Graphics	15W
<b>MB4U860-1072</b>	Comet Lake	Core i7	10810U	6	12	1.1GHz	4.9GHz	12M	Intel UHD Graphics	15W
<b>MB4U860-1073</b>	Comet Lake	Core i7	10710U	6	12	1.1GHz	4.7GHz	12M	Intel UHD Graphics	15W

## Custom Options

Category	Description
USB 2.0	2



# MB2U61A-0900 Series

## Main Features

- Intel 8<sup>th</sup> Whiskey Lake-U Processor
- Intel 8<sup>th</sup> Coffee Lake-U Processor
- Intel 10<sup>th</sup> Comet lake-U Processor
- 1 × Display Port, 1 × HDMI
- 4 × USB 3.0, 1 × SATA 3.0
- 1 × M.2, 1 × mSATA, 1 × Mini-PCIe
- 6 × Intel I225-V/I226-V 2.5 Gigabit LAN

## Specifications

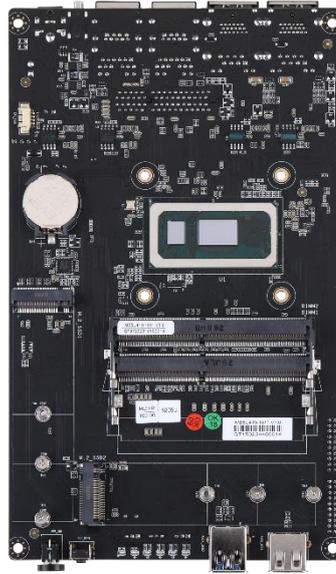
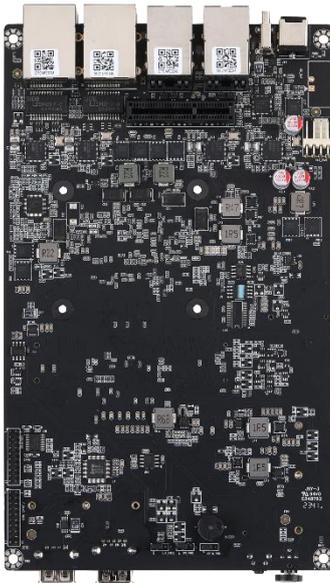
Processor System	
Dimension	120 × 120mm
CPU	<ul style="list-style-type: none"> <li>• Intel 8<sup>th</sup> Whiskey Lake-U Processor</li> <li>• Intel 8<sup>th</sup> Coffee Lake-U Processor</li> <li>• Intel 10<sup>th</sup> Comet lake-U Processor</li> </ul>
Core Number	By CPU
Max. Speed	By CPU
L2 Cache	By CPU
Chipset	By CPU
BIOS	UEFI
Expansion Slot	
Mini-PCIe/ mSATA	1 × Mini PCIe Full-length Mini PCIe for SSD by Default Full-length Mini PCIe for 4G
M.2	1 × M.2 for Wi-Fi (E key, Type: 2230)
Memory	
Technology	DDR4 2133/2400MHz SDRAM
Max.	32GB
Socket	1 × SO-DIMM
Graphics	
Controller	By CPU
VRAM	Shared Memory
Display Port	1
HDMI	1 (Support HDMI 1.4a)
Multi Display	Yes
Ethernet	
Interface	100/1000/2500Mbps
Controller	6 × Intel I225-V/I226-V 2.5 Gigabit LAN
Connector	6 × RJ-45
Audio	
Controller	No
SATA	
Max. Data Transfer Rate	SATA 3.0 (6.0Gb/S)
Accessories	
Accessories	Cable for HDD

Front I/O	
USB	4 × USB 3.0
Serial Port	1 × Connector, RS-232 (RJ-45) by Default, 2 × USB 2.0 (Option)
HDMI	1
Display Port	1
LED	1 × Power LED, 1 × HDD LED
Power Button	1 × Power Button, 1 × Reset Button
Real I/O	
DC-IN	1
Ethernet	6
Internal Connector	
TPM	1 (Option)
SATA	1, SATA 3.0 (6.0Gb/S)
SATA PWR Connector	1, 1 × 4Pin, Pitch PH2.0mm
SIM Slot	1
AutoStart Jumper	Yes, 1 × 3Pin, Pitch 2.54mm
Clear CMOS Jumper	Yes, 1 × 3Pin, Pitch 2.0mm
USB Header	1, 2 × 5Pin, Pitch 2.54mm
Front Panel Header	1, 2 × 5Pin, Pitch 2.54mm
Power Header	1, 1 × 2Pin, Pitch 3.5mm, Phoenix 2Pin (Option)
Watchdog Timer	
Output	From Super I/O to Drag RESETCON#
Interval	256 Segments, 0, 1, 2, 3, ..., 255 sec/min
Power Requirement	
Input PWR	12V DC in, 5.5mm/2.5mm
Environment	
Operating Temperature	0-50 °C
OS Support	
OS	Windows 10, Linux

# Ordering and Specifications Information

Quick Order Model: MB2U61A-0912

Ordering Code	Code Name	Processor Type	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Processor Graphics	TDP
<b>MB2U61A-0912</b>	Whiskey Lake	Celeron	4305U	2	2	2.2GHz	/	2M	Intel UHD Graphics	15W
<b>MB2U61A-0921</b>	Whiskey Lake	Pentium	5405U	2	4	2.3GHz	/	2M	Intel UHD Graphics	15W
<b>MB2U61A-0931</b>	Whiskey Lake	Core i3	8145U	2	4	2.1GHz	3.9GHz	4M	Intel UHD Graphics	15W
<b>MB2U61A-0951</b>	Whiskey Lake	Core i5	8265U	4	8	1.6GHz	3.9GHz	6M	Intel UHD Graphics	15W
<b>MB2U61A-0971</b>	Whiskey Lake	Core i7	8565U	4	8	1.8GHz	4.6GHz	8M	Intel UHD Graphics	15W
<b>MB2U61A-0952</b>	Coffee Lake	Core i5	8260U	4	8	1.6GHz	3.9GHz	6M	Intel UHD Graphics 620	15W
<b>MB2U61A-1011</b>	Comet Lake	Celeron	5205U	2	2	1.9GHz	/	2M	Intel UHD Graphics	15W
<b>MB2U61A-1012</b>	Comet Lake	Celeron	5305U	2	2	2.3GHz	/	2M	Intel UHD Graphics	15W
<b>MB2U61A-1021</b>	Comet Lake	Pentium	6405U	2	4	2.4GHz	/	2M	Intel UHD Graphics	15W
<b>MB2U61A-1031</b>	Comet Lake	Core i3	10110U	2	4	2.1GHz	4.1GHz	4M	Intel UHD Graphics	15W
<b>MB2U61A-1051</b>	Comet Lake	Core i5	10210U	4	8	1.6GHz	4.2GHz	6M	Intel UHD Graphics	15W
<b>MB2U61A-1071</b>	Comet Lake	Core i7	10610U	4	8	1.8GHz	4.9GHz	8M	Intel UHD Graphics	15W
<b>MB2U61A-1072</b>	Comet Lake	Core i7	10810U	6	12	1.1GHz	4.9GHz	12M	Intel UHD Graphics	15W
<b>MB2U61A-1073</b>	Comet Lake	Core i7	10710U	6	12	1.1GHz	4.7GHz	12M	Intel UHD Graphics	15W



# MB6U419-0900 Series

## Main Features

- Intel 8<sup>th</sup> Whiskey Lake-U Processor
- Intel 8<sup>th</sup> Coffee Lake-U Processor
- Intel 10<sup>th</sup> Comet lake-U Processor
- 2 × HDMI
- 3 × USB 3.0, 1 × USB 2.0, 1 × Type C
- 2 × M.2
- 4 × Intel I225-V/I226-V 2.5 Gigabit LAN

## Specifications

### Processor System

Dimension	120 × 200mm
CPU	<ul style="list-style-type: none"> <li>• Intel 8<sup>th</sup> Whiskey Lake-U Processor</li> <li>• Intel 8<sup>th</sup> Coffee Lake-U Processor</li> <li>• Intel 10<sup>th</sup> Comet lake-U Processor</li> </ul>
Core Number	By CPU
Max. Speed	By CPU
L2 Cache	By CPU
Chipset	By CPU
BIOS	UEFI

### Expansion Slot

M.2	1 × M.2 for SSD (M key, Type: 2280, PCIe 3.0 × 4)
M.2	1 × M.2 for SSD (M key, Type: 2280, PCIe 3.0 × 1)

### Memory

Technology	DDR4 2133/2400MHz SDRAM
Max.	64GB
Socket	2 × SO-DIMMs

### Graphics

Controller	By CPU
VRAM	Shared Memory
Display Port	0
HDMI	2 (Support HDMI 1.4a)
Multi Display	Yes

### Ethernet

Interface	100/1000/2500Mbps
Controller	4 × Intel I225-V/I226-V 2.5 Gigabit LAN
Connector	4 × RJ-45

### Audio

Controller	No
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### SATA

Max. Data Transfer Rate	SATA 3.0 (6.0Gb/S)
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### Accessories

Accessories	No
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### Front I/O

Power Button	1 × Power Button, 1 × Reset Button
LED	1 × Power LED, 1 × HDD LED
LED	1 × LAN LED
USB	1 × USB 3.0, 1 × USB 2.0

### Real I/O

DC-IN	1
Type C	1, USB 3.0 and Display Port
HDMI	2
Ethernet	4
USB	2 × USB 3.0

### Internal Connector

TPM	1 (Option)
PCIe	1, PCIe slot (Type: X4, PCIe 3.0 × 1, SATA 3.0 × 2)
Serial Port	1, 2 × 5Pin, Pitch 2.0mm (Option)
AutoStart Jumper	Yes, 1 × 3Pin, Pitch 2.54mm
Clear CMOS Jumper	Yes, 1 × 3Pin, Pitch 2.0mm
GPIO Header	1, 2 × 5Pin, Pitch 2.0mm
GPIO Power Select	Yes, 1 × 3Pin, Pitch 2.0mm
USB Header	1, 2 × 5Pin, Pitch 2.0mm
Front Panel Header	1, 2 × 5Pin, Pitch 2.0mm
Power Header	1, 1 × 2Pin, Pitch 3.5mm, Phoenix 2Pin (Option)

### Watchdog Timer

Output	From Super I/O to Drag RESETCON#
Interval	256 Segments, 0, 1, 2, 3, ..., 255 sec/min

### Power Requirement

Input PWR	12V/19V DC in, 5.5mm/2.5mm
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### Environment

Operating Temperature	0-50 °C
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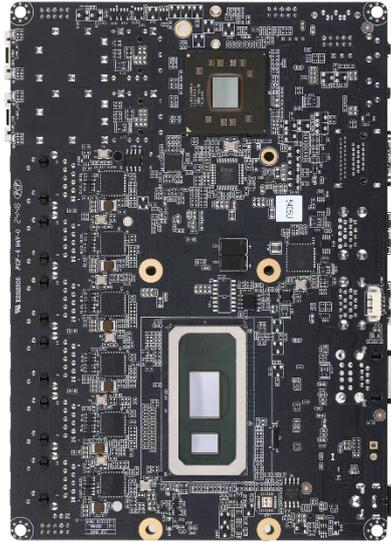
### OS Support

OS	Windows 10, Linux
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# Ordering and Specifications Information

