

# Building a Smarter Tomorrow

2023 Product Catalog 2H





# Company Profile



GIGAIPC, established in 2018 as an independent IPC-focused spin-off from GIGABYTE, is driven by a passion for technology and agile intuition of our customer's requirements. GIGAIPC has an exceptionally sophisticated Research & Development department, enabling us to keep up with the rapid pace of today's technology. Combined with our outstanding research and design ability, GIGAIPC also has an award-winning Taiwan-based manufacturing facility, synchronizing with GIGAIPC's R&D department to deliver high quality and reliable products. GIGAIPC is a young and energetic organization driven by surpassing our customer's expectations, and we promise to offer our customers not only high-quality computing platforms but also world-class service and support. As a result, GIGAIPC's service centers have been established in most major cities worldwide, and our global presence is still being actively expanding, all ready to offer the best service to our customers.



Company Profile/ Naming Rule

GIGAIPC is an Associate member of the Intel® Internet of Things Solutions Alliance.



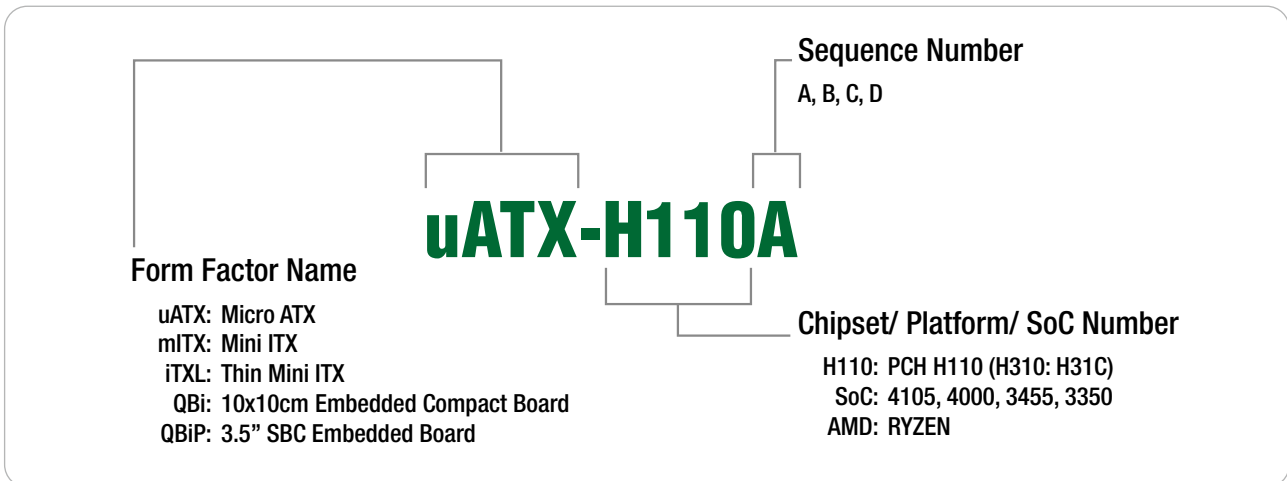
## “Building a SMARTER Tomorrow”

The strengths of GIGAIPC are based on the advantages, skills and expertise we have built to realize this vision, including being customer focused and striving for high quality. GIGAIPC is determined to keep reinforcing these strengths as our principles to achieve maximum customer satisfaction.

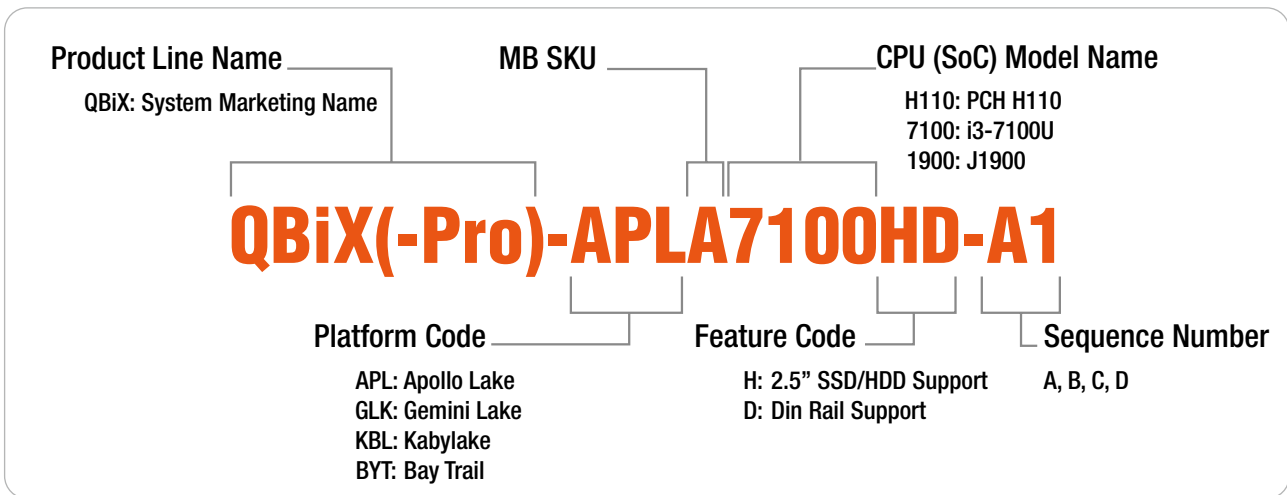
## Key Advantages to work with GIGAIPC

<b>Technology</b>	<ol style="list-style-type: none"> <li>1. Intel®, AMD etc. Key vendor direct support</li> <li>2. Latest technical and over 10 years RD development experiences</li> <li>3. Large coverage rate of design verification</li> </ol>
<b>Flexibility</b>	<ol style="list-style-type: none"> <li>1. Huge off-the-shelf products combination and rich ODM/OEM experiences</li> <li>2. Multiple manufacturing sites for different high-mix and low-volume requirements</li> <li>3. Task-force team with multiple functions to align customer's requirements</li> </ol>
<b>Quality</b>	<ol style="list-style-type: none"> <li>1. Component IPC, audit and approval system</li> <li>2. Rich resources and equipments on design and manufacture quality system</li> <li>3. Emphasizing closed-loop of PDCA cycle for continuous improvement</li> </ol>
<b>Service</b>	<ol style="list-style-type: none"> <li>1. Worldwide RMA service coverage more than 80 service centers globally</li> </ol>
<b>Capability</b>	<ol style="list-style-type: none"> <li>1. Customization capability</li> <li>2. Direct field application engineer support and quick response</li> <li>3. Customized manufacturing process, quality control and delivery solutions</li> </ol>

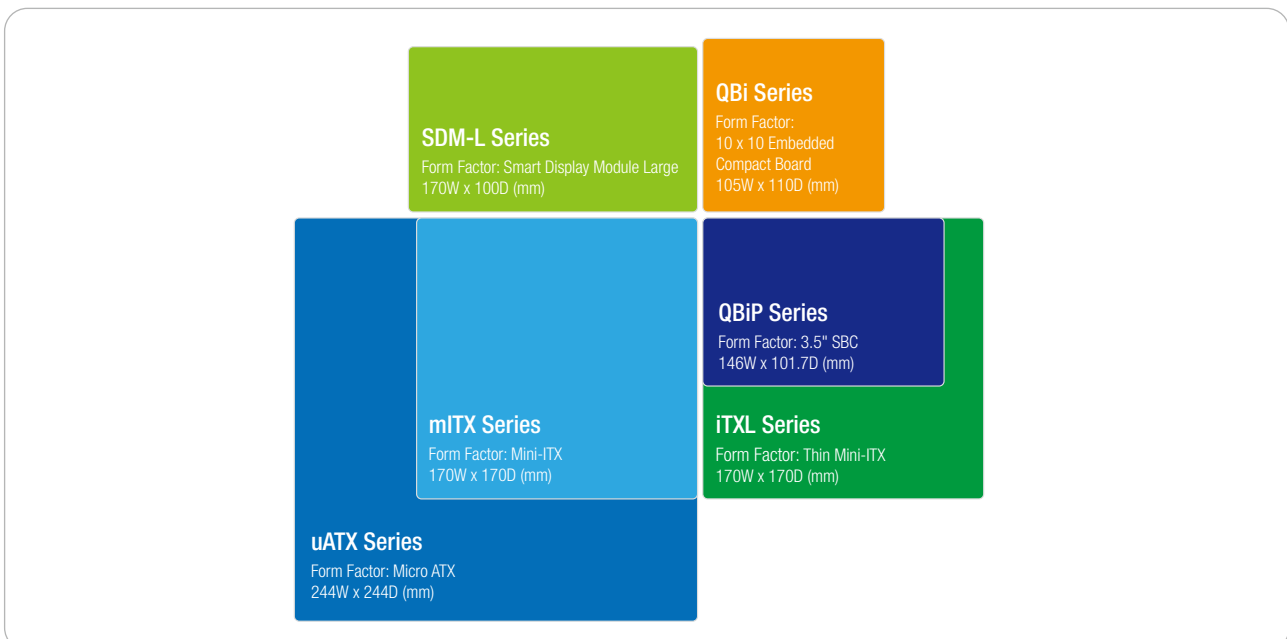
## Motherboard's Naming Rule -



## System's Naming Rule -



## Motherboard's Form Factor -



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## QBiX Series

Preliminary



QBiX Series

Model Name	QBiX-RPUA1355H-A1 QBiX-RPUA1335H-A1 QBiX-RPUA1315EH-A1	QBiX-TGLA1135G7-A1 QBiX-TGLA1115G4E-A1	QBiX-WHLA8565H-A1 QBiX-WHLA8265H-A1 QBiX-WHLA8145H-A1
<b>Dimension</b>	138W x 118D x 74.2H (mm)	138W x 118D x 74.2H (mm)	138W x 118D x 74.2H (mm)
<b>CPU</b>	Intel® Core™ i7-1355U Processor Intel 7, 10 cores, 2P+8E, 12 threads, up to 5.0 GHz Intel® Core™ i5-1335U Processor Intel 7, 10 cores, 2P+8E, 12 threads, up to 4.6 GHz Intel® Core™ i3-1315UE Processor, Intel 7, 6 cores, 2P+8E, 8 threads, up to 4.5 GHz	Intel® Core™ i5-1135G7 Processor 10nm SuperFin, 4 cores, 8 threads, up to 4.2 GHz Intel® Core™ i3-1115G4E Processor, 10nm SuperFin, 2 cores, 4 threads, up to 3.90 GHz	Intel® Core™ i7-8565U Processor, 14nm, 4 cores, 8 threads, up to 4.6 GHz Intel® Core™ i5-8265U Processor, 14nm, 4 cores, 8 threads, up to 3.9 GHz Intel® Core™ i3-8145UE Processor, 14nm, 2 cores, 4 threads, up to 3.9 GHz
<b>Chipset</b>	SoC	SoC	SoC
<b>Memory</b>	2 x DDR5 SO-DIMM sockets, Max. Capacity 64 GB, Support Dual Channel DDR5 3200 MHz	2 x DDR4 SO-DIMM sockets, Max. Capacity 64 GB, Support Dual Channel DDR4 3200 MHz	2 x DDR4 SO-DIMM sockets, Max. Capacity 64 GB, Support Dual Channel DDR4 2400 MHz
<b>Ethernet</b>	1 x GbE LAN Port (Realtek® RTL8111H) 1 x 2.5GbE LAN Port (Intel® I226V)	2 x GbE LAN Ports (Intel® I219V and Realtek® RTL8111HS)	2 x GbE LAN Ports (Intel® I219V and Realtek® RTL8111HS)
<b>Graphic</b>	Integrated Graphics Processor - Intel® Iris® Xe/ UHD Graphics for 13th Gen Intel® Processors: 2 x HDMI 2.0, 1 x DP 1.4 through USB Type C (DP Alt. mode) 3 independent display outputs	Integrated Graphics Processor - Intel® Iris® X <sup>e</sup> Graphics: 2 x HDMI 2.0 2 independent display outputs	Integrated Graphics Processor - Intel® UHD Graphics 620: 2 x HDMI 1.4 2 independent display outputs
<b>Audio</b>	Realtek® Audio Codec	Realtek® Audio Codec	Realtek® Audio Codec
<b>Storage</b>	1 x 2.5" HDD/SSD (SATA 6Gb/s)	—	1 x 2.5" HDD/SSD (SATA 6Gb/s)
<b>Expansion Slots</b>	1 x 2280 M.2 M-Key (PCIe x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0)	1 x 2280 M.2 M-Key (PCIe x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0)	1 x 2280 M.2 M-Key (PCIe x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0) 1 x Vertical USB 3.2 Gen 1
<b>Front I/O</b>	2 x USB 3.2 Gen 2x1 1 x Power button with LED 2 x External Antenna Holes (Optional) 1 x HDD LED 1 x COM Port (RS-232/422/845) 1 x Headphone Jack	2 x USB 3.2 Gen 2x1 1 x Power button with LED 2 x External Antenna Holes (Optional) 1 x HDD LED 1 x COM Port (RS-232/422/845) 1 x Headphone Jack	2 x USB 3.2 Gen 2x1 1 x Power button with LED 2 x External Antenna Holes (Optional) 1 x HDD LED 1 x COM Port (RS-232/422/845) 1 x Headphone Jack
<b>Rear I/O</b>	2 x HDMI 2 x RJ45 LAN Ports 1 x USB 3.2 Gen 2x1 1 x USB 3.2 Type C Gen 2x1 (with DP Alt. mode) 1 x Screw type DC Jack	2 x HDMI 2 x RJ45 LAN Ports 2 x USB 3.2 Gen 2x1 1 x Screw type DC Jack	2 x HDMI 2 x RJ45 LAN Ports 2 x USB 3.2 Gen 2x1 1 x Screw Type DC Jack
<b>Side I/O</b>	—	—	—
<b>TPM</b>	Onboard TPM 2.0 security chip INFINEON SLB9670VQ2.0	—	—
<b>Power</b>	+12V~24VDC (Adapter 19.5V/135W)	+9V~48VDC (Adapter 19.5V/135W)	+9V~36VDC (Adapter 19V/90W)
<b>Operating Temp.</b>	0°C to 50°C	0°C to 50°C	0°C to 50°C
<b>Mounting</b>	Wall mount	Wall mount	Wall mount
<b>Ordering Information</b>	6BQB1355AMR-SI (Box packing) 6BQB1335AMR-SI (Box packing) 6BQB1315AMR-SI (Box packing)	6BQB1135AMR-SI (Box packing) 6BQB1115AMR-SI (Box packing)	6BQB8565AMR-SI (Box packing) 6BQB8265AMR-SI (Box packing) 6BQB8145AMR-SI (Box packing)
<b>Built-in Components</b>	—	—	—