Quick Order Model: MB6U419-0912

Ordering Code	Code Name	Processor Type	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Processor Graphics	TDP
<b>MB6U419-0912</b>	Whiskey Lake	Celeron	4305U	2	2	2.2GHz	/	2M	Intel UHD Graphics	15W
<b>MB6U419-0921</b>	Whiskey Lake	Pentium	5405U	2	4	2.3GHz	/	2M	Intel UHD Graphics	15W
<b>MB6U419-0931</b>	Whiskey Lake	Core i3	8145U	2	4	2.1GHz	3.9GHz	4M	Intel UHD Graphics	15W
<b>MB6U419-0951</b>	Whiskey Lake	Core i5	8265U	4	8	1.6GHz	3.9GHz	6M	Intel UHD Graphics	15W
<b>MB6U419-0971</b>	Whiskey Lake	Core i7	8565U	4	8	1.8GHz	4.6GHz	8M	Intel UHD Graphics	15W
<b>MB6U419-0952</b>	Coffee Lake	Core i5	8260U	4	8	1.6GHz	3.9GHz	6M	Intel UHD Graphics 620	15W
<b>MB6U419-1011</b>	Comet Lake	Celeron	5205U	2	2	1.9GHz	/	2M	Intel UHD Graphics	15W
<b>MB6U419-1012</b>	Comet Lake	Celeron	5305U	2	2	2.3GHz	/	2M	Intel UHD Graphics	15W
<b>MB6U419-1021</b>	Comet Lake	Pentium	6405U	2	4	2.4GHz	/	2M	Intel UHD Graphics	15W
<b>MB6U419-1031</b>	Comet Lake	Core i3	10110U	2	4	2.1GHz	4.1GHz	4M	Intel UHD Graphics	15W
<b>MB6U419-1051</b>	Comet Lake	Core i5	10210U	4	8	1.6GHz	4.2GHz	6M	Intel UHD Graphics	15W
<b>MB6U419-1071</b>	Comet Lake	Core i7	10610U	4	8	1.8GHz	4.9GHz	8M	Intel UHD Graphics	15W
<b>MB6U419-1072</b>	Comet Lake	Core i7	10810U	6	12	1.1GHz	4.9GHz	12M	Intel UHD Graphics	15W
<b>MB6U419-1073</b>	Comet Lake	Core i7	10710U	6	12	1.1GHz	4.7GHz	12M	Intel UHD Graphics	15W



# MB4U81Y-0900 Series

## Main Features

- Intel 8<sup>th</sup> Whiskey Lake-U Processor
- Intel 8<sup>th</sup> Coffee Lake-U Processor
- Intel 10<sup>th</sup> Comet lake-U Processor
- 1 × Display Port, 1 × HDMI
- 3 × USB 3.0, 1 × USB 2.0
- 3 × M.2, 1 × SATA 3.0
- 2, Intel JL82599ES 10 Gigabit SFP+
- 6 × Intel I225-V/I226-V 2.5 Gigabit LAN

## Specifications

Processor System	
Dimension	165 × 115mm
CPU	<ul style="list-style-type: none"> <li>• Intel 8<sup>th</sup> Whiskey Lake-U Processor</li> <li>• Intel 8<sup>th</sup> Coffee Lake-U Processor</li> <li>• Intel 10<sup>th</sup> Comet lake-U Processor</li> </ul>
Core Number	By CPU
Max. Speed	By CPU
L2 Cache	By CPU
Chipset	By CPU
BIOS	UEFI
Expansion Slot	
M.2	1 × M.2 for SSD, (M key, Type: 2280, PCIe 3.0 × 1) 1 × M.2 for 4G/5G, (B key, Type: 3042/3052) 1 × M.2 for WIFI (E key, Type: 2230, (For Core series))
Memory	
Technology	DDR4 2133/2400MHz SDRAM
Max.	32GB
Socket	1 × SO-DIMM
Graphics	
Controller	By CPU
VRAM	Shared Memory
Display Port	1
HDMI	1 (Support HDMI 1.4a)
Multi Display	Yes
Ethernet	
Interface	100/1000/2500Mbps, 10Gbps
Controller	6 × Intel I225-V/I226-V 2.5 Gigabit LAN
Connector	6 × RJ-45
Connector	1 × Intel JL82599ES 10 Gigabit SFP+ Max. speed of 12Gbps for both interfaces
Audio	
Controller	No
SATA	
Max. Data Transfer Rate	SATA 3.0 (6.0Gb/s)
Accessories	
Accessories	Cable for HDD

Front I/O	
Power Button	1 × Power Button, 1 × Reset Button
LED	1 × Power LED, 1 × HDD LED
Display	1 × Display Port, 1 × HDMI
USB	3 × USB 3.0, 1 × USB 2.0
Serial Port	1 × Connector, RS-232 (RJ-45) by Default
DC-IN	1
Real I/O	
SFP+	2 × 10G SFP+
Ethernet	6 × 2.5G
Internal Connector	
TPM	1 (Option)
SATA	1, SATA 3.0 (6.0Gb/s)
SATA PWR Connector	1, 1 × 4Pin, Pitch PH2.0mm
SIM Slot	1
AutoStart Jumper	Yes, 1 × 3Pin, Pitch 2.54mm
Clear CMOS Jumper	Yes, 1 × 3Pin, Pitch 2.0mm
USB 3.0 Header	2, 2 × 5Pin, Pitch 2.0mm
USB Header	1, 2 × 5Pin, Pitch 2.54mm
Front Panel Header	1, 2 × 5Pin, Pitch 2.0mm
Power Header	1, 1 × 2Pin, Pitch 3.5mm, Phoenix 2Pin (Option)
CPU FAN Connector	1, 1 × 4Pin, Pitch PH 1.25mm
SYS FAN Connector	1, 1 × 4Pin, Pitch PH 1.25mm
Watchdog Timer	
Output	From Super I/O to Drag RESETCON#
Interval	256 Segments, 0, 1, 2, 3, ..., 255 sec/min
Power Requirement	
Input PWR	12V DC in, 5.5mm/2.5mm
Environment	
Operating Temperature	0-50 °C
OS Support	
OS	Windows 10, Linux

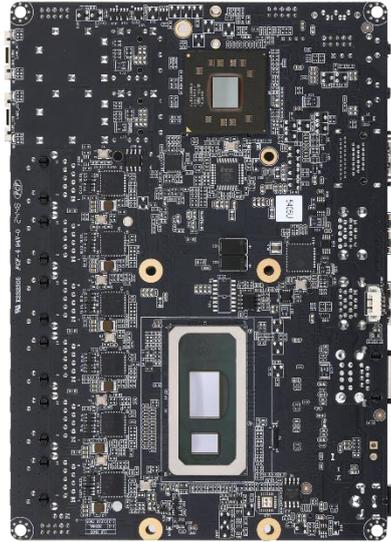
# Ordering and Specifications Information

Quick Order Model: MB4U81Y-0921

Ordering Code	Code Name	Processor Type	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Processor Graphics	TDP
MB4U81Y-0912	Whiskey Lake	Celeron	4305U	2	2	2.2GHz	/	2M	Intel UHD Graphics	15W
<b>MB4U81Y-0921</b>	Whiskey Lake	Pentium	5405U	2	4	2.3GHz	/	2M	Intel UHD Graphics	15W
MB4U81Y-0931	Whiskey Lake	Core i3	8145U	2	4	2.1GHz	3.9GHz	4M	Intel UHD Graphics	15W
MB4U81Y-0951	Whiskey Lake	Core i5	8265U	4	8	1.6GHz	3.9GHz	6M	Intel UHD Graphics	15W
MB4U81Y-0971	Whiskey Lake	Core i7	8565U	4	8	1.8GHz	4.6GHz	8M	Intel UHD Graphics	15W
MB4U81Y-0952	Coffee Lake	Core i5	8260U	4	8	1.6GHz	3.9GHz	6M	Intel UHD Graphics 620	15W
MB4U81Y-1011	Comet Lake	Celeron	5205U	2	2	1.9GHz	/	2M	Intel UHD Graphics	15W
MB4U81Y-1012	Comet Lake	Celeron	5305U	2	2	2.3GHz	/	2M	Intel UHD Graphics	15W
MB4U81Y-1021	Comet Lake	Pentium	6405U	2	4	2.4GHz	/	2M	Intel UHD Graphics	15W
<b>MB4U81Y-1031</b>	Comet Lake	Core i3	10110U	2	4	2.1GHz	4.1GHz	4M	Intel UHD Graphics	15W
MB4U81Y-1051	Comet Lake	Core i5	10210U	4	8	1.6GHz	4.2GHz	6M	Intel UHD Graphics	15W
MB4U81Y-1071	Comet Lake	Core i7	10610U	4	8	1.8GHz	4.9GHz	8M	Intel UHD Graphics	15W
MB4U81Y-1072	Comet Lake	Core i7	10810U	6	12	1.1GHz	4.9GHz	12M	Intel UHD Graphics	15W
MB4U81Y-1073	Comet Lake	Core i7	10710U	6	12	1.1GHz	4.7GHz	12M	Intel UHD Graphics	15W

## Custom Options

Category	Description
USB 2.0	2



# MB4U81Y-090U Series

## Main Features

- Intel 8<sup>th</sup> Whiskey Lake-U Processor
- Intel 8<sup>th</sup> Coffee Lake-U Processor
- Intel 10<sup>th</sup> Comet lake-U Processor
- 1 × Display Port, 1 × HDMI
- 3 × USB 3.0, 1 × USB 2.0
- 3 × M.2, 1 × SATA 3.0
- 2, Intel X710-BM2 SFP+
- 6 × Intel I225-V/I226-V 2.5 Gigabit LAN

## Specifications

Processor System	
Dimension	165 × 115mm
CPU	<ul style="list-style-type: none"> <li>• Intel 8<sup>th</sup> Whiskey Lake-U Processor</li> <li>• Intel 8<sup>th</sup> Coffee Lake-U Processor</li> <li>• Intel 10<sup>th</sup> Comet lake-U Processor</li> </ul>
Core Number	By CPU
Max. Speed	By CPU
L2 Cache	By CPU
Chipset	By CPU
BIOS	UEFI
Expansion Slot	
M.2	1 × M.2 for SSD, (M key, Type: 2280, PCIe 3.0 × 1) 1 × M.2 for 4G/5G, (B key, Type: 3042/3052) 1 × M.2 for WIFI (E key, Type: 2230, <a href="#">(For Core series)</a> )
Memory	
Technology	DDR4 2133/2400MHz SDRAM
Max.	32GB
Socket	1 × SO-DIMM
Graphics	
Controller	By CPU
VRAM	Shared Memory
Display Port	1
HDMI	1 (Support HDMI 1.4a)
Multi Display	Yes
Ethernet	
Interface	100/1000/2500Mbps, 10Gbps
Controller	6 × Intel I225-V/I226-V 2.5 Gigabit LAN
Connector	6 × RJ-45
Connector	1 × Intel X710-BM2 SFP+
Audio	
Controller	No
SATA	
Max. Data Transfer Rate	SATA 3.0 (6.0Gb/s)
Accessories	
Accessories	Cable for HDD

Front I/O	
Power Button	1 × Power Button, 1 × Reset Button
LED	1 × Power LED, 1 × HDD LED
Display	1 × Display Port, 1 × HDMI
USB	3 × USB 3.0, 1 × USB 2.0
Serial Port	1 × Connector, RS-232 (RJ-45) by Default
DC-IN	1
Real I/O	
SFP+	2 × 10G SFP+
Ethernet	6 × 2.5G
Internal Connector	
TPM	1 (Option)
SATA	1, SATA 3.0 (6.0Gb/s)
SATA PWR Connector	1, 1 × 4Pin, Pitch PH2.0mm
SIM Slot	1
AutoStart Jumper	Yes, 1 × 3Pin, Pitch 2.54mm
Clear CMOS Jumper	Yes, 1 × 3Pin, Pitch 2.0mm
USB 3.0 Header	2, 2 × 5Pin, Pitch 2.0mm
USB Header	1, 2 × 5Pin, Pitch 2.54mm
Front Panel Header	1, 2 × 5Pin, Pitch 2.0mm
Power Header	1, 1 × 2Pin, Pitch 3.5mm, Phoenix 2Pin (Option)
CPU FAN Connector	1, 1 × 4Pin, Pitch PH 1.25mm
SYS FAN Connector	1, 1 × 4Pin, Pitch PH 1.25mm
Watchdog Timer	
Output	From Super I/O to Drag RESETCON#
Interval	256 Segments, 0, 1, 2, 3, ..., 255 sec/min
Power Requirement	
Input PWR	12V DC in, 5.5mm/2.5mm
Environment	
Operating Temperature	0-50 °C
OS Support	
OS	Windows 10, Linux