## QBiX Series



Preliminary



Model Name	QBiX-KBLA7100H-A1	QBiX-ADNAN97-A1	QBiX-EHLA6412-A1
<b>Dimension</b>	138W x 118D x 74.2H (mm)	118W x 109.4D x 44.4H (mm)	118W x 109.4D x 44.4H (mm)
<b>CPU</b>	Intel® Core™ i3-7100U Processor, 14nm, 2 cores, 4 threads, 2.4 GHz	Intel® Processor N97, Intel 7, 4 cores, 4 threads, up to 3.6 GHz	Intel® Celeron® J6412 Processor, 10nm, 4 cores, 4 threads, up to 2.6 GHz
<b>Chipset</b>	SoC	—	—
<b>Memory</b>	2 x DDR4 SO-DIMM sockets, Max. Capacity 32 GB, Support Dual Channel DDR4 2133 MHz	1 x DDR5 SO-DIMM socket, Max. Capacity 16 GB, Support Single Channel DDR5 4800 MHz	1 x DDR4 SO-DIMM socket, Max. Capacity 32 GB, Support Single Channel DDR4 3200 MHz
<b>Ethernet</b>	1 x GbE LAN Port (Intel® I219V)	2 x GbE LAN Ports (Realtek® RTL8111H)	2 x GbE LAN Ports (Intel® I211AT)
<b>Graphic</b>	Integrated Graphics Processor - Intel® HD Graphics 620: 1 x HDMI 2.0 1 x Mini Display Port 2 independent display outputs	Integrated Graphics Processor - Intel® UHD Graphics : 2 x HDMI 2.0, 1 x DP 1.4 through USB Type C (DP Alt. mode) 3 independent display outputs	Integrated Graphics Processor - Intel® UHD Graphics for 10th Gen Intel® Processors : 2 x HDMI 2.0 2 independent display outputs
<b>Audio</b>	Intel® Integrated Audio	Realtek® Audio Codec	Realtek® Audio Codec
<b>Storage</b>	1 x 2.5" HDD/SSD (SATA 6Gb/s)	—	—
<b>Expansion Slots</b>	1 x 2280 M.2 M-Key (PCIe x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0)	1 x 2280 M.2 M-Key (SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0)	1 x 2280 M.2 M-Key (PCIe x2, SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0)
<b>Front I/O</b>	2 x USB 3.2 Gen 1 1 x Power switch 2 x External Antenna Holes (Optional) 1 x Power LED 1 x HDD LED	2 x USB 3.2 Gen 2x1 1 x COM Port (RS-232) 1 x Headphone Jack 1 x Power button with LED	2 x USB 3.2 Gen 2x1 1 x COM Port (RS-232) 1 x Headphone Jack 1 x Power button with LED
<b>Rear I/O</b>	1 x RJ45 LAN Port 2 x USB 3.2 Gen 1 1 x HDMI 1 x Mini Display Port 1 x COM Port (RS-232) 1 x Screw Type DC Jack	2 x RJ45 LAN Ports 2 x USB 3.2 Gen 1 1 x USB 3.2 Type C Gen 2x1 (with DP Alt. mode) 2 x HDMI 2 x External Antenna Holes (Optional) 1 x Screw Type DC Jack	2 x RJ45 LAN Ports 2 x USB 3.2 Gen 2x1 2 x HDMI 2 x External Antenna Holes (Optional) 1 x Screw Type DC Jack
<b>Side I/O</b>	—	—	—
<b>TPM</b>	—	Onboard TPM 2.0 security chip INFINEON SLB9670VQ2.0	—
<b>Power</b>	+12V~24VDC (Adapter 19V/65W)	+12V~19VDC (Adapter 19V/65W)	+12V~19VDC (Adapter 19V/65W)
<b>Operating Temp.</b>	0°C to 50°C	0°C to 50°C	0°C to 50°C
<b>Mounting</b>	Wall mount	VESA 75/100	VESA 75/100
<b>Ordering Information</b>	6BCKAAMR-SI (Box packing)	6BQBN970AMR-SI (Box packing)	6BQB6412AMR-SI (Box packing)
<b>Built-in Components</b>	—	—	—

## QBiX Series

New



QBiX Series/ QBiX-Pro Series

Model Name	QBiX-EHLB6412-A1	QBiX-GLKB4125-A1	QBiX-GLKA5005H-A1
<b>Dimension</b>	118W x 109.4D x 44.4H (mm)	118W x 109.4D x 44.4H (mm)	118W x 109.4D x 54.4H (mm)
<b>CPU</b>	Intel® Celeron® J6412 Processor, 10nm, 4 cores, 4 threads, up to 2.6 GHz	Intel® Celeron® J4125 Processor, 14nm, 4 cores, 4 threads, up to 2.7 GHz	Intel® Pentium® Silver J5005 Processor, 14nm, 4 cores, 4 threads, up to 2.8 GHz
<b>Chipset</b>	—	SoC	SoC
<b>Memory</b>	1 x DDR4 SO-DIMM socket, Max. Capacity 32 GB, Support Single Channel DDR4 3200 MHz	1 x DDR4 SO-DIMM socket, Max. Capacity 8 GB, Support Single Channel DDR4 2400 MHz	1 x DDR4 SO-DIMM socket, Max. Capacity 8 GB, Support Single Channel DDR4 2400 MHz
<b>Ethernet</b>	2 x GbE LAN Ports (Realtek® RTL8111H)	2 x GbE LAN Ports (Intel® I211AT and Realtek® RTL8111HS)	1 x GbE LAN Port (Realtek® RTL8111HS)
<b>Graphic</b>	Integrated Graphics Processor - Intel® UHD Graphics for 10th Gen Intel® Processors : 2 x HDMI 2.0 2 independent display outputs	Integrated Graphics Processor - Intel® UHD Graphics 600: 2 x HDMI 1.4 2 independent display outputs	Integrated Graphics Processor - Intel® UHD Graphics 605: 1 x HDMI 1.4 1 x VGA 2 independent display outputs
<b>Audio</b>	Realtek® Audio Codec	Realtek® Audio Codec	Realtek® Audio Codec
<b>Storage</b>	—	—	1 x 2.5" HDD/SSD (SATA 6Gb/s)
<b>Expansion Slots</b>	1 x 2280 M.2 M-Key (PCIe x2, SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0)	1 x 2280 M.2 M-Key (SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0)	1 x 2230 M.2 E-Key (PCIe x1, USB 2.0)
<b>Front I/O</b>	2 x USB 3.2 Gen 2x1 1 x COM Port (RS-232) 1 x Headphone Jack 1 x Power button with LED	2 x USB 3.2 Gen 1 1 x COM Port (RS-232) 1 x Headphone Jack 1 x Power button with LED	2 x USB 3.2 Gen 1 1 x COM Port (RS-232) 1 x Headphone Jack 1 x Microphone Jack 1 x Power button with LED
<b>Rear I/O</b>	2 x RJ45 LAN Ports 2 x USB 3.2 Gen 2x1 2 x HDMI 2 x External Antenna Holes (Optional) 1 x Screw Type DC Jack	2 x RJ45 LAN Ports 2 x USB 3.2 Gen 1 2 x HDMI 2 x External Antenna Holes (Optional) 1 x Screw Type DC Jack	1 x RJ45 LAN Port 2 x USB 3.2 Gen 1 1 x HDMI 1 x VGA 2 x External Antenna Holes (Optional) 1 x DC Jack
<b>Side I/O</b>	—	—	1 x DC Jack
<b>TPM</b>	Onboard TPM 2.0 security chip INFINEON SLB9670VQ2.0	—	—
<b>Power</b>	+12V~19VDC (Adapter 19V/65W)	+12V~19VDC (Adapter 19V/65W)	+12V~19VDC (Adapter 19V/65W)
<b>Operating Temp.</b>	0°C to 50°C	0°C to 50°C	0°C to 50°C
<b>Mounting</b>	VESA 75/100	VESA 75/100	VESA 75/100
<b>Ordering Information</b>	6BQB6412BMR-SI (Box packing)	6BQB4125AMR-SI (Box packing)	6BCGAAMR-SI (Box packing)
<b>Built-in Components</b>	—	—	—



## QBiX-Pro Series

Preliminary



Preliminary



Model Name	QBiX-Pro-RPLA1355H-A1 QBiX-Pro-RPLA1335H-A1 QBiX-Pro-RPLA1315EH-A1	QBiX-Pro-RPLA1355H-A2 QBiX-Pro-RPLA1335H-A2 QBiX-Pro-RPLA1315EH-A2
<b>Dimension</b>	178W x 125D x 52.7H (mm)	178W x 125D x 52.7H (mm)
<b>CPU</b>	Intel® Core™ i7-1355U Processor, Intel® 7, 10 cores, 2P+8E, 12 threads, up to 5.0 GHz Intel® Core™ i5-1335U Processor, Intel® 7, 10 cores, 2P+8E, 12 threads, up to 4.6 GHz Intel® Core™ i3-1315UE Processor, Intel® 7, 6 cores, 2P+4E, 8 threads, up to 4.5 GHz	Intel® Core™ i7-1355U Processor, Intel® 7, 10 cores, 2P+8E, 12 threads, up to 5.0 GHz Intel® Core™ i5-1335U Processor, Intel® 7, 10 cores, 2P+8E, 12 threads, up to 4.6 GHz Intel® Core™ i3-1315UE Processor, Intel® 7, 6 cores, 2P+4E, 8 threads, up to 4.5 GHz
<b>Chipset</b>	SoC	SoC
<b>Memory</b>	2 x DDR4 SO-DIMM sockets, Max. Capacity 64 GB, Support Dual Channel DDR4 3200 MHz	2 x DDR4 SO-DIMM sockets, Max. Capacity 64 GB, Support Dual Channel DDR4 3200 MHz
<b>Ethernet</b>	2 x 2.5GbE LAN Ports (Intel® I226V)	2 x 2.5GbE LAN Ports (Intel® I226V)
<b>Graphic</b>	Integrated Graphics Processor - Intel® Iris® Xe/UHD Graphics for 13th Gen Intel® Processors: 2 x HDMI 2.0 2 independent display outputs	Integrated Graphics Processor - Intel® Iris® Xe/UHD Graphics for 13th Gen Intel® Processors: 2 x HDMI 2.0 2 independent display outputs
<b>Audio</b>	Realtek® Audio Codec	Realtek® Audio Codec
<b>Storage</b>	1 x 2.5" HDD/SSD (SATA 6Gb/s)	1 x 2.5" HDD/SSD (SATA 6Gb/s)
<b>Expansion Slots</b>	1 x 2280 M.2 M-Key (PCIe x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0) 1 x Full-size Mini PCIe with SIM slot (PCIe x1, USB 2.0)	1 x 2280 M.2 M-Key (PCIe x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0) 1 x Full-size Mini PCIe with SIM slot (PCIe x1, USB 2.0)
<b>Front I/O</b>	2 x RJ45 LAN Ports 4 x USB 3.2 Gen 2x1 2 x HDMI 1 x Power button with LED 1 x HDD LED 1 x COM Port (RS-232/422/485 & RI/5V/12V)	2 x RJ45 LAN Ports 4 x USB 3.2 Gen 2x1 2 x HDMI 1 x Power button with LED 1 x HDD LED 1 x COM Port (RS-232/422/485 & RI/5V/12V)
<b>Rear I/O</b>	2 x USB 2.0 2 x COM Ports (RS-232/422/485) 1 x GPIO (8 bits) 1 x Headphone Jack 1 x 3-pin Terminal Block	2 x USB 2.0 2 x COM Ports (RS-232/422/485) 1 x GPIO (8 bits) 1 x Headphone Jack 1 x Screw Type DC Jack
<b>Side I/O</b>	2 x External Antenna Holes (Optional)	2 x External Antenna Holes (Optional)
<b>TPM</b>	Onboard TPM 2.0 security chip INFINEON SLB9672VU2.0	Onboard TPM 2.0 security chip INFINEON SLB9672VU2.0
<b>Power</b>	A1: +12V~36VDC (Full Range)	A2: +12V~36VDC (Adapter 19.5V/135W)
<b>Operating Temp.</b>	0°C to 50°C	0°C to 50°C
<b>Mounting</b>	Wall mount (Optional)	Wall mount (Optional)
<b>Ordering Information</b>	6BQP1355AMR-SI (Box packing) 6BQP1335AMR-SI (Box packing) 6BQP1315AMR-SI (Box packing)	6BQP1355AMR-SI (Box packing) 6BQP1335AMR-SI (Box packing) 6BQP1315AMR-SI (Box packing)
<b>Built-in Components</b>	—	—