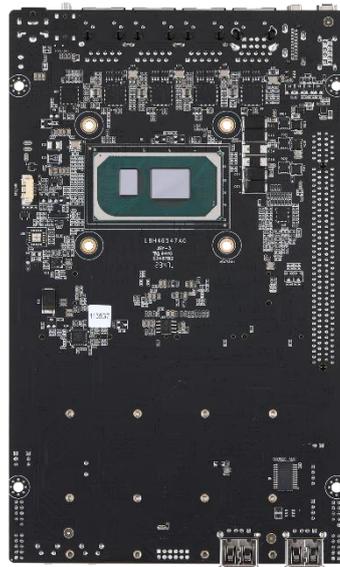
## Ordering and Specifications Information

Quick Order Model: MB4U81Y-095B

Ordering Code	Code Name	Processor Type	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Processor Graphics	TDP
MB4U81Y-091B	Whiskey Lake	Celeron	4305U	2	2	2.2GHz	/	2M	Intel UHD Graphics	15W
MB4U81Y-092A	Whiskey Lake	Pentium	5405U	2	4	2.3GHz	/	2M	Intel UHD Graphics	15W
MB4U81Y-093A	Whiskey Lake	Core i3	8145U	2	4	2.1GHz	3.9GHz	4M	Intel UHD Graphics	15W
MB4U81Y-095A	Whiskey Lake	Core i5	8265U	4	8	1.6GHz	3.9GHz	6M	Intel UHD Graphics	15W
MB4U81Y-097A	Whiskey Lake	Core i7	8565U	4	8	1.8GHz	4.6GHz	8M	Intel UHD Graphics	15W
MB4U81Y-095B	Coffee Lake	Core i5	8260U	4	8	1.6GHz	3.9GHz	6M	Intel UHD Graphics 620	15W
MB4U81Y-101A	Comet Lake	Celeron	5205U	2	2	1.9GHz	/	2M	Intel UHD Graphics	15W
MB4U81Y-101B	Comet Lake	Celeron	5305U	2	2	2.3GHz	/	2M	Intel UHD Graphics	15W
MB4U81Y-102A	Comet Lake	Pentium	6405U	2	4	2.4GHz	/	2M	Intel UHD Graphics	15W
MB4U81Y-103A	Comet Lake	Core i3	10110U	2	4	2.1GHz	4.1GHz	4M	Intel UHD Graphics	15W
MB4U81Y-105A	Comet Lake	Core i5	10210U	4	8	1.6GHz	4.2GHz	6M	Intel UHD Graphics	15W
MB4U81Y-107A	Comet Lake	Core i7	10610U	4	8	1.8GHz	4.9GHz	8M	Intel UHD Graphics	15W
MB4U81Y-107B	Comet Lake	Core i7	10810U	6	12	1.1GHz	4.9GHz	12M	Intel UHD Graphics	15W
MB4U81Y-107C	Comet Lake	Core i7	10710U	6	12	1.1GHz	4.7GHz	12M	Intel UHD Graphics	15W

## Custom Options

Category	Description
USB 2.0	2



# MB6U40A-1100 Series

## Main Features

- Intel 11<sup>th</sup> Tiger Lake Processor
- 1 × HDMI
- 1 × USB 3.0, 6 × USB 2.0, 1 × Type C
- 4 × M.2
- 4 × Intel I225-V/I226-V 2.5 Gigabit LAN

## Specifications

### Processor System

Dimension	120 × 200mm
CPU	Intel 11 <sup>th</sup> Tiger Lake Processor
Core Number	By CPU
Max. Speed	By CPU
L2 Cache	By CPU
Chipset	By CPU
BIOS	UEFI

### Expansion Slot

M.2	2 × M.2 for SSD (M key, Type: 2280, PCIe 3.0 × 2)
M.2	2 × M.2 for SSD (M key, Type: 2280, PCIe 3.0 × 1)

### Memory

Technology	DDR4 3200MHz SDRAM
Max.	64GB
Socket	2 × SO-DIMMs

### Graphics

Controller	By CPU
VRAM	Shared Memory
Display Port	Display Port (Type C)
HDMI	1 (Support HDMI 1.4a)
Multi Display	Yes

### Ethernet

Interface	100/1000/2500Mbps
Controller	4 × Intel I225-V/I226-V 2.5 Gigabit LAN
Connector	4 × RJ-45

### Audio

Controller	No
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### SATA

Max. Data Transfer Rate	No
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### Accessories

Accessories	No
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### Front I/O

Power Button	1 × Power Button, 1 × Reset Button
LED	1 × Power LED, 1 × HDD LED
USB	2 × USB 2.0

### Real I/O

DC-IN	1
Type C	1, USB 3.0 and Display Port
HDMI	1
Ethernet	4
USB	1 × USB 3.0

### Internal Connector

M.2	2 × M.2 for SSD, PCIe 3.0 × 2 (M key, Type: 2242/2260/2280)
M.2	2 × M.2 for SSD, PCIe 3.0 × 1 (M key, Type: 2242/2260/2280) (NGFF for Core i5/i7)
PCIe	1, PCIe slot (Type: X16, PCIe 4.0 × 4)
AutoStart Jumper	1, 1 × 3Pin, Pitch 2.0mm
CMOS Clear Jumper	1, 1 × 3Pin, Pitch 2.0mm
Front Panel	1, 2 × 5Pin, Pitch 2.0mm
USB	2, 2 × 5Pin, Pitch 2.0mm
Serial Port	1 × RS-232, 1, 2 × 5Pin, Pitch 2.0mm
Power Header	1, 1 × 2Pin, Pitch 3.5mm, Phoenix 2Pin (Option)

### Watchdog Timer

Output	From Super I/O to Drag RESETCON#
Interval	256 Segments, 0,1,2,3,,,255 sec/min

### Power Requirement

Input PWR	12V DC in, 5.5mm/2.5mm
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### Environment

Operating Temperature	0-50 °C
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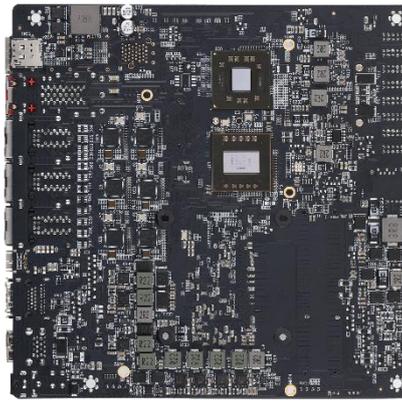
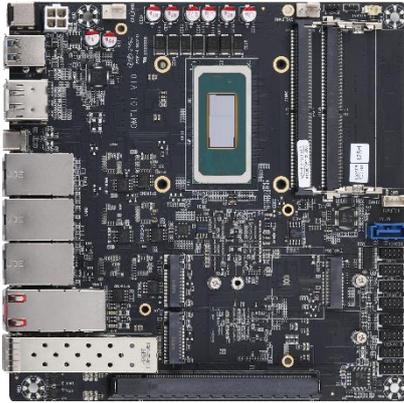
### OS Support

OS	UEFI Windows 10, UEFI Linux
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# Ordering and Specifications Information

Quick Order Model: **MB6U40A-1151**

Ordering Code	Code Name	Processor Type	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Processor Graphics	TDP
<b>MB6U40A-1111</b>	Tiger Lake	Celeron	6305	2	2	1.80 GHz		4M	Intel UHD Graphics	15W
<b>MB6U40A-1121</b>	Tiger Lake	Pentium	7505	2	4	2.00 GHz	3.50 GHz	4M	Intel UHD Graphics	15W
<b>MB6U40A-1131</b>	Tiger Lake	Core i3	1115G4	2	4	3.00 GHz	4.10 GHz	6M	Intel UHD Graphics	12-28W
<b>MB6U40A-1132</b>	Tiger Lake	Core i3	1125G4	4	8	2.00 GHz	3.70 GHz	8M	Intel UHD Graphics	12-28W
<b>MB6U40A-1151</b>	Tiger Lake	Core i5	1135G7	4	8	2.40 GHz	4.20 GHz	8M	Intel Iris Xe Graphics	12-28W
<b>MB6U40A-1152</b>	Tiger Lake	Core i5	1145G7	4	8	2.60 GHz	4.40 GHz	8M	Intel Iris Xe Graphics	12-28W
<b>MB6U40A-1153</b>	Tiger Lake	Core i5	1155G7	4	8	2.50 GHz	4.50 GHz	8M	Intel Iris Xe Graphics eligible	12-28W
<b>MB6U40A-1171</b>	Tiger Lake	Core i7	1165G7	4	8	2.80 GHz	4.70 GHz	12M	Intel Iris Xe Graphics	12-28W
<b>MB6U40A-1172</b>	Tiger Lake	Core i7	1185G7	4	8	3.00 GHz	4.80 GHz	12M	Intel Iris Xe Graphics	12-28W
<b>MB6U40A-1173</b>	Tiger Lake	Core i7	1195G7	4	8	2.90 GHz	5.00 GHz	12M	Intel Iris Xe Graphics eligible	12-28W
<b>MB6H40A-1151</b>	Tiger Lake	Core i5	11300H	4	8	2.60 GHz	4.40 GHz	8M	Intel Iris Xe Graphics	28-35W
<b>MB6H40A-1152</b>	Tiger Lake	Core i5	11320H	4	8	2.50 GHz	4.50 GHz	8M	Intel Iris Xe Graphics eligible	28-35W
<b>MB6H40A-1171</b>	Tiger Lake	Core i7	11370H	4	8	3.00 GHz	4.80 GHz	12M	Intel Iris Xe Graphics	28-35W
<b>MB6H40A-1172</b>	Tiger Lake	Core i7	11375H	4	8	3.00 GHz	5.00 GHz	12M	Intel Iris Xe Graphics	28-35W
<b>MB6H40A-1173</b>	Tiger Lake	Core i7	11390H	4	8	2.90 GHz	5.00 GHz	12M	Intel Iris Xe Graphics eligible	28-35W



# MB7HT1X-1500 Series

## Main Features

- Intel Meteor Lake U/H Ultra Processor(Series 1)
- Intel Arrow Lake U/H Ultra Processor(Series 2)
- 1 × Display Port, 1 × HDMI
- 3 × USB 3.0, 1 × Type C
- 3 × M.2, 1 × SATA 3.0, 1 × RS-232
- 6 × Intel I225-V/I226-V 2.5 Gigabit LAN
- 2, Intel X540 10 Gigabit LAN
- 2, Intel JL82599ES 10 Gigabit SFP+
- 1 × PCIe 5.0 × 8 Slot

## Specifications

Processor System	
Dimension	170 × 170mm
CPU	• Intel Meteor Lake U/H Ultra Processor(Series 1) • Intel Arrow Lake U/H Ultra Processor(Series 2)
Core Number	By CPU
Max. Speed	By CPU
L2 Cache	By CPU
Chipset	By CPU
BIOS	UEFI
Expansion Slot	
M.2	1 × M.2 for SSD (M key, Type: 2280, PCIe 4.0 × 4)
M.2	1 × M.2 for SSD (M key, Type: 2280, PCIe 4.0 × 1)
M.2	1 × M.2 for 4G/5G (B key, Type: 3042/3052)
Memory	
Technology	DDR5 4800MHz SDRAM
Max.	96GB
Socket	2 × SO-DIMMs
Graphics	
Controller	By CPU
VRAM	Shared Memory
Display Port	1
HDMI	1 (Support HDMI 1.4a)
Multi Display	Yes
Ethernet	
RJ45/2.5G	6, Intel I225-V/I226-V 2.5 Gigabit LAN
RJ45/10G	2, Intel JLX540-AT2/BT2 10 Gigabit LAN <b>Max. speed of 12Gbps for both interfaces</b>
SFP+ / 10G	2, Intel JL82599ES 10 Gigabit LAN <b>Max. speed of 12Gbps for both interfaces</b>
Audio	
Controller	Realtek HD Audio
SATA	
Max. Data Transfer Rate	SATA 3.0 (6.0Gb/S)
Accessories	
Accessories	Cable for HDD, Cable for Serial Port