## QBiX-Pro Series

New



New



QBiX-Pro Series

Model Name	QBiX-Pro-ADLA1255H-A1 QBiX-Pro-ADLA1235H-A1 QBiX-Pro-ADLA1215EH-A1	QBiX-Pro-ADLA1255H-A2 QBiX-Pro-ADLA1235H-A2 QBiX-Pro-ADLA1215EH-A2
<b>Dimension</b>	178W x 125D x 52.7H (mm)	178W x 125D x 52.7H (mm)
<b>CPU</b>	Intel® Core™ i7-1255U Processor, Intel® 7, 10 cores, 12 threads, up to 4.7 GHz Intel® Core™ i5-1235U Processor, Intel® 7, 10 cores, 12 threads, up to 4.4 GHz Intel® Core™ i3-1215UE Processor, Intel® 7, 6 cores, 8 threads, up to 4.4 GHz	Intel® Core™ i7-1255U Processor, Intel® 7, 10 cores, 12 threads, up to 4.7 GHz Intel® Core™ i5-1235U Processor, Intel® 7, 10 cores, 12 threads, up to 4.4 GHz Intel® Core™ i3-1215UE Processor, Intel® 7, 6 cores, 8 threads, up to 4.4 GHz
<b>Chipset</b>	SoC	SoC
<b>Memory</b>	2 x DDR4 SO-DIMM sockets, Max. Capacity 64 GB, Support Dual Channel DDR4 3200 MHz	2 x DDR4 SO-DIMM sockets, Max. Capacity 64 GB, Support Dual Channel DDR4 3200 MHz
<b>Ethernet</b>	2 x 2.5GbE LAN Ports (Intel® I226V)	2 x 2.5GbE LAN Ports (Intel® I226V)
<b>Graphic</b>	Integrated Graphics Processor - Intel® Iris® Xe/UHD Graphics : 2 x HDMI 2.0 2 independent display outputs	Integrated Graphics Processor - Intel® Iris® Xe/UHD Graphics : 2 x HDMI 2.0 2 independent display outputs
<b>Audio</b>	Realtek® Audio Codec	Realtek® Audio Codec
<b>Storage</b>	1 x 2.5" HDD/SSD (SATA 6Gb/s)	1 x 2.5" HDD/SSD (SATA 6Gb/s)
<b>Expansion Slots</b>	1 x 2280 M.2 M-Key (PCIe Gen4x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0) 1 x Full-size Mini PCIe with SIM slot (PCIe x1, USB 2.0)	1 x 2280 M.2 M-Key (PCIe Gen4x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0) 1 x Full-size Mini PCIe with SIM slot (PCIe x1, USB 2.0)
<b>Front I/O</b>	2 x RJ45 LAN Ports 4 x USB 3.2 Gen 2x1 2 x HDMI 1 x Power button with LED 1 x HDD LED 1 x COM Port (RS-232/422/485 & RI/5V/12V) 1 x External Antenna Hole (Optional)	2 x RJ45 LAN Ports 4 x USB 3.2 Gen 2x1 2 x HDMI 1 x Power button with LED 1 x HDD LED 1 x COM Port (RS-232/422/485 & RI/5V/12V) 1 x External Antenna Hole (Optional)
<b>Rear I/O</b>	2 x USB 2.0 2 x COM Ports (RS-232/422/485) 1 x GPIO (8 bits) 1 x Headphone Jack 1 x 3-pin Terminal Block	2 x USB 2.0 2 x COM Ports (RS-232/422/485) 1 x GPIO (8 bits) 1 x Headphone Jack 1 x Screw Type DC Jack
<b>Side I/O</b>	2 x External Antenna Holes (Optional)	2 x External Antenna Holes (Optional)
<b>TPM</b>	—	—
<b>Power</b>	A1: +12V~36VDC (Full Range)	A2: +12V~36VDC (Adapter 19.5V/135W)
<b>Operating Temp.</b>	0°C to 50°C	0°C to 50°C
<b>Mounting</b>	Wall mount (Optional)	Wall mount (Optional)
<b>Ordering Information</b>	6BQP1255AMR-SI (Box packing) 6BQP1235AMR-SI (Box packing) 6BQP1215AMR-SI (Box packing)	6BQP1255AMR-SI (Box packing) 6BQP1235AMR-SI (Box packing) 6BQP1215AMR-SI (Box packing)
<b>Built-in Components</b>	—	—

## QBiX-Pro Series



Model Name	QBiX-Pro-TGLA1135G7H-A1 QBiX-Pro-TGLA1115G4EH-A1	QBiX-Pro-TGLA1135G7H-A2 QBiX-Pro-TGLA1115G4EH-A2
<b>Dimension</b>	178W x 125D x 52.7H (mm)	178W x 125D x 52.7H (mm)
<b>CPU</b>	Intel® Core™ i5-1135G7 Processor, 10nm SuperFin, 4 cores, 8 threads, up to 4.2 GHz Intel® Core™ i3-1115G4E Processor, 10nm SuperFin, 2 cores, 4 threads, up to 3.9 GHz	Intel® Core™ i5-1135G7 Processor, 10nm SuperFin, 4 cores, 8 threads, up to 4.2 GHz Intel® Core™ i3-1115G4E Processor, 10nm SuperFin, 2 cores, 4 threads, up to 3.9 GHz
<b>Chipset</b>	SoC	SoC
<b>Memory</b>	2 x DDR4 SO-DIMM sockets, Max. Capacity 64 GB, Support Dual Channel DDR4 3200 MHz	2 x DDR4 SO-DIMM sockets, Max. Capacity 64 GB, Support Dual Channel DDR4 3200 MHz
<b>Ethernet</b>	2 x GbE LAN Ports (Intel® I219V and Intel® I211AT)	2 x GbE LAN Ports (Intel® I219V and Intel® I211AT)
<b>Graphic</b>	Integrated Graphics Processor - Intel® Iris Xe/UHD Graphics for 11th Gen Intel® Processors : 2 x HDMI 2.0 2 independent display outputs	Integrated Graphics Processor - Intel® Iris Xe/UHD Graphics for 11th Gen Intel® Processors : 2 x HDMI 2.0 2 independent display outputs
<b>Audio</b>	Realtek® Audio Codec	Realtek® Audio Codec
<b>Storage</b>	1 x 2.5" HDD/SSD (SATA 6Gb/s)	1 x 2.5" HDD/SSD (SATA 6Gb/s)
<b>Expansion Slots</b>	1 x 2280 M.2 M-Key (PCIe x2, SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0) 1 x Full-size Mini PCIe with SIM slot (PCIe x1, USB 2.0)	1 x 2280 M.2 M-Key (PCIe x2, SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0) 1 x Full-size Mini PCIe with SIM slot (PCIe x1, USB 2.0)
<b>Front I/O</b>	2 x RJ45 LAN Ports 4 x USB 3.2 Gen 2x1 2 x HDMI 1 x Power button with LED 1 x HDD LED 1 x COM Port (RS-232/422/485 & RI/5V/12V)	2 x RJ45 LAN Ports 4 x USB 3.2 Gen 2x1 2 x HDMI 1 x Power button with LED 1 x HDD LED 1 x COM Port (RS-232/422/485 & RI/5V/12V)
<b>Rear I/O</b>	2 x USB 2.0 2 x COM Ports (RS-232/422/485) 1 x GPIO (8 bits) 1 x Headphone Jack 1 x 3-pin Terminal Block	2 x USB 2.0 2 x COM Ports (RS-232/422/485) 1 x GPIO (8 bits) 1 x Headphone Jack 1 x Screw Type DC Jack
<b>Side I/O</b>	2 x External Antenna Holes (Optional)	2 x External Antenna Holes (Optional)
<b>TPM</b>	—	—
<b>Power</b>	A1: +9V~36VDC (Full Range)	A2: +9V~36VDC (Adapter 19.5V/135W)
<b>Operating Temp.</b>	0°C to 50°C	0°C to 50°C
<b>Mounting</b>	Wall mount (Optional)	Wall mount (Optional)
<b>Ordering Information</b>	6BQP1135AMR-SI (Box packing) 6BQP1115AMR-SI (Box packing)	6BQP1135AMR-SI (Box packing) 6BQP1115AMR-SI (Box packing)
<b>Built-in Components</b>	—	—

## QBiX-Pro Series



QBiX-Pro Series

Model Name	QBiX-Pro-WHLA8565H-A1 QBiX-Pro-WHLA8265H-A1 QBiX-Pro-WHLA8145H-A1	QBiX-Pro-WHLA8565H-A2 QBiX-Pro-WHLA8265H-A2 QBiX-Pro-WHLA8145H-A2
<b>Dimension</b>	178W x 125D x 52.7H (mm)	178W x 125D x 52.7H (mm)
<b>CPU</b>	Intel® Core™ i7-8565U Processor, 14nm, 4 cores, 8 threads, up to 4.6 GHz Intel® Core™ i5-8265U Processor, 14nm, 4 cores, 8 threads, up to 3.9 GHz Intel® Core™ i3-8145UE Processor, 14nm, 2 cores, 4 threads, up to 3.9 GHz	Intel® Core™ i7-8565U Processor 14nm, 4 cores, 8 threads, up to 4.6 GHz Intel® Core™ i5-8265U Processor 14nm, 4 cores, 8 threads, up to 3.9 GHz Intel® Core™ i3-8145UE Processor 14nm, 2 cores, 4 threads, up to 3.9 GHz
<b>Chipset</b>	SoC	SoC
<b>Memory</b>	2 x DDR4 SO-DIMM sockets, Max. Capacity 64 GB, Support Dual Channel DDR4 2400 MHz	2 x DDR4 SO-DIMM sockets, Max. Capacity 64 GB, Support Dual Channel DDR4 2400 MHz
<b>Ethernet</b>	2 x GbE LAN Ports (Intel® I219V and Intel® I211AT)	2 x GbE LAN Ports (Intel® I219V and Intel® I211AT)
<b>Graphic</b>	Integrated Graphics Processor - Intel® UHD Graphics for 8th Gen Intel® Processors /UHD Graphics 620 : 2 x HDMI 1.4 2 independent display outputs	Integrated Graphics Processor - Intel® UHD Graphics for 8th Gen Intel® Processors /UHD Graphics 620 : 2 x HDMI 1.4 2 independent display outputs
<b>Audio</b>	Realtek® Audio Codec	Realtek® Audio Codec
<b>Storage</b>	1 x 2.5" HDD/SSD (SATA 6Gb/s)	1 x 2.5" HDD/SSD (SATA 6Gb/s)
<b>Expansion Slots</b>	1 x 2280 M.2 M-Key (PCIe x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0) 1 x Full-size Mini PCIe with SIM slot (PCIe x1, USB 2.0)	1 x 2280 M.2 M-Key (PCIe x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0) 1 x Full-size Mini PCIe with SIM slot (PCIe x1, USB 2.0)
<b>Front I/O</b>	2 x RJ45 LAN Ports 4 x USB 3.2 Gen 2x1 2 x HDMI 1 x Power button with LED 1 x HDD LED 1 x COM Port (RS-232/422/485 & RI/5V/12V)	2 x RJ45 LAN Ports 4 x USB 3.2 Gen 2x1 2 x HDMI 1 x Power button with LED 1 x HDD LED 1 x COM Port (RS-232/422/485 & RI/5V/12V)
<b>Rear I/O</b>	2 x USB 2.0 2 x COM Ports (RS-232) 1 x GPIO (8 bits) 1 x Headphone Jack 1 x 3-pin Terminal Block	2 x USB 2.0 2 x COM Ports (RS-232) 1 x GPIO (8 bits) 1 x Headphone Jack 1 x Screw Type DC Jack
<b>Side I/O</b>	2 x External Antenna Holes (Optional)	2 x External Antenna Holes (Optional)
<b>TPM</b>	—	—
<b>Power</b>	+9V~36VDC (Full Range)	+9V~36VDC (Adapter 19V/90W)
<b>Operating Temp.</b>	0°C to 50°C	0°C to 50°C
<b>Mounting</b>	Wall mount (Optional)	Wall mount (Optional)
<b>Ordering Information</b>	6BQP8565AMR-SI (Box packing) 6BQP8265AMR-SI (Box packing) 6BQP8145AMR-SI (Box packing)	6BQP8565AMR-SI (Box packing) 6BQP8265AMR-SI (Box packing) 6BQP8145AMR-SI (Box packing)
<b>Built-in Components</b>	—	—



## QBiX-Pro Series



Model Name	QBiX-Pro-KBLB7200H-A2	QBiX-Pro-KBLB7100H-A1	QBiX-Pro-KBLB3965H-A1
<b>Dimension</b>	178W x 125D x 52.7H (mm)	178W x 125D x 52.7H (mm)	178W x 125D x 52.7H (mm)
<b>CPU</b>	Intel® Core™ i5-7200U Processor, 14nm, 2 cores, 4 threads, up to 3.1 GHz	Intel® Core™ i3-7100U Processor, 14nm, 2 cores, 4 threads, 2.4 GHz	Intel® Celeron® 3965U Processor, 14nm, 2 cores, 2 threads, 2.2 GHz
<b>Chipset</b>	SoC	SoC	SoC
<b>Memory</b>	2 x DDR4 SO-DIMM sockets, Max. Capacity 32 GB, Support Dual Channel DDR4 2133 MHz	2 x DDR4 SO-DIMM sockets, Max. Capacity 32 GB, Support Dual Channel DDR4 2133 MHz	2 x DDR4 SO-DIMM sockets, Max. Capacity 32 GB, Support Dual Channel DDR4 2133 MHz
<b>Ethernet</b>	2 x GbE LAN Ports (Intel® I219V and Intel® I211AT)	2 x GbE LAN Ports (Intel® I219V and Intel® I211AT)	2 x GbE LAN Ports (Intel® I219V and Intel® I211AT)
<b>Graphic</b>	Integrated Graphics Processor - Intel® HD Graphics 620: 1 x HDMI 2.0 1 x Display Port 2 independent display outputs	Integrated Graphics Processor - Intel® HD Graphics 620: 1 x HDMI 2.0 1 x Display Port 2 independent display outputs	Integrated Graphics Processor - Intel® HD Graphics 610: 1 x HDMI 2.0 1 x Display Port 2 independent display outputs
<b>Audio</b>	Realtek® Audio Codec	Realtek® Audio Codec	Realtek® Audio Codec
<b>Storage</b>	1 x 2.5" HDD/SSD (SATA 6Gb/s)	1 x 2.5" HDD/SSD (SATA 6Gb/s)	1 x 2.5" HDD/SSD (SATA 6Gb/s)
<b>Expansion Slots</b>	1 x 2280 M.2 M-Key (PCIe x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0) 1 x Full-size Mini PCIe with SIM slot (PCIe x1, USB 2.0)	1 x 2280 M.2 M-Key (PCIe x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0) 1 x Full-size Mini PCIe with SIM slot (PCIe x1, USB 2.0)	1 x 2280 M.2 M-Key (SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0) 1 x Full-size Mini PCIe with SIM slot (PCIe x1, USB 2.0)
<b>Front I/O</b>	2 x RJ45 LAN Ports 4 x USB 3.2 Gen 1 1 x HDMI 1 x Display Port 1 x Power switch 1 x Power & HDD LED 1 x COM Port (RS-232/422/485 & RI/5V/12V)	2 x RJ45 LAN Ports 4 x USB 3.2 Gen 1 1 x HDMI 1 x Display Port 1 x Power switch 1 x Power & HDD LED 1 x COM Port (RS-232/422/485 & RI/5V/12V)	2 x RJ45 LAN Ports 4 x USB 3.2 Gen 1 1 x HDMI 1 x Display Port 1 x Power switch 1 x Power & HDD LED 1 x COM Port (RS-232/422/485 & RI/5V/12V)
<b>Rear I/O</b>	2 x USB 2.0 3 x COM Ports (RS-232) 1 x Screw Type DC Jack	2 x USB 2.0 3 x COM Ports (RS-232) 1 x 3-pin Terminal Block	2 x USB 2.0 3 x COM Ports (RS-232) 1 x 3-pin Terminal Block
<b>Side I/O</b>	2 x External Antenna Holes (Optional)	2 x External Antenna Holes (Optional)	2 x External Antenna Holes (Optional)
<b>TPM</b>	—	—	—
<b>Power</b>	+9V~36VDC (Adapter 19V/65W)	+9V~36VDC (Full Range)	+9V~36VDC (Full Range)
<b>Operating Temp.</b>	0°C to 50°C	0°C to 50°C	0°C to 50°C
<b>Mounting</b>	Wall mount (Optional)	Wall mount (Optional)	Wall mount (Optional)
<b>Ordering Information</b>	6BQP7200AMR-SI (Box packing)	6BCKACMR-SI (Box packing)	6BQP3965AMR-SI (Box packing)
<b>Built-in Components</b>	—	—	—

## QBiX-Pro Series



QBiX-Pro Series

Model Name	QBiX-Pro-EHLA6412H-A1	QBiX-Pro-EHLA6412H-A2
<b>Dimension</b>	178W x 125D x 52.7H (mm)	178W x 125D x 52.7H (mm)
<b>CPU</b>	Intel® Celeron® J6412 Processor, 10nm, 4 cores, 4 threads, up to 2.6 GHz	Intel® Celeron® J6412 Processor, 10nm, 4 cores, 4 threads, up to 2.6 GHz
<b>Chipset</b>	—	—
<b>Memory</b>	2 x DDR4 SO-DIMM sockets, Max. Capacity 32 GB, Support Dual Channel DDR4 3200 MHz	2 x DDR4 SO-DIMM sockets, Max. Capacity 32 GB, Support Dual Channel DDR4 3200 MHz
<b>Ethernet</b>	2 x GbE LAN Ports (Intel® I211AT)	2 x GbE LAN Ports (Intel® I211AT)
<b>Graphic</b>	Integrated Graphics Processor - Intel® UHD Graphics for 10th Gen Intel® Processors : 2 x HDMI 2.0 2 independent display outputs	Integrated Graphics Processor - Intel® UHD Graphics for 10th Gen Intel® Processors : 2 x HDMI 2.0 2 independent display outputs
<b>Audio</b>	Realtek® Audio Codec	Realtek® Audio Codec
<b>Storage</b>	1 x 2.5" HDD/SSD (SATA 6Gb/s)	1 x 2.5" HDD/SSD (SATA 6Gb/s)
<b>Expansion Slots</b>	1 x 2280 M.2 M-Key (PCIex2, SATA 6Gb/s) 1 x Full-size Mini PCIe with SIM slot (PCIe x1, USB 2.0)	1 x 2280 M.2 M-Key (PCIex2, SATA 6Gb/s) 1 x Full-size Mini PCIe with SIM slot (PCIe x1, USB 2.0)
<b>Front I/O</b>	2 x RJ45 LAN Ports 4 x USB 3.2 Gen 1 2 x HDMI 1 x Power button with LED 1 x HDD LED 1 x Headphone Jack 2 x USB 2.0	2 x RJ45 LAN Ports 4 x USB 3.2 Gen 1 2 x HDMI 1 x Power button with LED 1 x HDD LED 1 x Headphone Jack 2 x USB 2.0
<b>Rear I/O</b>	1 x COM Port (RS-232/422/485 & RI/5V/12V) 1 x COM Port (RS-232/422/485) 1 x COM Port (RS-232) 1 x GPIO (8 bits) 1 x 3-pin Terminal Block	1 x COM Port (RS-232/422/485 & RI/5V/12V) 1 x COM Port (RS-232/422/485) 1 x COM Port (RS-232) 1 x GPIO (8 bits) 1 x Screw Type DC Jack
<b>Side I/O</b>	2 x External Antenna Holes (Optional)	2 x External Antenna Holes (Optional)
<b>TPM</b>	—	—
<b>Power</b>	+9V~36VDC (Full Range)	+9V~36VDC (Adapter 19V/65W)
<b>Operating Temp.</b>	0°C to 50°C	0°C to 50°C
<b>Mounting</b>	Wall mount (Optional)	Wall mount (Optional)
<b>Ordering Information</b>	6BQP6412AMR-SI (Box packing)	6BQP6412AMR-SI (Box packing)
<b>Built-in Components</b>	—	—

## QBiX-Pro Series



Model Name	QBiX-Pro-APLB4200H-A1	QBiX-Pro-APLB4200H-B1
<b>Dimension</b>	178W x 125D x 52.7H (mm)	178W x 125D x 52.7H (mm)
<b>CPU</b>	Intel® Pentium® N4200 Processor, 14nm, 4 cores, 4 threads, up to 2.5 GHz	Intel® Pentium® N4200 Processor, 14nm, 4 cores, 4 threads, up to 2.5 GHz
<b>Chipset</b>	SoC	SoC
<b>Memory</b>	2 x DDR3L SO-DIMM sockets, Max. Capacity 8 GB, Support Dual Channel DDR3L 1866 MHz	2 x DDR3L SO-DIMM sockets, Max. Capacity 8 GB, Support Dual Channel DDR3L 1866 MHz
<b>Ethernet</b>	2 x GbE LAN Ports (Intel® I211AT)	2 x GbE LAN Ports (Intel® I211AT)
<b>Graphic</b>	Integrated Graphics Processor - Intel® HD Graphics 505: 1 x HDMI 1.4 1 x VGA 2 independent display outputs	Integrated Graphics Processor - Intel® HD Graphics 505: 1 x HDMI 1.4 1 x VGA 2 independent display outputs
<b>Audio</b>	Realtek® Audio Codec	Realtek® Audio Codec
<b>Storage</b>	1 x 2.5" HDD/SSD (SATA 6Gb/s)	1 x 2.5" HDD/SSD (SATA 6Gb/s)
<b>Expansion Slots</b>	1 x 2242 M.2 M-Key (SATA 6Gb/s) 1 x Full-size Mini PCIe with SIM slot (PCIe x1, USB 2.0)	1 x 2242 M.2 M-Key (SATA 6Gb/s) 1 x Full-size Mini PCIe with SIM slot (PCIe x1, USB 2.0)
<b>Front I/O</b>	2 x RJ45 LAN Ports 2 x USB 3.2 Gen 1 1 x HDMI 1 x VGA 1 x Power switch 1 x Power & HDD LED 1 x Headphone Jack	2 x RJ45 LAN Ports 2 x USB 3.2 Gen 1 1 x HDMI 1 x VGA 1 x Power switch 1 x Power & HDD LED 1 x Headphone Jack
<b>Rear I/O</b>	2 x USB 2.0 1 x COM Port (RS-232/422/485 & RI/5V/12V) 3 x COM Ports (RS-232) 1 x 3-pin Terminal Block	2 x USB 2.0 1 x COM Port (RS-232/422/485 & RI/5V/12V) 2 x COM Ports (RS-232) 1 x GPIO (8 bits) 1 x 3-pin Terminal Block
<b>Side I/O</b>	2 x External Antenna Holes (Optional)	2 x External Antenna Holes (Optional)
<b>TPM</b>	—	—
<b>Power</b>	+9V~36VDC (Full Range)	+9V~36VDC (Full Range)
<b>Operating Temp.</b>	0°C to 50°C	0°C to 50°C
<b>Mounting</b>	Wall mount (Optional)	Wall mount (Optional)
<b>Ordering Information</b>	6BCBABMR-SI (Box packing)	6BQP4200BMR-SI (Box packing)
<b>Built-in Components</b>	—	—