Rear I/O	
DC-IN	1
USB 3.0	2 × USB 3.0 (Type A)
Display	1 × Display Port, 1 × HDMI
Type C	1, USB 3.0
Ethernet	6 × 2.5G
Ethernet	2 × 10G
SFP+	2 × 10G SFP+
Internal Connector	
PCIe Slot	1, PCIe slot (Type: X16, PCIe 5.0 × 8)
Power Header	1, 2 × 2Pin, Pitch 5.5mm/4.2mm
CPU FAN Connector	1, 1 × 4Pin, Pitch 2.54mm
SYS FAN Connector	1, 1 × 4Pin, Pitch 2.54mm
Audio Header	1, 2 × 5Pin, Pitch 2.0mm
Front Panel Header	1, 2 × 5Pin, Pitch 2.0mm
USB Header	4, 2 × 5Pin, Pitch 2.0mm
USB 3.0 Header	1, 2 × 5Pin, Pitch 2.0mm
Serial Port	1, 2 × 5Pin, Pitch 2.0mm
SATA	1, SATA 3.0 (6.0Gb/S)
SATA PWR Connector	1, 1 × 4Pin, Pitch PH2.0mm
AutoStart Jumper	Yes, 1 × 3Pin, Pitch 2.0mm
Clear CMOS Jumper	Yes, 1 × 3Pin, Pitch 2.0mm
GPIO Header	1, 2 × 5Pin, Pitch 2.0mm
Watchdog Timer	
Output	From Super I/O to Drag RESETCON#
Interval	256 Segments,0,1,2,3,,,255 sec/min
Power Requirement	
Input PWR	12V/19V DC in, 5.5mm/2.5mm
Environment	
Operating Temperature	0-50 °C
OS Support	
OS	UEFI Windows 10, UEFI Linux

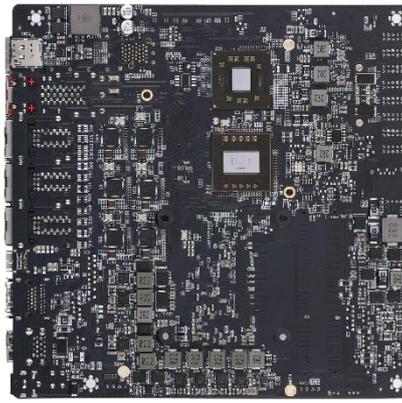
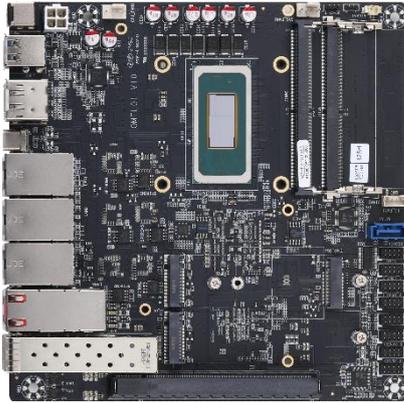
# Ordering and Specifications Information

Quick Order Model: MB7UT1A-1551

Ordering Code	MB7UT1X-1551	MB7UT1X-1571	MB7HT1X-1551	MB7HT1X-1571
Code Name	Meteor Lake	Meteor Lake	Meteor Lake	Meteor Lake
Processor Type	Core Ultra 5	Core Ultra 7	Core Ultra 5	Core Ultra 7
Processor Number	125U	155U	125H	155H
Total Cores	12	12	14	16
# of Performance-cores	2	2	4	6
# of Efficient-cores	8	8	8	8
# of Low Power Efficient-cores	2	2	2	2
# of Threads	14	14	18	22
Max Turbo Frequency	4.30 GHz	4.80 GHz	4.50 GHz	4.80 GHz
Intel® Turbo Boost Max Technology 3.0 Frequency				4.80 GHz
Performance-core Max Turbo Frequency	4.30 GHz	4.80 GHz	4.50 GHz	4.80 GHz
Efficient-core Max Turbo Frequency	3.60 GHz	3.80 GHz	3.60 GHz	3.80 GHz
Low Power Efficient-core Max Turbo Frequency	2.10 GHz	2.10 GHz	2.50 GHz	2.50 GHz
Performance-core Base Frequency	1.30 GHz	1.70 GHz	1.20 GHz	1.40 GHz
Efficient-core Base Frequency	800 MHz	1.20 GHz	700 MHz	900 MHz
Low Power Efficient-core Base Frequency	700 MHz	700 MHz	700 MHz	700 MHz
Cache	12M	12M	18M	24M
Processor Graphics	Intel Graphics	Intel Graphics	Intel Arc graphics	Intel Arc graphics
10G SFP+	JL82599ES	JL82599ES	JL82599ES	JL82599ES
10G RJ45	JLX540-AT2 JLX540-BT2	JLX540-AT2 JLX540-BT2	JLX540-AT2 JLX540-BT2	JLX540-AT2 JLX540-BT2
TDP	15-57W	15-57W	28-115W	28-115W

## Custom Options

Category	Description
TPM 2.0	1 (Z32H330TC)



# MB7HT1X-150U Series

## Main Features

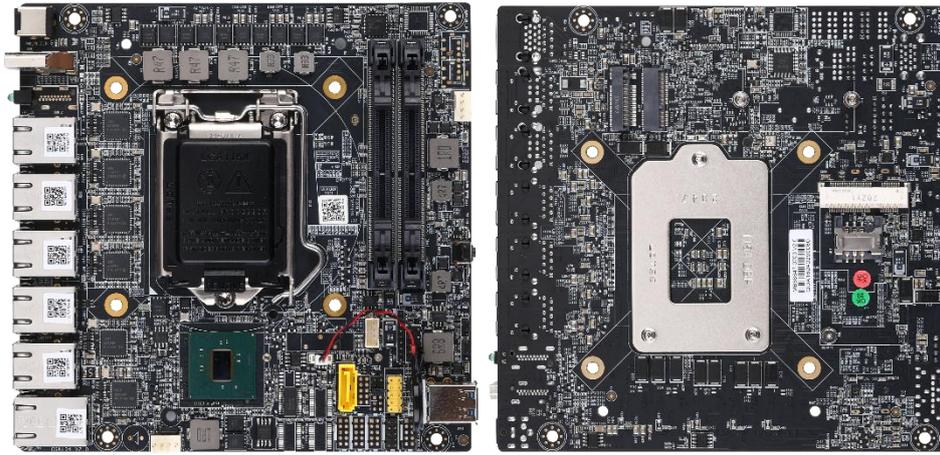
- Intel Meteor Lake U/H Ultra Processor(Series 1)
- Intel Arrow Lake U/H Ultra Processor(Series 2)
- 1 × Display Port, 1 × HDMI
- 3 × USB 3.0, 1 × Type C
- 3 × M.2, 1 × SATA 3.0, 1 × RS-232
- 6 × Intel I225-V/I226-V 2.5 Gigabit LAN
- 2, Intel X540 10 Gigabit LAN
- 2, Intel X710-BM2 10 Gigabit SFP+
- 1 × PCIe 5.0 × 8 Slot

## Specifications

Processor System	
Dimension	170 × 170mm
CPU	• Intel Meteor Lake U/H Ultra Processor(Series 1) • Intel Arrow Lake U/H Ultra Processor(Series 2)
Core Number	By CPU
Max. Speed	By CPU
L2 Cache	By CPU
Chipset	By CPU
BIOS	UEFI
Expansion Slot	
M.2	1 × M.2 for SSD (M key, Type: 2280, PCIe 4.0 × 4)
M.2	1 × M.2 for SSD (M key, Type: 2280, PCIe 4.0 × 1)
M.2	1 × M.2 for 4G/5G (B key, Type: 3042/3052)
Memory	
Technology	DDR5 4800MHz SDRAM
Max.	96GB
Socket	2 × SO-DIMMs
Graphics	
Controller	By CPU
VRAM	Shared Memory
Display Port	1
HDMI	1 (Support HDMI 1.4a)
Multi Display	Yes
Ethernet	
RJ45/2.5G	6, Intel I225-V/I226-V 2.5 Gigabit LAN
RJ45/10G	2, Intel X540 10 Gigabit LAN <b>Max. speed of 12Gbps for both interfaces</b>
SFP+ / 10G	2, Intel X710-BM2 10 Gigabit SFP+
Audio	
Controller	Realtek HD Audio
SATA	
Max. Data Transfer Rate	SATA 3.0 (6.0Gb/s)
Accessories	
Accessories	Cable for HDD, Cable for Serial Port

Rear I/O	
DC-IN	1
USB 3.0	2 × USB 3.0 (Type A)
Display	1 × Display Port, 1 × HDMI
Type C	1, USB 3.0
Ethernet	6 × 2.5G
Ethernet	2 × 10G
SFP+	2 × 10G SFP+
Internal Connector	
PCIe Slot	1, PCIe slot (Type: X16, PCIe 5.0 × 8)
Power Header	1, 2 × 2Pin, Pitch 5.5mm/4.2mm
CPU FAN Connector	1, 1 × 4Pin, Pitch 2.54mm
SYS FAN Connector	1, 1 × 4Pin, Pitch 2.54mm
Audio Header	1, 2 × 5Pin, Pitch 2.0mm
Front Panel Header	1, 2 × 5Pin, Pitch 2.0mm
USB Header	4, 2 × 5Pin, Pitch 2.0mm
USB 3.0 Header	1, 2 × 5Pin, Pitch 2.0mm
Serial Port	1, 2 × 5Pin, Pitch 2.0mm
SATA	1, SATA 3.0 (6.0Gb/s)
SATA PWR Connector	1, 1 × 4Pin, Pitch PH2.0mm
AutoStart Jumper	Yes, 1 × 3Pin, Pitch 2.0mm
Clear CMOS Jumper	Yes, 1 × 3Pin, Pitch 2.0mm
GPIO Header	1, 2 × 5Pin, Pitch 2.0mm
Watchdog Timer	
Output	From Super I/O to Drag RESETCON#
Interval	256 Segments,0,1,2,3,,,255 sec/min
Power Requirement	
Input PWR	12V/19V DC in, 5.5mm/2.5mm
Environment	
Operating Temperature	0-50 °C
OS Support	
OS	UEFI Windows 10, UEFI Linux

Ordering Code	MB7UT1A-155A	MB7UT1A-157A	MB7HT1A-155A	MB7HT1A-157A
Code Name	Meteor Lake	Meteor Lake	Meteor Lake	Meteor Lake
Processor Type	Core Ultra 5	Core Ultra 7	Core Ultra 5	Core Ultra 7
Processor Number	125U	155U	125H	155H
Total Cores	12	12	14	16
# of Performance-cores	2	2	4	6
# of Efficient-cores	8	8	8	8
# of Low Power Efficient-cores	2	2	2	2
# of Threads	14	14	18	22
Max Turbo Frequency	4.30 GHz	4.80 GHz	4.50 GHz	4.80 GHz
Intel® Turbo Boost Max Technology 3.0 Frequency				4.80 GHz
Performance-core Max Turbo Frequency	4.30 GHz	4.80 GHz	4.50 GHz	4.80 GHz
Efficient-core Max Turbo Frequency	3.60 GHz	3.80 GHz	3.60 GHz	3.80 GHz
Low Power Efficient-core Max Turbo Frequency	2.10 GHz	2.10 GHz	2.50 GHz	2.50 GHz
Performance-core Base Frequency	1.30 GHz	1.70 GHz	1.20 GHz	1.40 GHz
Efficient-core Base Frequency	800 MHz	1.20 GHz	700 MHz	900 MHz
Low Power Efficient-core Base Frequency	700 MHz	700 MHz	700 MHz	700 MHz
Cache	12M	12M	18M	24M
Processor Graphics	Intel Graphics	Intel Graphics	Intel Arc graphics	Intel Arc graphics
10G SFP+	FTX710-BM2	FTX710-BM2	FTX710-BM2	FTX710-BM2
10G RJ45	JLX540-AT2 JLX540-BT2	JLX540-AT2 JLX540-BT2	JLX540-AT2 JLX540-BT2	JLX540-AT2 JLX540-BT2
TDP	15-57W	15-57W	28-115W	28-115W