## QBiX-Pro Series



Model Name	QBiX-Pro-BYTA1900H-A1	QBiX-Pro-AMDA1605H-A1
<b>Dimension</b>	178W x 125D x 52.7H (mm)	178W x 125D x 52.7H (mm)
<b>CPU</b>	Intel® Celeron® J1900 Processor, 22nm, 4 cores, 4 threads, up to 2.42 GHz	AMD® RYZEN™ V1605B Embedded Processor, 14nm, 4 cores, 8 threads, 2.0 GHz, up to 3.6 GHz
<b>Chipset</b>	SoC	SoC
<b>Memory</b>	1 x DDR3L SO-DIMM socket, Max. Capacity 8 GB, Support Single Channel DDR3L 1333 MHz	2 x DDR4 SO-DIMM sockets, Max. Capacity 32 GB, Support Dual Channel DDR4 2400 MHz
<b>Ethernet</b>	2 x GbE LAN Ports (Intel® I211AT)	2 x GbE LAN Ports (Realtek® RTL8111HS)
<b>Graphic</b>	Integrated Graphics Processor - Intel® HD Graphics: 1 x HDMI 1.4 1 x VGA 2 independent display outputs	Integrated Graphics Processor- AMD® Radeon™ Vega 8 Graphics: 4 x HDMI 2.0 4 independent display outputs
<b>Audio</b>	Realtek® Audio Codec	Realtek® Audio Codec
<b>Storage</b>	1 x 2.5" HDD/SSD (SATA 3Gb/s)	1 x 2.5" HDD/SSD (SATA 6Gb/s)
<b>Expansion Slots</b>	1 x 2280 M.2 M-Key (SATA 3Gb/s) 1 x Full-size Mini PCIe with SIM slot (PCIe x1, USB 2.0)	1 x 2280 M.2 M-Key (PCIe x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0) 1 x Full-size Mini PCIe with SIM slot (PCIe x1, USB 2.0)
<b>Front I/O</b>	2 x RJ45 LAN Ports 1 x USB 3.2 Gen 1 1 x USB 2.0 1 x HDMI 1 x VGA 1 x Power switch 1 x Power & HDD LED 1 x Headphone Jack	2 x RJ45 LAN Ports 2 x USB 3.2 Gen 1 4 x HDMI 1 x Power switch 1 x Power & HDD LED
<b>Rear I/O</b>	2 x USB 2.0 1 x COM Port (RS-232/422/485 & RI/5V/12V) 1 x COM Port (RS-232/422/485) 2 x COM Ports (RS-232) 1 x 3-pin Terminal Block	2 x USB 2.0 2 x COM Ports (RS-232/422/485 & RI/5V/12V) 2 x COM Ports (RS-232) 1 x Screw Type DC Jack
<b>Side I/O</b>	2 x External Antenna Holes (Optional)	2 x External Antenna Holes (Optional)
<b>TPM</b>	—	Onboard TPM 2.0 security chip INFINEON SLB9665TT2.0
<b>Power</b>	+9V~36VDC (Full Range)	+9V~36VDC (Adapter 19V/65W)
<b>Operating Temp.</b>	0°C to 50°C	0°C to 50°C
<b>Mounting</b>	Wall mount (Optional)	Wall mount (Optional)
<b>Ordering Information</b>	6BQP1900AMR-SI (Box packing)	6BQP1605AMR-SI (Box packing)
<b>Built-in Components</b>	—	—



## QBiX-Pro DIN Rail Series



Model Name	QBiX-DR-EHLA6412H-A1	QBiX-Pro-GLKB5040HD-A1	QBiX-Pro-BYTA1900HD-A1
<b>Dimension</b>	160W x 118D x 62.6H (mm)	160W x 118D x 62.6H (mm)	160W x 118D x 62.6H (mm)
<b>CPU</b>	Intel® Celeron® J6412 Processor, 10nm, 4 cores, 4 threads, up to 2.6 GHz	Intel® Pentium® Silver J5040 Processor, 14nm, 4 cores, 4 threads, up to 3.2 GHz	Intel® Celeron® J1900 Processor, 22nm, 4 cores, 4 threads, up to 2.42 GHz
<b>Chipset</b>	SoC	SoC	SoC
<b>Memory</b>	1 x DDR4 SO-DIMM socket, Max. Capacity 32 GB, Support Single Channel DDR4 3200 MHz	1 x DDR4 SO-DIMM socket, Max. Capacity 8 GB, Support Single Channel DDR4 2400 MHz	1 x DDR3L SO-DIMM socket, Max. Capacity 8 GB, Support Single Channel DDR3L 1333 MHz
<b>Ethernet</b>	2 x GbE LAN Ports (Intel® I210AT)	2 x GbE LAN Ports (Intel® I211AT)	2 x GbE LAN Ports (Intel® I211AT)
<b>Graphic</b>	Integrated Graphics Processor - Intel® UHD Graphics for 10th Gen Intel® Processors: 1 x HDMI 2.0 1 x VGA 2 independent display outputs	Integrated Graphics Processor - Intel® UHD Graphics 605: 1 x HDMI 2.0 1 x VGA 2 independent display outputs	Integrated Graphics Processor - Intel® HD Graphics: 1 x HDMI 1.4 1 x VGA 2 independent display outputs
<b>Audio</b>	Realtek® Audio codec	Realtek® Audio Codec	Realtek® Audio Codec
<b>Storage</b>	1 x 2.5" HDD/SSD (SATA 6Gb/s)	1 x 2.5" HDD/SSD (SATA 6Gb/s)	1 x 2.5" HDD/SSD (SATA 3Gb/s)
<b>Expansion Slots</b>	1 x 2280 M.2 M-Key (SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0) 1 x 3052/3042 M.2 B key with SIM Slot -4G/5G Support 1 x Vertical USB 2.0	1 x 2280 M.2 M-Key (SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0) 1 x Full-size Mini PCIe with SIM slot (PCIe x1, USB 2.0) 1 x Vertical USB 2.0	1 x 2280 M.2 M-Key (SATA 3Gb/s) 1 x Full-size Mini PCIe with SIM slot (PCIe x1, USB 2.0)
<b>Front I/O</b>	2 x RJ45 LAN Ports 2 x USB 3.2 Gen 1 2 x USB 2.0 1 x HDMI 1 x VGA 2 x COM Ports (RS-232/422/485 & RI/5V/12V) 1 x Power button with LED 1 x WiFi/HDD LED 1 x Remote control connector 1 x Headphone Jack 1 x External Antenna Hole (Optional)	2 x RJ45 LAN Ports 4 x USB 3.2 Gen 1 1 x HDMI 1 x VGA 2 x COM Ports (RS-232/422/485 & RI/5V/12V) 1 x Power button with LED 1 x WiFi/HDD LED 1 x Remote control connector 1 x Headphone Jack 1 x External Antenna Hole (Optional)	2 x RJ45 LAN Ports 1 x USB 3.2 Gen 1 3 x USB 2.0 1 x HDMI 1 x VGA 1 x COM Port (RS-232/422/485 & RI/5V/12V) 1 x COM Port (RS-232/422/485) 1 x Power button with LED 1 x HDD LED 1 x Headphone Jack
<b>Rear I/O</b>	1 x Din Rail Mounting Support	1 x Din Rail Mounting Support	1 x Din Rail Mounting Support
<b>Side I/O</b>	1 x GPIO (8 bits) 1 x 3-pin Terminal Block 2 x COM Ports (RS-232/422/485 & RI/5V/12V) 2 x External Antenna Holes (Optional)	1 x GPIO (8 bits) 1 x 3-pin Terminal Block 2 x COM Ports (RS-232/422/485) 2 x External Antenna Holes (Optional)	1 x GPIO (8 bits) 1 x 3-pin Terminal Block 3 x External Antenna Holes (Optional)
<b>TPM</b>	—	—	1 x TPM header
<b>Power</b>	+9V~36VDC (Full Range)	+9V~36VDC (Full Range)	+9V~36VDC (Full Range)
<b>Operating Temp.</b>	0°C to 50°C	0°C to 50°C	0°C to 50°C
<b>Mounting</b>	DIN Rail	DIN Rail	DIN Rail
<b>Ordering Information</b>	6BDR6412AMR-SI (Box packing)	6BQP5040BMR-SI (Box packing)	6BQP1900BMR-SI (Box packing)
<b>Built-in Components</b>	—	—	—

## QBiX-Expert Series



Market Name	QBiX-Expert-TGLA1165G7H-A1	QBiX-Expert-TGLA1135G7H-A1	QBiX-Expert-TGLA1115G4EH-A1
<b>Dimension</b>	210.36W x 165D x 67H (mm)	210.36W x 165D x 67H (mm)	210.36W x 165D x 67H (mm)
<b>CPU</b>	Intel® Core™ i7-1165G7 Processor, 10nm SuperFin, 4 cores, 8 threads, up to 4.7 GHz	Intel® Core™ i5-1135G7 Processor, 10nm SuperFin, 4 cores, 8 threads, up to 4.2 GHz	Intel® Core™ i3-1115G4E Processor, 10nm SuperFin, 2 cores, 4 threads, up to 3.90 GHz
<b>Chipset</b>	SoC	SoC	SoC
<b>Memory</b>	2 x DDR4 SO-DIMM sockets, Max. Capacity 64 GB, Support Dual Channel DDR4 3200 MHz	2 x DDR4 SO-DIMM sockets, Max. Capacity 64 GB, Support Dual Channel DDR4 3200 MHz	2 x DDR4 SO-DIMM sockets, Max. Capacity 64 GB, Support Dual Channel DDR4 3200 MHz
<b>Ethernet</b>	2 x GbE LAN Ports (Intel® I219V and Intel® I211AT) 4 x PoE GbE LAN Ports (Intel® I211AT)	2 x GbE LAN Ports (Intel® I219V and Intel® I211AT) 4 x PoE GbE LAN Ports (Intel® I211AT)	2 x GbE LAN Ports (Intel® I219V and Intel® I211AT) 4 x PoE GbE LAN Ports (Intel® I211AT)
<b>Graphic</b>	Integrated Graphics Processor - Intel® Iris X <sup>e</sup> Graphics : 2 x HDMI 2.0 2 independent display outputs	Integrated Graphics Processor - Intel® Iris X <sup>e</sup> Graphics : 2 x HDMI 2.0 2 independent display outputs	Integrated Graphics Processor - Intel® Iris X <sup>e</sup> Graphics: 2 x HDMI 2.0 2 independent display outputs
<b>Audio</b>	Realtek® Audio Codec	Realtek® Audio Codec	Realtek® Audio Codec
<b>Storage</b>	1 x Swappable 2.5" HDD/SSD (SATA 6Gb/s)	1 x Swappable 2.5" HDD/SSD (SATA 6Gb/s)	1 x Swappable 2.5" HDD/SSD (SATA 6Gb/s)
<b>Expansion Slots</b>	1 x 2280 M.2 M-Key (PCIe x2, SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0) 1 x Full-size Mini PCIe with SIM slot (PCIe x1, USB 2.0)	1 x 2280 M.2 M-Key (PCIe x2, SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0) 1 x Full-size Mini PCIe with SIM slot (PCIe x1, USB 2.0)	1 x 2280 M.2 M-Key (PCIe x2, SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0) 1 x Full-size Mini PCIe with SIM slot (PCIe x1, USB 2.0)
<b>Front I/O</b>	4 x RJ45 LAN Ports with PoE 2 x USB 2.0 1 x Power button with LED 1 x HDD LED 2 x COM Ports (RS-232/422/485) 2 x External Antenna Holes (Optional)	4 x RJ45 LAN Ports with PoE 2 x USB 2.0 1 x Power button with LED 1 x HDD LED 2 x COM Ports (RS-232/422/485) 2 x External Antenna Holes (Optional)	4 x RJ45 LAN Ports with PoE 2 x USB 2.0 1 x Power button with LED 1 x HDD LED 2 x COM Ports (RS-232/422/485) 2 x External Antenna Holes (Optional)
<b>Rear I/O</b>	2 x HDMI 2 x RJ45 LAN Ports 4 x USB 3.2 Gen 2x1 1 x COM Port (RS-232/422/485 & RI/5V/12V) 1 x COM Port (RS-232/422/485) 1 x GPIO (8 bits) 1 x Headphone Jack 1 x 4-pin Terminal Block	2 x HDMI 2 x RJ45 LAN Ports 4 x USB 3.2 Gen 2x1 1 x COM Port (RS-232/422/485 & RI/5V/12V) 1 x COM Port (RS-232/422/485) 1 x GPIO (8 bits) 1 x Headphone Jack 1 x 4-pin Terminal Block	2 x HDMI 2 x RJ45 LAN Ports 4 x USB 3.2 Gen 2x1 1 x COM Port (RS-232/422/485 & RI/5V/12V) 1 x COM Port (RS-232/422/485) 1 x GPIO (8 bits) 1 x Headphone Jack 1 x 4-pin Terminal Block
<b>Side I/O</b>	—	—	—
<b>TPM</b>	—	—	—
<b>Power</b>	+12~24VDC / 13A (PoE support)	+12~24VDC / 13A (PoE support)	+12~24VDC / 13A (PoE support)
<b>Operating Temp.</b>	0°C to 50°C	0°C to 50°C	0°C to 50°C
<b>Mounting</b>	Wall mount (Optional)	Wall mount (Optional)	Wall mount (Optional)
<b>Ordering Information</b>	6BQE1165AMR-SI (Box packing)	6BQE1135AMR-SI (Box packing)	6BQE1115AMR-SI (Box packing)
<b>Built-in Components</b>	—	—	—