# MB5S647-0700 Series

## Main Features

- Intel 6<sup>th</sup> Skylake-S Processor
- Intel 7<sup>th</sup> KabyLake-S Processor
- Intel 8<sup>th</sup> Coffee Lake-S Processor
- Intel 9<sup>th</sup> Coffee Lake-R-S Processor
- 1 × HDMI, • 2 × USB 3.0, 1 × SATA 3.0
- 1 × Mini-PCIe, 2 × M.2
- 6 × Intel I211-AT/I210-AT Gigabit LAN

## Specifications

Processor System	
Dimension	155 × 155mm
CPU	<ul style="list-style-type: none"> <li>• Intel 6<sup>th</sup> Skylake-S Processor</li> <li>• Intel 7<sup>th</sup> KabyLake-S Processor</li> <li>• Intel 8<sup>th</sup> Coffee Lake-S Processor</li> <li>• Intel 9<sup>th</sup> Coffee Lake-R-S Processor</li> </ul>
Core Number	By CPU
Max. Speed	By CPU
L2 Cache	By CPU
Chipset	Intel B150
Expansion Slot	
Mini-PCIe	1 × Mini PCIe, Full-length Mini PCIe for 4G by Default, Half-length Mini PCIe for Wi-Fi
M.2	1 × M.2 for SSD (M key, Type: 2280)
M.2	1 × M.2 for Wi-Fi (E key, Type: 2230)
Memory	
Technology	DDR4 2133MHz SDRAM
Max.	64GB
Socket	2 × SO-DIMMs
Graphics	
Controller	By CPU
VRAM	Shared Memory
VGA	0
HDMI	1 (Support HDMI 1.4a)
Multi Display	No
Ethernet	
Interface	10/100/1000Mbps
Controller	6 × Intel I211-AT/I210-AT Gigabit LAN
Connector	6 × RJ-45
Audio	
Controller	No
SATA	
Max. Data Transfer Rate	SATA 3.0 (6.0Gb/S)
Accessories	
Accessories	Cable for HDD

Rear I/O	
DC-IN	1
HDMI	1
Ethernet	6
LED	1 × Power LED

Front I/O	
Power Button	1
LED	1 × Power LED, 1 × HDD LED
USB	2 × USB 3.0
Audio	No

Internal Connector	
TPM	1 (Option)
VGA Header	1, 2 × 5Pin, Pitch 2.0mm (Option)
Serial Port	0
RS-485	0
SATA	1, SATA 3.0 (6.0Gb/S)
SATA PWR Connector	1, 1 × 4Pin, Pitch PH2.0mm
SIM Slot	1
AutoStart Jumper	Yes, 1 × 3Pin, Pitch 2.54mm
Clear CMOS Jumper	Yes, 1 × 3Pin, Pitch 2.0mm
GPIO Header	1, 2 × 5Pin, Pitch 2.0mm
USB Header	1, 2 × 5Pin, Pitch 2.54mm
Front Panel Header	1, 2 × 5Pin, Pitch 2.0mm
Power Header	1, 1 × 2Pin, Pitch 4.2mm (Option)

Watchdog Timer	
Output	From Super I/O to Drag RESETCON#
Interval	256 Segments, 0, 1, 2, 3, ..., 255 sec/min

Power Requirement	
Input PWR	12V DC in, 5.5mm/2.5mm

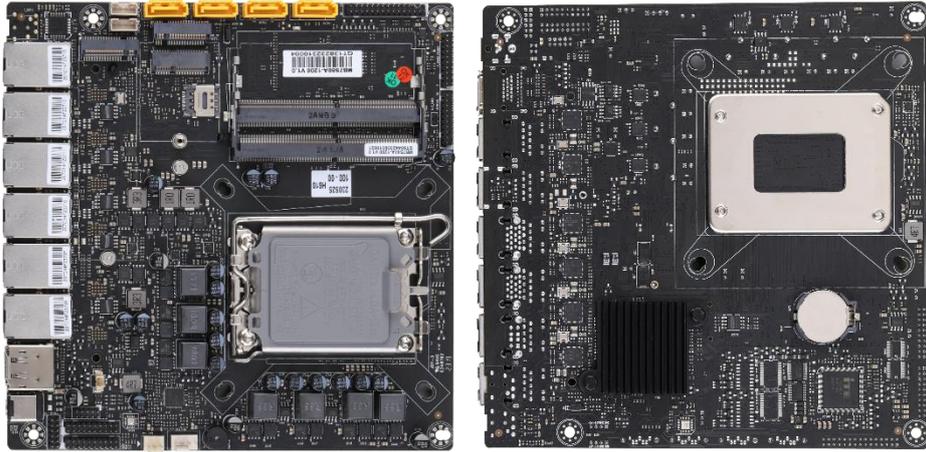
Environment	
Operating Temperature	0-50 °C

OS Support	
OS	Windows 10, Linux Windows 7 (Only for 6th Gen Skylake)

# Ordering and Specifications Information

Quick Order Model: MB5S647-0700

Ordering Code	Code Name	Processor Type	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Processor Graphics	TDP
	Skylake	Celeron	G3900	2	2	2.8GHz	/	2M	Intel HD 510	51W
	Skylake	Pentium	G4500	2	2	3.5GHz	/	3M	Intel HD 530	51W
	Skylake	Core i3	6100	2	4	3.7GHz	/	3M	Intel HD 530	51W
	Skylake	Core i5	6400	4	4	2.7GHz	3.3GHz	6M	Intel HD 530	65W
	Kaby Lake	Celeron	G3930	2	2	2.9GHz	/	2M	Intel HD 610	51W
	Kaby Lake	Pentium	G4560	2	4	3.5GHz	/	3M	Intel HD 610	54W
	Kaby Lake	Core i3	7100	2	4	3.9GHz	/	3M	Intel HD 630	51W
	Kaby Lake	Core i5	7500	4	4	3.4GHz	3.8GHz	6M	Intel HD 630	65W
	Coffee Lake	Celeron	G4900	2	2	3.1GHz	/	2M	Intel® UHD Graphics 610	54W
	Coffee Lake	Pentium	G5400	2	4	3.7GHz	/	4M	Intel® UHD Graphics 610	58W
	Coffee Lake	Core i3	8100	4	4	3.6GHz	/	6M	Intel® UHD Graphics 630	65W
	Coffee Lake	Core i5	8400	6	6	2.9GHz	4.1GHz	9M	Intel® UHD Graphics 630	65W
	Coffee Lake	Celeron	G4930	2	2	3.2GHz	/	2M	Intel® UHD Graphics 610	54W
	Coffee Lake	Pentium	G5420	2	4	3.8GHz	/	4M	Intel® UHD Graphics 610	54W
	Coffee Lake	Core i3	9100	4	4	3.6GHz	4.2GHz	6M	Intel® UHD Graphics 630	65W
	Coffee Lake	Core i5	9400	6	6	2.9GHz	4.1GHz	9M	Intel® UHD Graphics 630	65W



# MB7S60A-1200 Series

## Main Features

- Intel 12<sup>th</sup> Alder lake -S Processor
- Intel 13<sup>th</sup> Raptor Lake-S Processor
- 1 × HDMI, 1 × Display Port
- 2 × USB 2.0
- 3 × M.2, 4 × SATA 3.0
- 6 × Intel I225-V/I226-V 2.5 Gigabit LAN

## Specifications

### Processor System

Dimension	170 × 170mm
CPU	• Intel 12 <sup>th</sup> Alder lake -S Processor • Intel 13 <sup>th</sup> Raptor Lake-S Processor
Core Number	By CPU
Max. Speed	By CPU
L2 Cache	By CPU
Chipset	Intel H610
BIOS	UEFI

### Expansion Slot

M.2	1 × M.2 for SSD (M key, Type: 2280, PCIe 4.0 × 4)
M.2	1 × M.2 for 4G/5G (B key, Type: 3042/3052),
M.2	1 × M.2 for Wi-Fi (E key, Type: 2230)

### Memory

Technology	DDR4 2400Mhz SDRAM
Max.	64GB
Socket	2 × SO-DIMMs

### Graphics

Controller	By CPU
VRAM	Shared Memory
VGA	0
Display Port	1
HDMI	1 (Support HDMI 1.4a)
EDP	1
Multi Display	Yes

### Ethernet

Interface	100/1000/2500Mbps
Controller	6 × Intel I225-V/I226-V 2.5 Gigabit LAN
Connector	6 × RJ-45

### Audio

Controller	No
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### SATA

Max. Data Transfer Rate	SATA 3.0 (6.0Gb/S)
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### Rear I/O

DC-IN	1
HDMI	1
Display Port	1
Ethernet	6
USB	0
Audio	0

### Internal Connector

TPM	1 (Option)
EDP	1, 2 × 15Pin, Pitch 1.0mm
VGA Header	0
Serial Port	0
RS-485	0
PS/2	0
SATA	4, SATA 3.0 (6.0Gb/S)
SATA PWR Connector	2, 1 × 4Pin, Pitch PH2.0mm
SIM Slot	1
AutoStart Jumper	Yes, 1 × 3Pin, Pitch 2.0mm
Clear CMOS Jumper	Yes, 1 × 2Pin, Pitch 2.0mm
USB Header	1, 2 × 5Pin, Pitch 2.0mm
Front Panel Header	1, 2 × 5Pin, Pitch 2.0mm
Power Header	1, 1 × 2Pin, Pitch 5.0mm (Option)

### Watchdog Timer

Output	From Super I/O to Drag RESETCON#
Interval	256 Segments, 0, 1, 2, 3, ..., 255 sec/min

### Power Requirement

Input PWR	12V/19V DC in, 5.5mm/2.5mm
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### Environment

Operating Temperature	0-50 °C
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### Accessories

Accessories	Cable for HDD
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### OS Support

OS	UEFI Windows 10, UEFI Linux
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## Quick Order Model: MB7S60A-1200

Ordering Code					
Code Name	Alder Lake S				
Processor Type	Celeron	Pentium	Core i3	Core i5	Core i7
Processor Number	G6900	G7400	12100	12400	12700
Total Cores	2	2	4	6	12
# of Performance-cores	2	2	4	6	8
# of Efficient-cores					4
# of Threads	2	4	8	12	20
Max Turbo Frequency			4.30 GHz	4.40 GHz	4.80 GHz
Performance-core Base Frequency	3.40 GHz	3.70 GHz	3.30 GHz	2.50 GHz	2.10 GHz
Performance-core Max Turbo Frequency	-	-	4.30 GHz	4.40 GHz	4.80 GHz
Efficient-core Base Frequency					1.60 GHz
Efficient-core Max Turbo Frequency					3.60 GHz
Cache	4M	6M	12M	18M	25M
Processor Graphics	Intel UHD Graphics 710	Intel UHD Graphics 710	Intel UHD Graphics 730	Intel UHD Graphics 730	Intel UHD Graphics 770
TDP	46W	46W	60W-89W	65W-117W	65W-180W

Ordering Code					
Code Name	Raptor Lake S	Raptor Lake S	Raptor Lake S	Raptor Lake S	Raptor Lake S
Processor Type	Celeron	Pentium	Core i3	Core i5	Core i7
Processor Number			13100	13400	13700
Total Cores			4	10	16
# of Performance-cores			4	6	8
# of Efficient-cores				4	8
# of Threads			8	16	24
Max Turbo Frequency			4.50 GHz	4.60 GHz	5.10 GHz
Performance-core Base Frequency			3.40 GHz	2.50 GHz	2.10 GHz
Performance-core Max Turbo Frequency			4.50 GHz	4.60 GHz	5.10 GHz
Efficient-core Base Frequency					1.50 GHz
Efficient-core Max Turbo Frequency					4.10 GHz
Cache			12M	20M	30M
Processor Graphics			Intel UHD Graphics 730	Intel UHD Graphics 730	Intel UHD Graphics 770
TDP			60W-110W	65-148W	65W-219W

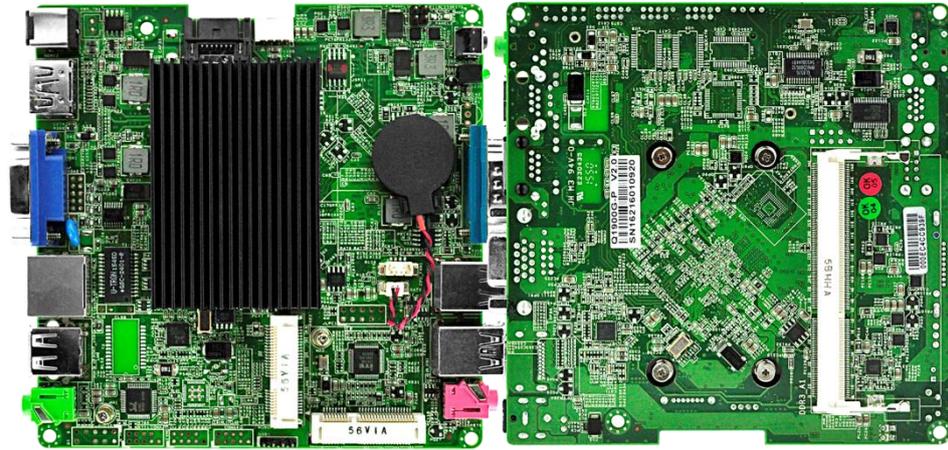
# Regular Series

NO.	New Series	Model	Code Name	Page No.	Default CPU	LAN	RS-232	LVDS EDP	Remark
1	MB2J113-0100	Q1900G-P	Bay Trail	<a href="#">101</a>	J1900	1	1		
2	MB2J213-0100	Q1900G2-M	Bay Trail	<a href="#">103</a>	J1900	2	1		
3	MB2J217-0300	Q3710G2-P	Braswell	<a href="#">105</a>	J3710	2	1		
4	MB1J124-0500	MB1J124-0521	Gemini Lake Gemini Lake-R	<a href="#">107</a>	J4105	1	2	EDP	
5	MB2U113-0300	Q1007UG-P	Ivy Bridge	<a href="#">109</a>	1007U	1	1	LVDS	
6	MB2U213-0300	Q1007UG2-P	Ivy Bridge	<a href="#">111</a>	1007U	2	1	LVDS	
7	<b>NUC7JYB</b>	<b>NUC7JYB</b>	<b>Gemini Lake</b>	<a href="#">113</a>	<b>J5005</b>	<b>1</b>	<b>0</b>		<b>New</b>
8	Q3735FM-P	Q3735FM-P	Bay Trail	<a href="#">114</a>	Z3735F	1	0		
9	Q8350G-P	Q8350G-P	Cherry Trail	<a href="#">115</a>	Z8350	1	0		

# MB2J113-0100 Series

## Main Features

- Intel Bay Trail Processor
- 1 × VGA, 1 × HDMI, 4 × RS-232
- 1 × USB 3.0, 4 × USB 2.0, 1 × SATA 3.0
- 1 × Mini-PCIe, 1 × mSATA
- 1 × Realtek Gigabit LAN



## Specifications

### Processor System

Dimension	120 × 120mm
CPU	Intel Bay Trail Processor
Core Number	By CPU
Max. Speed	By CPU
L2 Cache	By CPU
Chipset	By CPU
BIOS	UEFI

### Expansion Slot

Mini-PCIe	1 × Half-length Mini PCIe for Wi-Fi
mSATA	1 × Full-length Mini PCIe for SSD

### Memory

Technology	DDR3L 1333/1600MHz SDRAM
Max.	8GB
Socket	1 × SO-DIMM

### Graphics

Controller	By CPU
VRAM	Shared Memory
VGA	1
LVDS	0
HDMI	1
Multi Display	Yes

### Ethernet

Interface	10/100/1000Mbps
Controller	1 × Realtek Gigabit LAN
Connector	1 × RJ-45

### Audio

Controller	Realtek HD Audio
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### SATA

Max. Data Transfer Rate	SATA 3.0 (6.0Gb/S)
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### Accessories

Accessories	Cable for HDD
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### Rear I/O

DC-IN	1
VGA	1
HDMI	1
Ethernet	1
USB	1 × USB 2.0
Audio	1 (Line-out)

### Front I/O

Power Button	1
LED	1 × Power LED
Serial Port	1 × RS-232
USB	1 × USB 3.0, 3 × USB 2.0
Audio	1 (Mic-in)

### Internal Connector

LVDS	0
VGA	1, 2 × 5Pin, Pitch 2.0mm
Serial Port	0
RS-485	0
SATA	1, SATA 3.0 (6.0Gb/S)
SATA PWR Connector	1, 1 × 4Pin, Pitch PH2.0mm
SIM Slot	0
AutoStart Jumper	No
Clear CMOS Jumper	0
GPIO Header	0
USB Header	1, 1 × 4Pin, Pitch 2.54mm
Front Panel Header	1, 2 × 2Pin, Pitch 2.54mm
Speakers Header	1, 2 × 5Pin, Pitch 2.54mm
Power Header	1, 1 × 2Pin, Pitch 2.5mm (Option)

### Power Requirements

Input PWR	12V DC in, 5.5mm/2.5mm
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### Environment

Operating Temperature	0-50 °C
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### OS Support

OS	Windows 7, Windows 10, Linux
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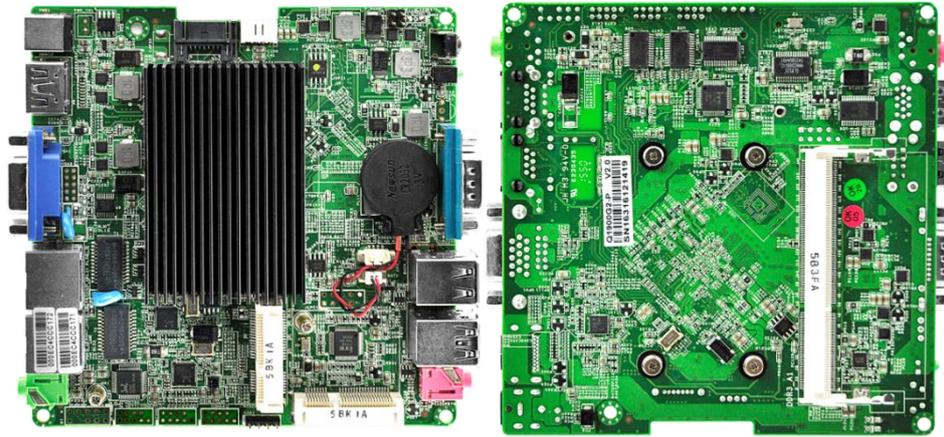
## Ordering and Specifications Information

Quick Order Model: Q1900G-P

Ordering Code	Code Name	Processor Type	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Processor Graphics	TDP
Q1800G-P (MB2J113-0111)	Bay trail	Celeron	J1800	2	2	2.41Ghz	2.58Ghz	1M	Intel HD Graphics	10W
Q1900G-P (MB2J113-0121)	Bay trail	Celeron	J1900	4	4	2.00Ghz	2.42Ghz	2M	Intel HD Graphics	10W
MB2J113-0122	Bay trail	Celeron	N2920	4	4	1.86Ghz	2.00Ghz	2M	Intel HD Graphics	7.5W
MB2J113-0123	Bay trail	Celeron	N2930	4	4	1.83Ghz	2.16Ghz	2M	Intel HD Graphics	7.5W
MB2J113-0125 (MB2J113-0134)	Bay trail	Pentium	N3540	4	4	2.16Ghz	2.66Ghz	2M	Intel HD Graphics	7.5W

## Custom Options

Category	Description
RJ-45	1



# MB2J213-0100 Series

## Main Features

- Intel Bay Trail Processor
- 1 × VGA, 1 × HDMI, 4 × RS-232
- 1 × USB 3.0, 3 × USB 2.0, 1 × SATA 3.0
- 1 × Mini-PCIe, 1 × mSATA
- 2 × Realtek Gigabit LAN

## Specifications

### Processor System

Dimension	120 × 120mm
CPU	Intel Bay Trail Processor
Core Number	By CPU
Max. Speed	By CPU
L2 Cache	By CPU
Chipset	By CPU
BIOS	UEFI

### Expansion Slot

Mini-PCIe	1 × Half-length Mini PCIe for Wi-Fi
mSATA	1 × Full-length Mini PCIe for SSD

### Memory

Technology	DDR3L 1333/1600MHz SDRAM
Max.	8GB
Socket	1 × SO-DIMM

### Graphics

Controller	By CPU
VRAM	Shared Memory
VGA	1
LVDS	0
HDMI	1
Multi Display	Yes

### Ethernet

Interface	10/100/1000Mbps
Controller	2 × Realtek Gigabit LAN
Connector	2 × RJ-45

### Audio

Controller	Realtek HD Audio
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### SATA

Max. Data Transfer Rate	SATA 3.0 (6.0Gb/S)
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### Accessories

Accessories	Cable for HDD
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### Rear I/O

DC-IN	1
VGA	1
HDMI	1
Ethernet	2
USB	0
Audio	1 (Line-out)

### Front I/O

Power Button	1
LED	1 × Power LED
Serial Port	1 × RS-232
USB	1 × USB 3.0, 3 × USB 2.0
Audio	1 (Mic-in)

### Internal Connector

LVDS	0
VGA	1, 2 × 5Pin, Pitch 2.0mm
Serial Port	0
RS-485	0
SATA	1, SATA 3.0 (6.0Gb/S)
SATA PWR Connector	1, 1 × 4Pin, Pitch PH2.0mm
SIM Slot	0
AutoStart Jumper	No
Clear CMOS Jumper	0
GPIO Header	0
USB Header	1, 1 × 4Pin, Pitch 2.54mm
Front Panel Header	1, 2 × 2Pin, Pitch 2.54mm
Speakers Header	1, 2 × 5Pin, Pitch 2.54mm
Power Header	1, 1 × 2Pin, Pitch 2.5mm (Option)

### Power Requirements

Input PWR	12V DC in, 5.5mm/2.5mm
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### Environment

Operating Temperature	0-50 °C
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### OS Support

OS	Windows 7, Windows 10, Linux
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## Ordering and Specifications Information

Quick Order Model: Q1900G2-M

Ordering Code	Code Name	Processor Type	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Processor Graphics	TDP
Q1800G2-M <i>(MB2J213-0111)</i>	Bay trail	Celeron	J1800	2	2	2.41Ghz	2.58Ghz	1M	Intel HD Graphics	10W
Q1900G2-M <i>(MB2J213-0121)</i>	Bay trail	Celeron	J1900	4	4	2.00Ghz	2.42Ghz	2M	Intel HD Graphics	10W
MB2J213-0122	Bay trail	Celeron	N2920	4	4	1.86Ghz	2.00Ghz	2M	Intel HD Graphics	7.5W
MB2J213-0123	Bay trail	Celeron	N2930	4	4	1.83Ghz	2.16Ghz	2M	Intel HD Graphics	7.5W
MB2J213-0125 <i>(MB2J213-0134)</i>	Bay trail	Pentium	N3540	4	4	2.16Ghz	2.66Ghz	2M	Intel HD Graphics	7.5W