## QBiX-ITX Series



Market Name	QBiX-ITX-Chassis Kit
<b>Dimension</b>	210W x 200D x 58H (mm)
<b>Support Model</b>	mITX-Q670A mITX-H610A mITX-Q47EA mITX-H42EA mITX-Q370A mITX-H310A mITX-Q170A mITX-H110B mITX-1605A
<b>Chipset</b>	Refer to MB
<b>Storage Drive Bay</b>	1 x 2.5" Drive Bay
<b>Expansion Slots</b>	Refer to Motherboard
<b>Front I/O</b>	4 x USB 2.0 1 x Power button with LED 1 x Power/HDD LED
<b>Rear I/O</b>	2 x External Antenna Holes Others are refer to Motherboard
<b>Side I/O</b>	—
<b>TPM</b>	Refer to Motherboard
<b>Power</b>	Refer to Motherboard
<b>Operating Temp.</b>	0°C to 50°C
<b>Mounting</b>	Wall Mount, VESA 75/100
<b>Ordering Information</b>	6BQIH310AMR-SI (Box packing)-MITX-H310A
<b>Built-in Components</b>	—

## QBiX-Jumbo Series

New



Preliminary



QBiX-Jumbo Series

Model Name	QBiX-JMB-ADLA67EH-A1	QBiX-JMB-ADLA67EHG-B1
<b>Dimension</b>	224W x 256.1D x 77.7H (mm)	224W x 368D x 166.3H (mm)
<b>CPU</b>	Support for 13th/12th Generation Intel® Core™ i9/i7/i5/i3, Pentium® and Celeron® processors in the LGA1700 package	Support for 13th/12th Generation Intel® Core™ i9/i7/i5/i3, Pentium® and Celeron® processors in the LGA1700 package
<b>Chipset</b>	Intel® Q670E Chipset	Intel® Q670E Chipset
<b>Memory</b>	2 x DDR4 SO-DIMM sockets, Max. Capacity 64 GB, Support Dual Channel DDR4 3200 MHz	2 x DDR4 SO-DIMM sockets, Max. Capacity 64 GB, Support Dual Channel DDR4 3200 MHz
<b>Ethernet</b>	1 x 2.5GbE LAN Port (Intel® I226V) 1 x GbE LAN Port (Intel® I219LM, Vpro support) 2 x GbE LAN Ports (Intel® I211AT)	1 x 2.5GbE LAN Port (Intel® I226V) 1 x GbE LAN Port (Intel® I219LM, Vpro support) 2 x GbE LAN Ports (Intel® I211AT)
<b>Graphic</b>	Integrated Graphics Processor - Intel® HD Graphics: 1 x Display Port 1 x DVI-D 1 x VGA 3 independent display outputs	Integrated Graphics Processor - Intel® HD Graphics: 1 x Display Port 1 x DVI-D 1 x VGA 3 independent display outputs
<b>Audio</b>	Realtek® Audio Codec	Realtek® Audio Codec
<b>Storage</b>	4 x 2.5" HDD/SSD (SATA 6Gb/s) 1 x 2280 M.2 M-Key (PCIe x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0) 1 x Full-size Mini PCIe with SIM slot (PCIe x1, USB 2.0)	4 x 2.5" HDD/SSD (SATA 6Gb/s) 1 x 2280 M.2 M-Key (PCIe x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0) 1 x Full-size Mini PCIe with SIM slot (PCIe x1, USB 2.0) 1 x PCIe x4 (Gen3 x4) 2 x PCIe x16 — Single at Gen3 x16 only or — Dual at Gen3 x8 + Gen3 x8
<b>Expansion Slots</b>		
<b>Front I/O</b>	1 x Power Switch /Power/ HDD LED 3 x Audio Jacks (Line in, Line out, Mic in) 1 x Display Port 1 x DVI-D 1 x VGA 2 x COM Ports (RS-232/422/485 & RI/5V/12V) 2 x COM Ports (RS-232) 4 x RJ45 LAN Ports 2 x USB 3.2 Gen 2x1 2 x USB 3.2 Gen 1 6 x USB 2.0 1 x 4-pin Terminal Block 2 x External Antenna Holes (Optional)	1 x Power Switch /Power/ HDD LED 3 x Audio Jacks (Line in, Line out, Mic in) 1 x Display Port 1 x DVI-D 1 x VGA 2 x COM Ports (RS-232/422/485 & RI/5V/12V) 2 x COM Ports (RS-232) 4 x RJ45 LAN Ports 2 x USB 3.2 Gen 2x1 2 x USB 3.2 Gen 1 6 x USB 2.0 1 x 4-pin Terminal Block 2 x External Antenna Holes (Optional)
<b>Rear I/O</b>	—	—
<b>Power</b>	+12V~48VDC (Full Range)	+24V~48VDC (Full Range)
<b>Operating Temp.</b>	-20°C to 50°C (CPU TDP 65W) -20°C to 60°C (CPU TDP 35W)	-20°C to 50°C (CPU TDP 65W) -20°C to 60°C (CPU TDP 35W) -20°C to 35°C (with Graphic card RTX3090)
<b>Ordering Information</b>	6BQJQ67EAMR-SI (Box packing)	—
<b>Build in Components</b>	Please contact with your sales representative for more information or e-mailed to : <a href="mailto:sales@gigaipc.com">sales@gigaipc.com</a>	
<b>Note</b>	—	—



## QBiX-Jumbo Series



Model Name	QBiX-JMB-CMLA47EH-A1	QBiX-JMB-CMLA47EHG-B1	QBiX-JMB-CMLA47EHGP-A1
<b>Dimension</b>	224W x 256.1D x 77.7H (mm)	224W x 368D x 166.3H (mm)	224W x 368D x 166.3H (mm)
<b>CPU</b>	Support for 10th Generation Intel® Core™ i9/i7/i5/i3, Pentium® and Celeron® processors in the LGA1200 package	Support for 10th Generation Intel® Core™ i9/i7/i5/i3, Pentium® and Celeron® processors in the LGA1200 package	Support for 10th Generation Intel® Core™ i9/i7/i5/i3, Pentium® and Celeron® processors in the LGA1200 package
<b>Chipset</b>	Intel® Q470E Chipset	Intel® Q470E Chipset	Intel® Q470E Chipset
<b>Memory</b>	2 x DDR4 SO-DIMM sockets, Max. Capacity 64 GB, Support Dual Channel DDR4 3200 MHz	2 x DDR4 SO-DIMM sockets, Max. Capacity 64 GB, Support Dual Channel DDR4 3200 MHz	2 x DDR4 SO-DIMM sockets, Max. Capacity 64 GB, Support Dual Channel DDR4 3200 MHz
<b>Ethernet</b>	4 x GbE LAN Ports (1 x Intel® I219V and 3 x Intel® I211AT)	4 x GbE LAN Ports (1 x Intel® I219V and 3 x Intel® I211AT)	4 x GbE LAN Ports (1 x Intel® I219V and 3 x Intel® I211AT)
<b>Graphic</b>	Integrated Graphics Processor - Intel® HD Graphics: 1 x Display Port 1 x DVI-D 1 x VGA 3 independent display outputs	Integrated Graphics Processor - Intel® HD Graphics: 1 x Display Port 1 x DVI-D 1 x VGA 3 independent display outputs	Integrated Graphics Processor - Intel® HD Graphics: 1 x Display Port 1 x DVI-D 1 x VGA 3 independent display outputs
<b>Audio</b>	Realtek® Audio Codec	Realtek® Audio Codec	Realtek® Audio Codec
<b>Storage</b>	4 x 2.5" HDD/SSD (SATA 6Gb/s)	4 x 2.5" HDD/SSD (SATA 6Gb/s)	4 x 2.5" HDD/SSD (SATA 6Gb/s)
<b>Expansion Slots</b>	1 x 2280 M.2 M-Key (PCIe x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0) 1 x Full-size Mini PCIe with SIM slot (PCIe x1, USB 2.0)	1 x 2280 M.2 M-Key (PCIe x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0) 1 x Full-size Mini PCIe with SIM slot (PCIe x1, USB 2.0) 1 x PCIe x4 (Gen3 x4) 2 x PCIe x16 — Single at Gen3 x16 only or — Dual at Gen3 x8 + Gen3 x8	1 x 2280 M.2 M-Key (PCIe x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0) 1 x Full-size Mini PCIe with SIM slot (PCIe x1, USB 2.0) 1 x PCIe x4 (Gen3 x4) 2 x PCIe x16 — Single at Gen3 x16 only or — Dual at Gen3 x8 + Gen3 x8
<b>Front I/O</b>	1 x Power Switch/ Power/ HDD LED 3 x Audio Jacks (Line in, Line out, Mic in) 1 x Display Port 1 x DVI-D 1 x VGA 2 x COM Ports (RS-232/422/485 & RI/5V/12V) 2 x COM Ports (RS-232) 4 x RJ45 LAN Ports 4 x USB 3.2 Gen 1 6 x USB 2.0 1 x 4-pin Terminal Block 2 x External Antenna Holes (Optional)	1 x Power Switch/ Power/ HDD LED 3 x Audio Jacks (Line in, Line out, Mic in) 1 x Display Port 1 x DVI-D 1 x VGA 2 x COM Ports (RS-232/422/485 & RI/5V/12V) 2 x COM Ports (RS-232) 4 x RJ45 LAN Ports 4 x USB 3.2 Gen 1 6 x USB 2.0 1 x 4-pin Terminal Block 2 x External Antenna Holes (Optional)	1 x Power Switch/ Power/ HDD LED 3 x Audio Jacks (Line in, Line out, Mic in) 1 x Display Port 1 x DVI-D 1 x VGA 2 x COM Ports (RS-232/422/485 & RI/5V/12V) 2 x COM Ports (RS-232) 4 x RJ45 LAN Ports 4 x USB 3.2 Gen 1 6 x USB 2.0 2 x External Antenna Holes (Optional)
<b>Rear I/O</b>	—	—	—
<b>Power</b>	+12V~48VDC (Full Range)	+24V~48VDC (Full Range)	850W Power Supply Built-in
<b>Operating Temp.</b>	-20°C to 50°C (CPU TDP 65W) -20°C to 60°C (CPU TDP 35W)	-20°C to 50°C (CPU TDP 65W) -20°C to 60°C (CPU TDP 35W)	-20°C to 50°C (CPU TDP 65W) -20°C to 60°C (CPU TDP 35W)
<b>Ordering Information</b>	6BQJQ47EAMR-SI (Box packing)	9BQJQ47EAMR-SI + 6BQJH310BPR-SI	9BQJQ47EPMR-SI (Box packing)
<b>Build in Components</b>	Please contact with your sales representative for more information or e-mailed to : <a href="mailto:sales@gigaipc.com">sales@gigaipc.com</a>		
<b>Note</b>			※Support Discrete GFX Max. 350W

## QBiX-Jumbo Series



QBiX-Jumbo Series/ QBiX-WP Series

Model Name	QBiX-JMB-CFLA310H-A1	QBiX-JMB-CFLA310HG-A1	QBiX-JMB-CFLA310HG-B1
<b>Dimension</b>	224W x 257D x 77H (mm)	224W x 343D x 146H (mm)	224W x 368D x 166.3H (mm)
<b>CPU</b>	Support for 9th/8th Generation Intel® Core™ i7/i5/i3 processors in the LGA1151 package	Support for 9th/8th Generation Intel® Core™ i7/i5/i3 processors in the LGA1151 package	Support for 9th/8th Generation Intel® Core™ i7/i5/i3 processors in the LGA1151 package
<b>Chipset</b>	Intel® H310 Chipset	Intel® H310 Chipset	Intel® H310 Chipset
<b>Memory</b>	2 x DDR4 SO-DIMM sockets, Max. Capacity 32 GB, Support Dual Channel DDR4 2666/2400 MHz	2 x DDR4 SO-DIMM sockets, Max. Capacity 32 GB, Support Dual Channel DDR4 2666/2400 MHz	2 x DDR4 SO-DIMM sockets, Max. Capacity 32 GB, Support Dual Channel DDR4 2666/2400 MHz
<b>Ethernet</b>	4 x GbE LAN Ports (1 x Intel® I219V and 3 x Intel® I211AT)	4 x GbE LAN Ports (1 x Intel® I219V and 3 x Intel® I211AT)	4 x GbE LAN Ports (1 x Intel® I219V and 3 x Intel® I211AT)
<b>Graphic</b>	Integrated Graphics Processor - Intel® HD Graphics: 1 x Display Port 1 x DVI-D 1 x VGA 2 independent display outputs	Integrated Graphics Processor - Intel® HD Graphics: 1 x Display Port 1 x DVI-D 1 x VGA 2 independent display outputs	Integrated Graphics Processor - Intel® HD Graphics: 1 x Display Port 1 x DVI-D 1 x VGA 2 independent display outputs
<b>Audio</b>	Realtek® Audio Codec	Realtek® Audio Codec	Realtek® Audio Codec
<b>Storage</b>	3 x 2.5" HDD/SSD (SATA 6Gb/s) 1 x 2280 M.2 M-Key (SATA 6Gb/s) 1 x 2230 M.2 E-Key	3 x 2.5" HDD/SSD (SATA 6Gb/s) 1 x 2280 M.2 M-Key (SATA 6Gb/s) 1 x 2230 M.2 E-Key	3 x 2.5" HDD/SSD (SATA 6Gb/s) 1 x 2280 M.2 M-Key (SATA 6Gb/s) 1 x 2230 M.2 E-Key
<b>Expansion Slots</b>	1 x Full-size Mini PCIe with SIM slot	1 x Full-size Mini PCIe with SIM slot 1 x PCIe x4 (Gen3 x1) 1 x PCIe x16 (Gen3 x16)	1 x Full-size Mini PCIe with SIM slot 1 x PCIe x4 (Gen3 x1) 1 x PCIe x16 (Gen3 x16)
<b>Front I/O</b>	1 x Power Switch/ Power/ HDD LED 3 x Audio Jacks (Line in, Line out, Mic in) 1 x Display Port 1 x DVI-D 1 x VGA 2 x COM Ports (RS-232/422/485 & RI/5V/12V) 2 x COM Ports (RS-232) 4 x RJ45 LAN Ports 4 x USB 3.2 Gen 1 4 x USB 2.0 1 x 4-pin Terminal Block 2 x External Antenna Holes (Optional)	1 x Power Switch/ Power/ HDD LED 3 x Audio Jacks (Line in, Line out, Mic in) 1 x Display Port 1 x DVI-D 1 x VGA 2 x COM Ports (RS-232/422/485 & RI/5V/12V) 2 x COM Ports (RS-232) 4 x RJ45 LAN Ports 4 x USB 3.2 Gen 1 4 x USB 2.0 1 x 4-pin Terminal Block 2 x External Antenna Holes (Optional)	1 x Power Switch/ Power/ HDD LED 3 x Audio Jacks (Line in, Line out, Mic in) 1 x Display Port 1 x DVI-D 1 x VGA 2 x COM Ports (RS-232/422/485 & RI/5V/12V) 2 x COM Ports (RS-232) 4 x RJ45 LAN Ports 4 x USB 3.2 Gen 1 4 x USB 2.0 1 x 4-pin Terminal Block 2 x External Antenna Holes (Optional)
<b>Rear I/O</b>	—	—	—
<b>Power</b>	+12V~48VDC (Full Range)	+24V~48VDC (Full Range)	+24V~48VDC (Full Range)
<b>Operating Temp.</b>	-20°C to 50°C (CPU TDP 65W) -20°C to 60°C (CPU TDP 35W) -20°C to 50°C (CPU TDP 35W, i3-8100T, Tj 82°C)	-20°C to 50°C (CPU TDP 65W) -20°C to 60°C (CPU TDP 35W) -20°C to 50°C (CPU TDP 35W, i3-8100T, Tj 82°C)	-20°C to 50°C (CPU TDP 65W) -20°C to 60°C (CPU TDP 35W) -20°C to 50°C (CPU TDP 35W, i3-8100T, Tj 82°C)
<b>Ordering Information</b>	9BQJH310AMR-SI (Box packing)	9BQJH310AMR-SI + 6BQJH310APR-SI	9BQJH310AMR-SI + 6BQJH310BPR-SI
<b>Build in Components</b>	Please contact with your sales representative for more information or e-mailed to : <a href="mailto:sales@gigaipc.com">sales@gigaipc.com</a>		
<b>Note</b>		※Support Discrete GFX Max. 250W	※Support Discrete GFX Max. 250W

## QBiX-WP Series



Model Name	QBiX-WP-WHLA8265H-A1	QBiX-WP-APLA3940H-A1
<b>Dimension</b>	188W x 155D x 72H (mm)	188W x 155D x 72H (mm)
<b>CPU</b>	Intel® Core™ i5-8265U Processor, 14nm, 4 cores, 8 threads, up to 3.9 GHz	Intel® Atom® x5-E3940 Processor, 14nm, 4 cores, 4 threads, up to 1.8 GHz
<b>Chipset</b>	—	—
<b>Memory</b>	2 x DDR4 SO-DIMM sockets, Max. Capacity 64 GB, Support Dual Channel DDR4 2400 MHz	2 x DDR3L SO-DIMM sockets, Max. Capacity 8 GB, Support Dual Channel DDR3L 1866 MHz
<b>Ethernet</b>	2 x GbE LAN Ports (Intel® I219V and Intel® I211AT)	2 x GbE LAN Ports (Intel® I211AT)
<b>Graphic</b>	Integrated Graphics Processor - Intel® UHD Graphics 620: 1 x HDMI 1.4	Integrated Graphics Processor - Intel® HD Graphics 500: 1 x HDMI 1.4
<b>Audio</b>	Realtek® Audio Codec	Realtek® Audio Codec
<b>Storage</b>	1 x 2.5" HDD/SSD (SATA 6Gb/s)	1 x 2.5" HDD/SSD (SATA 6Gb/s)
<b>Expansion Slots</b>	1 x 2280 M.2 M-Key (PCIe x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0) 1 x Full-size Mini PCIe with SIM slot (PCIe x1, USB 2.0)	1 x 2242 M.2 M-Key (SATA 6Gb/s) 1 x Full-size Mini PCIe with SIM slot (PCIe x1, USB 2.0)
<b>Front I/O</b>	2 x (M12) RJ45 LAN Ports 2 x (IP67) USB 2.0 connector 1 x (IP67) HDMI connector 1 x (IP67) Power switch 1 x (M8) Power & HDD LED	2 x (M12) RJ45 LAN Ports 2 x (IP67) USB 2.0 connector 1 x (IP67) HDMI connector 1 x (IP67) Power switch 1 x (M8) Power & HDD LED
<b>Rear I/O</b>	1 x (M12) COM Port (RS-232/422/485 & RI/5V/12V) 2 x (M12) COM Ports (RS-232) 1 x (M12) GPIO (8 bits) 1 x (M12) DC IN	1 x (M12) COM Port (RS-232/422/485 & RI/5V/12V) 2 x (M12) COM Ports (RS-232) 1 x (M12) GPIO (8 bits) 1 x (M12) DC Jack
<b>Power</b>	+9V~36VDC	+9V~36VDC
<b>Operating Temp.</b>	-20°C to 70°C	-20°C to 80°C
<b>Ordering Information</b>	9BQW8265AMR-SI (Box packing)	9BQW3940AMR-SI (Box packing)
<b>Build in Components</b>	Please contact with your sales representative for more information or e-mailed to : <a href="mailto:sales@gigaipc.com">sales@gigaipc.com</a>	

## QBiX-Jetson Series



QBiX-Jetson series/ QBiX-Plus Series

Model Name	QBiX-Jetson-NanoAHP-A1	QBiX-Jetson-XavierAHP-A1
<b>Dimension</b>	210W x 169.8D x 55.2H (mm)	210W x 169.8D x 55.2H (mm)
<b>CPU</b>	ARM® Cortex® A57 MPCore (Quad-Core) Processor with NEON Technology	6-core NVIDIA® Carmel Arm® v8.2 64-bit CPU 6MB L2 cache + 4MB L3 cache
<b>Chipset</b>	—	—
<b>Memory</b>	4GB LPDDR4 (module)	8GB LPDDR4 (module)
<b>Ethernet</b>	8 x GbE LAN with PoE 15W/Port (PoE Optional) 2 x GbE LAN	8 x GbE LAN with PoE 15W/Port (PoE Optional) 2 x GbE LAN
<b>Graphic</b>	NVIDIA® Maxwell™ architecture with 128 NVIDIA® CUDA® cores 1 x HDMI 1 x Display Port	384-core NVIDIA® Volta™ GPU with 48 Tensor Cores 1 x HDMI 1 x Display Port
<b>Audio</b>	—	—
<b>Storage</b>	1 x 16G eMMC 5.1 (Module) 1 x SATA 6Gb/s (Swappable 2.5" HDD/SSD)	1 x 16G eMMC 5.1 (Module) 1 x SATA 6Gb/s (Swappable 2.5" HDD/SSD)
<b>Expansion Slots</b>	1 x 3052 M.2 B-Key (USB 3.2 Gen 1x1) 1 x Mini PCIe (USB 2.0 only) 1 x 2230 M.2 E-Key - Intel AC 8265 (Optional) 1 x SIM slot	1 x 3052 M.2 B-Key (PCIe x1, USB3.2 Gen1x1) 1 x Mini PCIe (USB 2.0 only) 1 x 2230 M.2 E-Key - Intel AC 8265 (Optional) 1 x SIM slot
<b>Front I/O</b>	1 x Micro SD card 1 x Micro USB 2.0 (OTD) 1 x HDMI 2.0 1 x Display Port 1 x Power button with LED 1 x HDD LED 1 x GPIO (12 bits) 1 x Recovery button 2 x External Antenna Holes (Optional)	1 x Micro SD card 1 x Micro USB 2.0 (OTD) 1 x HDMI 2.0 1 x Display Port 1 x Power button with LED 1 x HDD LED 1 x GPIO (12 bits) 1 x Recovery button 2 x External Antenna Holes (Optional)
<b>Rear I/O</b>	4 x COM Ports (RS-232/422/485) 1 x 3-pin Terminal block 8 x GbE LAN Ports with PoE 15W/Port 2 x GbE LAN Ports 4 x USB 3.2 Gen 1	4 x COM Ports (RS-232/422/485) 1 x 3-pin Terminal block 8 x GbE LAN Ports with PoE 15W/Port 2 x GbE LAN Ports 4 x USB 3.2 Gen 1
<b>Side I/O</b>	4 x External Antenna Holes (Optional)	4 x External Antenna Holes (Optional)
<b>Power</b>	+12V~54VDC (non PoE) +54VDC (PoE support)	+12V~54VDC (non PoE) +54VDC (PoE support)
<b>Operating Temp.</b>	-20°C to 70°C	-20°C to 70°C
<b>Ordering Information</b>	9BQNNANOAMR-SI (Box packing)	9BQNXAVNAMR-SI (Box packing)
<b>Build in Components</b>	—	—

## QBiX-Plus Series



Model Name	QBiX-Plus-KBLA7100-A1	QBiX-Plus-EHLA6412-A1
<b>Dimension</b>	180W x 117D x 36H (mm)	165W x 105D x 27H (mm)
<b>CPU</b>	Intel® Core™ i3-7100U Processor, 14nm, 2 cores, 4 threads, 2.40 GHz	Intel® Celeron® J6412 Processor, 10nm, 4 cores, 4 threads, up to 2.6 GHz
<b>Chipset</b>	SoC	—
<b>Memory</b>	2 x DDR4 SO-DIMM sockets, Max. Capacity 32 GB, Support Dual Channel DDR4 2133 MHz	2 x DDR4 SO-DIMM sockets, Max. Capacity 32 GB, Support Dual Channel DDR4 3200 MHz
<b>Ethernet</b>	2 x GbE LAN Ports (Intel® I219LM and Intel® I210AT)	2 x GbE LAN Ports (Realtek® RTL8118)
<b>Graphic</b>	Integrated Graphics Processor - Intel® HD Graphics 620: 2 x HDMI 2.0 2 independent display outputs	Integrated Graphics Processor - Intel® UHD Graphics for 10th Intel Processor 3 x HDMI 2.0 3 independent display outputs
<b>Audio</b>	Realtek® Audio Codec	Realtek® Audio Codec
<b>Storage</b>	—	—
<b>Expansion Slots</b>	1 x 2280 M.2 M-Key (PCIe x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0) 1 x Full-size Mini PCIe with SIM slot (PCIe x1, USB 2.0)	1 x 2280 M.2 M-Key (PCIe x2, SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0) 1 x 3042 M.2 B-key with SIM Slot (USB 3.2 Gen 1)
<b>Front I/O</b>	1 x USB 3.2 Gen 2x1 Type C 1 x USB 3.2 Gen 2x1 Type A 2 x USB 3.2 Gen 1 1 x COM Port (RS-232/422/485) 1 x Micro SD card slot 1 x Power button	2 x USB 3.2 Gen 1 1 x COM Port (RS-232)(RJ45 Type) 1 x Micro SD card slot 1 x Power button 1 x HDMI
<b>Rear I/O</b>	1 x Combo Audio Jack (Microphone & Headphone) 2 x RJ45 LAN Ports 2 x USB 3.2 Gen 1 2 x HDMI 1 x DC Jack	1 x Headphone Jack 2 x RJ45 LAN Ports 2 x USB 3.2 Gen 1 2 x HDMI 1 x DC Jack
<b>Side I/O</b>	3 x External Antenna Holes (Optional)	3 x External Antenna Holes (Optional)
<b>TPM</b>	—	—
<b>Power</b>	+19VDC (Adapter 19V/90W)	+12V~19VDC (Adapter 19V/65W)
<b>Operating Temp.</b>	0°C to 40°C	0°C to 50°C
<b>Mounting</b>	VESA 75/100	VESA 75/100
<b>Ordering Information</b>	9BCKABZAMR-SI (Box packing)	6BQS6412AMR-SI (Box packing)
<b>Built-in Components</b>	Please contact with your sales representative for more information or e-mailed to : <a href="mailto:sales@gigaipc.com">sales@gigaipc.com</a>	—