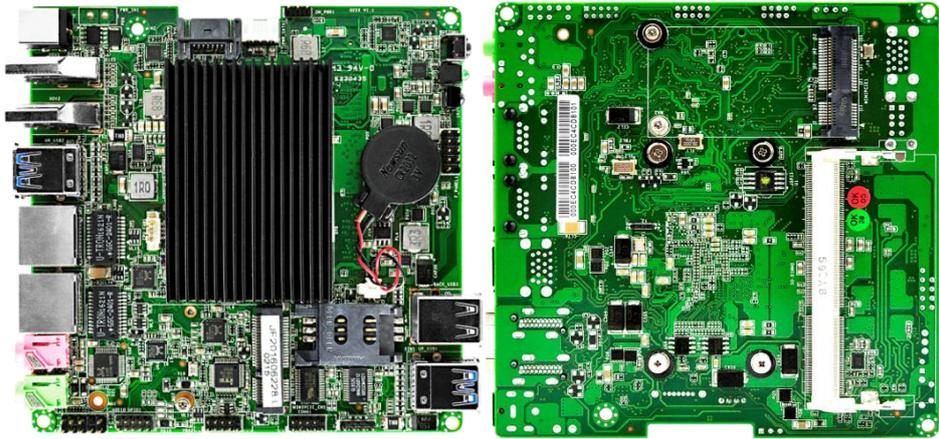
## Custom Options

Category	Description
USB 2.0	1

# MB2J217-0300 Series

## Main Features

- Intel Braswell Processor
- 2 × HDMI, 1 × RS-232, 1 × VGA (Header)
- 4 × USB 3.0, 2 × USB 2.0, 1 × SATA 3.0
- 1 × Mini-PCIe, 1 × mSATA
- 2 × Realtek Gigabit LAN



## Specifications

### Processor System

Dimension	120 × 120mm
CPU	Intel Braswell Processor
Core Number	By CPU
Max. Speed	By CPU
L2 Cache	By CPU
Chipset	By CPU
BIOS	UEFI

### Expansion Slot

Mini-PCIe	1 × Mini PCIe, Full-length Mini PCIe for 4G, Half-length Mini PCIe for Wi-Fi by Default
mSATA	1 × Full-length Mini PCIe for SSD

### Memory

Technology	DDR3L 1333/1600MHz SDRAM
Max.	8GB
Socket	1 × SO-DIMM

### Graphics

Controller	By CPU
VRAM	Shared Memory
VGA	1 (Header)
HDMI	2 (Support HDMI 1.4a)
Multi Display	Yes

### Ethernet

Interface	10/100/1000Mbps
Controller	2 × Realtek Gigabit LAN
Connector	2 × RJ-45

### Audio

Controller	Realtek HD Audio
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### SATA

Max. Data Transfer Rate	SATA 3.0 (6.0Gb/s)
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### Rear I/O

DC-IN	1
HDMI	2
USB	2 × USB 3.0
Ethernet	2
Audio	2 (Mic-in, Line-out)

### Front I/O

Power Button	1
LED	1 × Power LED
IR	1 (Option)
USB	2 × USB 3.0, 2 × USB 2.0

### Internal Connector

VGA Header	1, 2 × 5Pin, Pitch 2.0mm
Serial Port	1, 2 × 5Pin, Pitch 2.0mm
SATA	1, SATA 3.0 (6.0Gb/s)
SATA PWR Connector	1, 1 × 4Pin, Pitch PH2.0mm
SIM Slot	1
AutoStart Jumper	Yes, 1 × 3Pin, Pitch 2.54mm
GPIO Header	1, 2 × 5Pin, Pitch 2.0mm
USB Header	1, 1 × 4Pin, Pitch 2.54mm
Front Panel Header	1, 2 × 5Pin, Pitch 2.54mm
Speakers Header	1, 2 × 5Pin, Pitch 2.54mm
Power Header	1, 1 × 2Pin, Pitch 4.2mm (Option)

### Power Requirements

Input PWR	12V DC in, 5.5mm/2.5mm
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### Environment

Operating Temperature	0-50 °C
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### Accessories

Accessories	Cable for HDD, Cable for Serial Port
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### OS Support

OS	Windows 7 x64, Windows 10, Linux
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## Ordering and Specifications Information

Quick Order Model: Q3710G2-P

Ordering Code	Code Name	Processor Type	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Processor Graphics	TDP
Q3060G2-P <i>(MB2 217-0311)</i>	Braswell	Celeron	N3060	2	2	1.6Ghz	2.48Ghz	2M	Intel HD Graphics	6W
Q3160G2-P <i>(MB2 217-0321)</i>	Braswell	Celeron	N3160	4	4	1.6Ghz	2.24Ghz	2M	Intel HD Graphics	6W
Q3710G2-P <i>(MB2 217-0331)</i>	Braswell	Pentium	J3710	4	4	1.6Ghz	2.64Ghz	2M	Intel HD Graphics	6.5W



# MB1J124-0500 Series

## Main Features

- Intel Gemini Lake Processor
- Intel Gemini Lake-R Processor
- 1 × HDMI, 1 × EDP
- 2 × USB 3.0, 2 × USB 2.0
- 1 × M.2, 1 × mSATA
- 1 × Realtek Gigabit LAN

## Specifications

### Processor System

Dimension	105 × 70mm
CPU	• Intel Gemini Lake Processor • Intel Gemini Lake-R Processor
Core Number	By CPU
Max. Speed	By CPU
L2 Cache	By CPU
Chipset	By CPU
BIOS	UEFI

### Expansion Slot

M.2	1 × M.2 for Wi-Fi (E key, Type: 2230)
mSATA	1 × Full-length Mini PCIe for SSD

### Memory

Technology	LPDDR4 2133/2400MHz SDRAM
Max.	4GB, Integrated, 8GB (Option)

### Graphics

Controller	By CPU
EDP	1
HDMI	1
Multi Display	Yes

### Ethernet

Interface	10/100/1000Mbps
Controller	1 × Realtek Gigabit LAN
Connector	1 × RJ-45

### Audio

Controller	Realtek HD Audio
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### Accessories

Accessories	No
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### Rear I/O

DC-IN	1
HDMI	1
Ethernet	1
USB	2 × USB 3.0, 2 × USB 2.0
Audio	1 (Mic-in, Line-out)

### Front I/O

Power Button	1
LED	1 × Power LED, 1 × HDD LED

### Internal Connector

EDP	1, 2 × 15Pin, Pitch 1.0mm (Option)
Serial Port	2, 2 × 5Pin, Pitch 2.0mm
RS-485	COM1/2 can be set up as RS-485
GPIO Header	1, 2 × 5Pin, Pitch 2.0mm
Front Panel Header	1, 2 × 5Pin, Pitch 2.0mm
Speakers Header	1, 2 × 5Pin, Pitch 2.54mm
Power Header	1, 1 × 2Pin, Pitch 5.08mm (Option)

### Watchdog Timer

Output	From Super I/O to Drag RESETCON#
Interval	256 Segments, 0, 1, 2, 3, ..., 255 sec/min

### Power Requirement

Input PWR	12V DC in, 5.5mm/2.5mm
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### Environment

Operating Temperature	0-50 °C
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### OS Support

OS	Windows 10, Linux
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# Ordering and Specifications Information

Quick Order Model: MB1J124-0521

Ordering Code	Code Name	Processor Type	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Processor Graphics	TDP
<b>Memory: 4GB, Integrated</b>										
MB2J513-0511	Gemini Lake	Celeron	J4005	2	2	2.0GHz	2.7GHz	4M	Intel UHD Graphics 600	10W
MB1J124-0512	Gemini Lake	Celeron	N4000	2	2	1.1GHz	2.6GHz	4M	Intel UHD Graphics 600	6W
MB1J124-0521	Gemini Lake	Celeron	J4105	4	4	1.5GHz	2.5GHz	4M	Intel UHD Graphics 600	10W
MB1J124-0611	Gemini Lake Refresh	Celeron	N4020	2	2	1.1GHz	2.8GHz	4M	Intel UHD Graphics 600	6W
MB1J124-0621	Gemini Lake R	Celeron	J4125	4	4	2.0GHz	2.7GHz	4M	Intel UHD Graphics 600	10W
<b>Memory: 8GB, Integrated</b>										
MB1J124-062A	Gemini Lake R	Celeron	J4125	4	4	2.0GHz	2.7GHz	4M	Intel UHD Graphics 600	10W

# MB2U113-0300 Series

## Main Features

- Intel 3<sup>rd</sup> Ivy Bridge Processor
- 1 × VGA, 1 × HDMI, 1 × RS-232
- 5 × USB 2.0, 1 × SATA 3.0
- 1 × Mini-PCIe, 1 × mSATA
- 1 × Realtek Gigabit LAN

## Specifications

Processor System	
Dimension	120 × 120mm
CPU	Intel 3 <sup>rd</sup> Ivy Bridge Processor
Core Number	By CPU
Max. Speed	By CPU
L2 Cache	By CPU
Chipset	By CPU
BIOS	Legacy
Expansion Slot	
Mini-PCIe	1 × Half-length Mini PCIe for Wi-Fi
mSATA	1 × Full-length Mini PCIe for SSD
Memory	
Technology	DDR3 1333/1600MHz SDRAM
Max.	8GB
Socket	1 × SO-DIMM
Graphics	
Controller	By CPU
VRAM	Shared Memory
VGA	1
LVDS	1 (Option)
HDMI	1
Multi Display	Yes
Ethernet	
Interface	10/100/1000Mbps
Controller	1 × Realtek Gigabit LAN
Connector	1 × RJ-45
Audio	
Controller	Realtek HD Audio
SATA	
Max. Data Transfer Rate	SATA 3.0 (6.0Gb/S)
Accessories	
Accessories	Cable for HDD

Rear I/O	
DC-IN	1
VGA	1
HDMI	1
Ethernet	1
USB	1 × USB 2.0
Audio	1 (Line-out)
Front I/O	
Power Button	1
LED	1 × Power LED
Serial Port	1 × RS-232
USB	4 × USB 2.0
Audio	1 (Mic-in)
Internal Connector	
LVDS	1, 2 × 15Pin, Pitch 1.0mm (Option)
VGA Header	1, 2 × 5Pin, Pitch 2.0mm
SATA	1, SATA 3.0 (6.0Gb/S)
SATA PWR Connector	1, 1 × 4Pin, Pitch PH2.0mm
USB Header	1, 2 × 5Pin, Pitch 2.54mm
Front Panel Header	1, 2 × 5Pin, Pitch 2.54mm
Speakers Header	1, 2 × 5Pin, Pitch 2.54mm
Power Header	1, 1 × 2Pin, Pitch 2.5mm (Option)
Power Requirement	
Input PWR	12V DC in, 5.5mm/2.5mm
Environment	
Operating Temperature	0-50 °C
OS Support	
OS	Windows XP, Windows 7, Windows 10, Linux

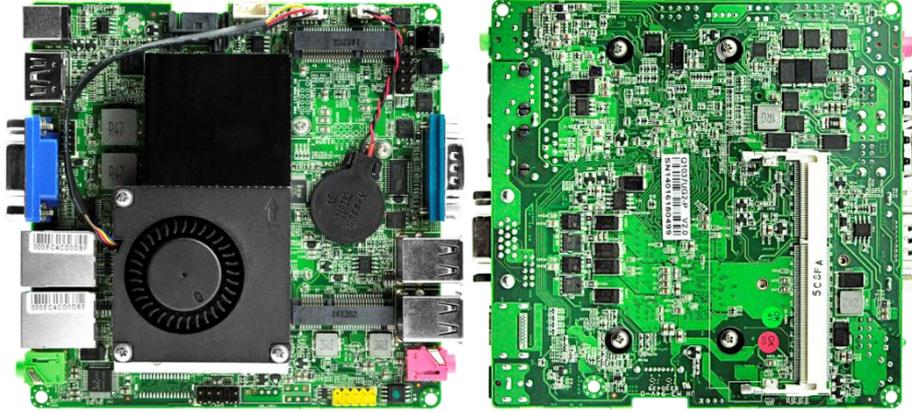
## Ordering and Specifications Information

Quick Order Model: Q1007UG-P

Ordering Code	Code Name	Processor Type	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Processor Graphics	TDP
Q1007UG-P (MB2U113-0311)	Ivy Bridge	Celeron	1007U	2	2	1.5GHz	/	2M	Intel HD Graphics	17W
Q1037UG-P (MB2U113-0312)	Ivy Bridge	Celeron	1037U	2	2	1.8GHz	/	2M	Intel HD Graphics	17W
Q3217UG-P (MB2U113-0331)	Ivy Bridge	Core i3	3217U	2	4	1.8GHz	/	3M	Intel HD Graphics 4000	17W
Q3317UG-P (MB2U113-0351)	Ivy Bridge	Core i5	3317U	2	4	1.7GHz	2.6GHz	3M	Intel HD Graphics 4000	17W

## Custom Options

Category	Description
RJ-45	1



# MB2U213-0300 Series

## Main Features

- Intel 3<sup>rd</sup> Ivy Bridge Processor
- 1 × VGA, 1 × HDMI, 1 × RS-232
- 4 × USB 2.0, 1 × SATA 3.0
- 1 × Mini-PCIe, 1 × mSATA
- 2 × Realtek Gigabit LAN

## Specifications

### Processor System

Dimension	120 × 120mm
CPU	Intel 3 <sup>rd</sup> Ivy Bridge Processor
Core Number	By CPU
Max. Speed	By CPU
L2 Cache	By CPU
Chipset	By CPU
BIOS	Legacy

### Expansion Slot

Mini-PCIe	1 × Half-length Mini PCIe for Wi-Fi
mSATA	1 × Full-length Mini PCIe for SSD

### Memory

Technology	DDR3 1333/1600MHz SDRAM
Max.	8GB
Socket	1 × SO-DIMM

### Graphics

Controller	By CPU
VRAM	Shared Memory
VGA	1
LVDS	1 (Option)
HDMI	1
Multi Display	Yes

### Ethernet

Interface	10/100/1000Mbps
Controller	2 × Realtek Gigabit LAN
Connector	2 × RJ-45

### Audio

Controller	Realtek HD Audio
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### SATA

Max. Data Transfer Rate	SATA 3.0 (6.0Gb/S)
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### Accessories

Accessories	Cable for HDD
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### Rear I/O

DC-IN	1
VGA	1
HDMI	1
Ethernet	2
Audio	1 (Line-out)

### Front I/O

Power Button	1
LED	1 × Power LED
Serial Port	1 × RS-232
USB	4 × USB 2.0
Audio	1 (Mic-in)

### Internal Connector

LVDS	1, 2 × 15Pin, Pitch 1.0mm (Option)
VGA Header	1, 2 × 5Pin, Pitch 2.0mm
SATA	1, SATA 3.0 (6.0Gb/S)
SATA PWR Connector	1, 1 × 4Pin, Pitch PH2.0mm
USB Header	1, 2 × 5Pin, Pitch 2.54mm
Front Panel Header	1, 2 × 5Pin, Pitch 2.54mm
Speakers Header	1, 2 × 5Pin, Pitch 2.54mm
Power Header	1, 1 × 2Pin, Pitch 2.5mm (Option)

### Power Requirement

Input PWR	12V DC in, 5.5mm/2.5mm
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### Environment

Operating Temperature	0-50 °C
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### OS Support

OS	Windows XP, Windows 7, Windows 10, Linux
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## Ordering and Specifications Information

Quick Order Model: Q1007UG2-P

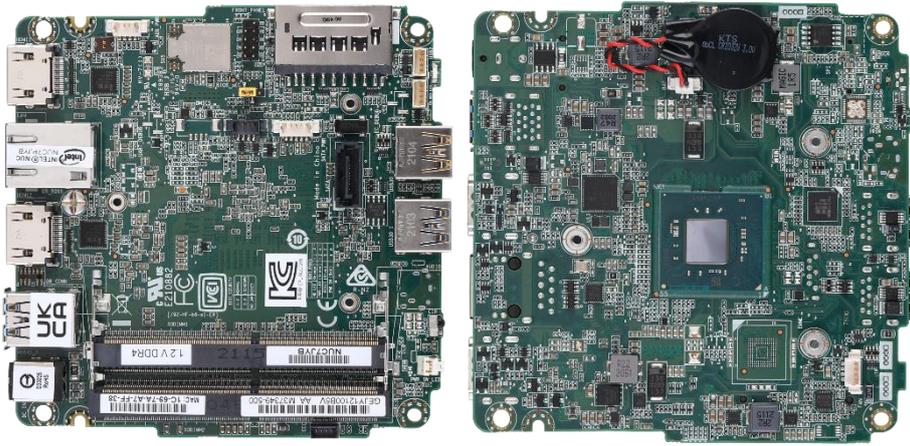
Ordering Code	Code Name	Processor Type	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Processor Graphics	TDP
Q1007UG2-P <i>(MB2U213-0311)</i>	Ivy Bridge	Celeron	1007U	2	2	1.5GHz	/	2M	Intel HD Graphics	17W
Q1037UG2-P <i>(MB2U213-0312)</i>	Ivy Bridge	Celeron	1037U	2	2	1.8GHz	/	2M	Intel HD Graphics	17W
Q3217UG2-P <i>(MB2U213-0331)</i>	Ivy Bridge	Core i3	3217U	2	4	1.8GHz	/	3M	Intel HD Graphics 4000	17W
Q3317UG2-P <i>(MB2U213-0351)</i>	Ivy Bridge	Core i5	3317U	2	4	1.7GHz	2.6GHz	3M	Intel HD Graphics 4000	17W

## Custom Options

Category	Description
USB 2.0	1

# NUC7JYB

Qotom Mini Motherboard



## Main Features

- Intel Pentium J5005 Gemini Lake Processor
- Intel UHD Graphics 605
- 2 × HDMI
- 4 × USB 3.0
- 1 × SATA
- 1 × Realtek Gigabit LAN

## Specifications

### Processor System

Dimension	101.6 × 101.6mm
CPU	Intel Gemini Lake Processor Default Pentium J5005 Processor, 10W
Core Number	4
Max. Speed	1.5GHz, up to 2.8GHz
L2 Cache	4M
Chipset	By CPU
BIOS	UEFI

### Memory

Technology	DDR4 2133/2400MHz SDRAM
Max.	16GB
Socket	2 × SO-DIMMs

### Graphics

Controller	Intel UHD Graphics 605
HDMI	2 × HDMI 2.0a
Multi Display	Yes

### Ethernet

Interface	10/100/1000Mbps
Controller	1 × Realtek Gigabit LAN
Connector	1 × RJ-45

### Audio

Controller	No
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### SATA

Max. Data Transfer Rate	SATA 3.0 (6.0Gb/S)
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### Accessories

Accessories	Cable for HDD, Fan module
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### Rear I/O

DC-IN	1
Display	2 × HDMI
Ethernet	1
USB	2 × USB 3.0

### Front I/O

Power Button	1
LED	1 × Power LED, 1 × HDD LED
IR	Consumer Infrared (CIR) sensor
USB	2 × USB 3.0

### Side I/O

SDXC card	1 × SDXC card reader slot
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### Internal Connector

Wi-Fi	Intel Wireless-AC 9462-D2W wireless LAN module
SATA	1, SATA 3.0 (6.0Gb/S)
SATA PWR Connector	1, 1 × 4Pin, Pitch 1.25mm
Clear CMOS Jumper	Yes, 1 × 3Pin, Pitch 1.25mm
USB 2.0 Header	2, 1 × 4Pin, Pitch 1.25mm
Front Panel Header	1, 2 × 5Pin, Pitch 1.25mm
CPU FAN Connector	1, 1 × 4Pin, Pitch 1.25mm

### Power Requirement

Input PWR	12V/19V DC in, 5.5mm/2.5mm
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### Environment

Operating Temperature	0-50 °C
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### OS Support

OS	Windows 10, Linux
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# Q3735FM-P

Qotom Mini Motherboard

## Main Features

- Intel Atom Z3735F Bay Trail Processor
- Intel HD Graphics
- 1 × VGA, 1 × HDMI
- 1 × Micro USB, 2 × USB 2.0
- 1 × Integrated Wi-Fi & Bluetooth
- 1 × Realtek RTL8152B LAN



## Specifications

### Processor System

Dimension	105 × 70mm
CPU	Intel Bay trail Processor Atom Z3735F Processor, 2.2W
Core Number	4
Max. Speed	1.33GHz, up to 1.83GHz
L2 Cache	2M
Chipset	By CPU
BIOS	UEFI

### Memory

Technology	DDR3L 1333/1600MHz SDRAM
Max.	2GB, Integrated
Socket	0

### Storage

eMMC	32GB, Integrated
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### Graphics

Controller	Intel HD Graphics
VRAM	Shared Memory
VGA	1
LVDS	0
HDMI	1
Multi Display	Yes

### Ethernet

Interface	10/100Mbps
Controller	1 × Realtek RTL8152B LAN
Connector	1 × RJ-45

### Wi-Fi and Bluetooth

Wi-Fi	Realtek RTL8723BS
Bluetooth	1, Bluetooth 4.0

### Audio

Controller	Realtek ALC5640 HD Audio
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### Rear I/O

DC-IN	1
HDMI	1
VGA	1
Ethernet	1

### Front I/O

Power Button	1
LED	1
TF Card Slot	1
USB	2 × USB 2.0, 1 × Micro USB
Audio	1 (Mic-in, Line-out)

### Internal Connector

VGA	0
Serial Port	0
SATA	0
SATA PWR Connector	0
m-SATA	0
Mini-PCIe	0
SIM Slot	0
AutoStart Jumper	0
GPIO Header	0
USB Header	0
Speakers Header	0
Front Panel Header	0
Power Header	0

### Power Requirements

Input PWR	5V3A DC in, 3.5mm/1.35mm
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### Environment

Operating Temperature	0-50 °C
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### Accessories

Accessories	No
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### OS Support

OS	UEFI Windows 8 x86, Windows 10 x86, UEFI Linux x86
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# Q8350G-P

## Qotom Mini Motherboard

### Main Features

- Intel Atom X5-Z8350 Cherry Trail Processor
- Intel HD Graphics
- 1 × VGA, 1 × HDMI
- 1 × Micro USB, 1x USB 2.0, 1 × USB 3.0
- 1 × Integrated Wi-Fi & Bluetooth
- 1 × Realtek RTL8111F LAN

## Specifications

### Processor System

Dimension	105 × 70mm
CPU	Intel Cherry Trail Processor Atom Z8350 Processor, 2W
Core Number	4
Max. Speed	1.44GHz, up to 1.92GHz
L2 Cache	2M
Chipset	By CPU
BIOS	UEFI

### Memory

Technology	DDR3L 1333/1600MHz SDRAM
Max.	2GB, Integrated, <b>4GB (Option)</b>
Socket	0

### Storage

eMMC	32GB/64GB, Integrated
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### Graphics

Controller	Intel HD Graphics
VRAM	Shared Memory
VGA	1
LVDS	0
HDMI	1
Multi Display	Yes

### Ethernet

Interface	10/100/1000Mbps
Controller	1 × Realtek RTL8111F LAN
Connector	1 × RJ-45

### Wi-Fi and Bluetooth

Wi-Fi	Realtek RTL8723BS
Bluetooth	1, Bluetooth 4.0

### Audio

Controller	Realtek ALC5645 HD Audio
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### Rear I/O

DC-IN	1
HDMI	1
VGA	1
Ethernet	1

### Front I/O

Power Button	1
LED	1
TF Card Slot	1
USB	1 × USB 2.0, 1 × USB 3.0, 1 × Micro USB
Audio	1 (Mic-in, Line-out)

### Internal Connector

VGA	0
Serial Port	0
SATA	0
SATA PWR Connector	0
m-SATA	0
Mini-PCIe	0
SIM Slot	0
AutoStart Jumper	0
GPIO Header	0
USB Header	0
Speakers Header	0
Front Panel Header	0
Power Header	0

### Power Requirements

Input PWR	5V3A DC in, 3.5mm/1.35mm
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### Environment

Operating Temperature	0-50 °C
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### Accessories

Accessories	No
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### OS Support

OS	UEFI Windows 8 x86, Windows 10 x86, UEFI Linux x86
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