## QBiX-Lite Series



QBiX-Lite Series

Market Name	QBiX-Lite-TGLA1145G7E-A1	QBiX-Lite-TGLA1135G7-A1	QBiX-Lite-AMDA1605H-A1
<b>Dimension</b>	234W x 155D x 30H (mm)	234W x 155D x 30H (mm)	234W x 155D x 30H (mm)
<b>CPU</b>	Intel® Core™ i5-1145G7E Processor 10nm SuperFin, 4 cores, 8 threads, up to 4.1 GHz	Intel® Core™ i5-1135G7 Processor 10nm SuperFin, 4 cores, 8 threads, up to 4.2 GHz	AMD® RYZEN™ V1605B Embedded Processor, 14nm, 4 cores, 8 threads, up to 3.6GHz
<b>Chipset</b>	SoC	SoC	SoC
<b>Memory</b>	2 x DDR4 SO-DIMM sockets, Max. Capacity 64 GB, Support Dual Channel DDR4 3200 MHz	2 x DDR4 SO-DIMM sockets, Max. Capacity 64 GB, Support Dual Channel DDR4 3200 MHz	2 x DDR4 SO-DIMM sockets, Max. Capacity 32 GB, Support Dual Channel DDR4 2400 MHz
<b>Ethernet</b>	2 x GbE LAN Ports (Intel® I219LM and Intel® I211AT)	2 x GbE LAN Ports (Intel® I219V and Intel® I211AT)	2 x GbE LAN Ports (Realtek® RTL8111HS)
<b>Graphic</b>	Integrated Graphics Processor - Intel® Iris X® Graphics: 2 x HDMI 2.0 2 x DP 1.4 (8K) 1 x DP 1.4 (USB Type C (8K)) 4 independent display outputs	Integrated Graphics Processor - Intel® Iris X® Graphics: 2 x HDMI 2.0 2 x DP 1.4 (8K) 1 x DP 1.4 (USB Type C (8K)) 4 independent display outputs	Integrated Graphics Processor - AMD® Radeon™ Vega 8 Graphics: 4 x HDMI 2.0 4 independent display outputs EDID Emulation support with AMD utility
<b>Audio</b>	Realtek® Audio Codec	Realtek® Audio Codec	Realtek® Audio Codec
<b>Storage</b>	1 x 2.5" HDD/SSD (SATA 6Gb/s)	1 x 2.5" HDD/SSD (SATA 6Gb/s)	1 x 2.5" HDD/SSD (SATA 6Gb/s)
<b>Expansion Slots</b>	1 x 2280 M.2 M-Key (PCIe x2, SATA 6Gb/s) 1 x 2230 M.2 E-Key 1 x 3052 M.2 B-Key with SIM slot (Support 5G)	1 x 2280 M.2 M-Key (PCIe x2, SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0) 1 x 3052 M.2 B-Key with SIM Slot (Support 5G)	1 x 2280 M.2 M-Key (PCIe x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0) 1 x Full-size Mini PCIe with SIM slot (PCIe x1, USB 2.0)
<b>Front I/O</b>	1 x USB type C (USB 3.2 Gen 2x1, DP Alt Mode & PD Out -30W)(-100W requests to use 250W adapter) 1 x USB type C (USB 3.2 Gen 2x1, PD input-100W) 4 x USB 3.2 Gen 2x1 2 x HDMI 2 x DP 2 x RJ45 LAN Ports 2 x USB 2.0 1 x HDD LED 1 x Power button with LED 2 x External Antenna Holes (Optional)	1 x USB type C (USB 3.2 Gen 2x1, DP Alt Mode & PD Out -30W) (-100W requests to use 250W adapter) 1 x USB type C (USB 3.2 Gen 2x1, PD input-100W) 4 x USB 3.2 Gen 2x1 2 x HDMI 2 x DP 2 x RJ45 LAN Ports 2 x USB 2.0 1 x HDD LED 1 x Power button with LED 2 x External Antenna Holes (Optional)	2 x RJ45 LAN Ports 2 x USB 3.2 Gen 1 2 x USB 2.0 4 x HDMI 1 x Power button with LED 1 x HDD LED 1 x Screw Type DC Jack
<b>Rear I/O</b>	1 x COM Port (RS-232) 2 x USB 2.0 1 x Headphone Jack 1 x Screw type DC Jack 2 x External Antenna Holes (Optional)	1 x COM Port (RS-232) 2 x USB 2.0 1 x Headphone Jack 1 x Screw type DC Jack 2 x External Antenna Holes (Optional)	1 x COM Port (RS-232/422/485 & RI/5V/12V) 2 x USB 2.0 1 x Line out phone Jack 2 x External Antenna Holes (Optional)
<b>Side I/O</b>	1 x External Antenna Hole (on each side)	1 x External Antenna Hole (on each side)	—
<b>TPM</b>	—	—	Onboard TPM 2.0 security chip INFINEON SLB9665TT2.0
<b>Power</b>	+12V~24VDC (Adapter 19.5V/135W)	+12V~24VDC (Adapter 19.5V/135W)	+9V~36VDC (Adapter 19V/65W)
<b>Operating Temp.</b>	0°C to 50°C	0°C to 50°C	0°C to 50°C
<b>Mounting</b>	Wall mount (Default)	Wall mount (Default)	Wall mount (Default)
<b>Ordering Information</b>	6BQL1145AMR-SI (Box packing)	6BQL1135AMR-SI (Box packing)	6BQL1605AMR-SI (Box packing)
<b>Built-in Components</b>	—	—	—

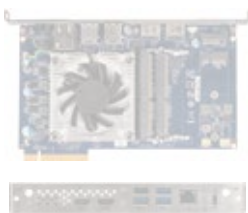
## QBiX-Lite Series



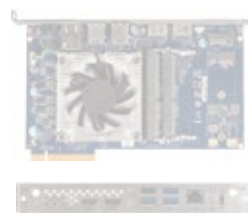
Market Name	QBiX-Lite SDM Kits
<b>Dimension</b>	195W x 158D x 30H (mm)
<b>Support model</b>	Support SDM module as follows. SDM-1185G7EL SDM-1135G7L SDM-1115G4L SDM-7300L – Intel vPro support SDM-7100L SDM-4000L SDM-3350L-QV SDM-3350L-HW
<b>Chipset</b>	—
<b>Memory</b>	Depends on SDM module
<b>Ethernet</b>	Depends on SDM module
<b>Graphic</b>	Depends on SDM module
<b>Audio</b>	Intel® Integrated Audio
<b>Storage</b>	Depends on SDM module
<b>Expansion Slots</b>	Depends on SDM module
<b>Front I/O</b>	Depends on SDM module
<b>Rear I/O</b>	1 x USB 3.2 Gen 1 1 x Display Port (Co-lay with front Display port) 1 x HDMI (2 x HDMI for SDM-1185G7EL) 1 x UART 1 x DC-Jack 1 x 2x2 Power connector
<b>Side I/O</b>	—
<b>TPM</b>	—
<b>Power</b>	+12V/19V/24VDC (Adapter 19V/65W) (Adapter 19V/90W for SDM-1135G7L , SDM-1115G4L) (Adapter 12V/120W for SDM-1185G7EL)
<b>Operating Temp.</b>	0°C to 50°C
<b>Mounting</b>	Wall mount, VESA 75/100 (Optional)
<b>Ordering Information</b>	6BSD4000AMR-SI (Box packing)
<b>Built-in Components</b>	—

## SDM-L Series

Preliminary



Preliminary



SDM-L Series

Model Name	SDM-1335AL	SDM-1315EAL
<b>Dimensions</b>	SDM-Large, 175W x 100D (mm)	SDM-Large, 175W x 100D (mm)
<b>CPU</b>	Intel® Core™ i5-1335U Processor, Intel® 7, 10 cores, 2P+8E, 12 threads, up to 4.60 GHz	Intel® Core™ i3-1315U Processor, Intel® 7, 6 cores, 2P+4E, 8 threads, up to 4.50 GHz
<b>VPro</b>	—	—
<b>Memory</b>	2 x DDR5 SO-DIMM sockets, Max. Capacity 64 GB, Support Dual Channel DDR5 5200 MHz	2 x DDR5 SO-DIMM sockets, Max. Capacity 64 GB, Support Dual Channel DDR5 5200 MHz
<b>Ethernet</b>	1 x 2.5GbE LAN Port (Intel® I225LM)	1 x 2.5GbE LAN Port (Intel® I225LM)
<b>Graphic</b>	Integrated Graphics Processor - Intel® Iris X <sup>e</sup> Graphics: 1 x HDMI 2.0 (SDM), 2 x HDMI 2.0 (Rear), 1 x DisplayPort (SDM) 4 independent display outputs	Integrated Graphics Processor - Intel® UHD Graphics: 1 x HDMI 2.0 (SDM), 2 x HDMI 2.0 (Rear), 1 x DisplayPort (SDM) 4 independent display outputs
<b>Audio</b>	Intel® Integrated Audio	Intel® Integrated Audio
<b>Storage</b>	—	—
<b>Expansion Slots</b>	1 x 2280 M.2 M-Key (PCIe x4) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0)	1 x 2280 M.2 M-Key (PCIe x4) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0)
<b>Internal I/O</b>	—	—
<b>Rear I/O</b>	2 x HDMI 1 x RJ45 LAN Port 2 x USB 3.2 Gen 2x1 1 x USB 3.2 Gen 1 1 x USB Type C 1 x PWR LED 1 x HDD LED 2 x External Antenna Holes (Optional) 1 x Reset button 1 x Power button	2 x HDMI 1 x RJ45 LAN Port 2 x USB 3.2 Gen 2x1 1 x USB 3.2 Gen 1 1 x USB Type C 1 x PWR LED 1 x HDD LED 2 x External Antenna Holes (Optional) 1 x Reset button 1 x Power button
<b>TPM</b>	Onboard TPM 2.0 security chip INFINEON SLB9670VQ2.0	Onboard TPM 2.0 security chip INFINEON SLB9670VQ2.0
<b>Operating Temp.</b>	0°C to 55°C	0°C to 55°C
<b>Ordering Information</b>	9MRLU5ALMR-SI (Box packing)	9MRLU3ALMR-SI (Box packing)
<b>Built-in Components</b>	—	—

## SDM-L Series



Model Name	SDM-1185G7EL	SDM-1135G7L	SDM-1115G4L
<b>Dimensions</b>	SDM-Large, 175W x 100D (mm)	SDM-Large, 175W x 100D (mm)	SDM-Large, 175W x 100D (mm)
<b>CPU</b>	Intel® Core™ i7-1185G7E Processor 10nm SuperFin, 4 cores, 8 threads, up to 4.40 GHz	Intel® Core™ i5-1135G7 Processor, 10nm SuperFin, 4 cores, 8 threads, up to 4.20 GHz	Intel® Core™ i3-1115G4 Processor , 10nm SuperFin, 2 cores, 4 threads, up to 4.10 GHz
<b>VPro</b>	—	—	—
<b>Memory</b>	16GB LPDDR4x-4267 MT/s (Soldered)	2 x DDR4 SO-DIMM sockets, Max. Capacity 64 GB, Support Dual Channel DDR4 3200 MHz	2 x DDR4 SO-DIMM sockets, Max. Capacity 64 GB, Support Dual Channel DDR4 3200 MHz
<b>Ethernet</b>	1 x 2.5GbE LAN Port (Intel® I225LM)	1 x GbE LAN Port (Intel® I219V)	1 x GbE LAN Port (Intel® I219V)
<b>Graphic</b>	Integrated Graphics Processor - Intel® Iris X <sup>e</sup> Graphics: 2 x HDMI 2.1 (SDM), 2 x HDMI 2.0 (Rear), 1 x DP 1.4 through USB type C (8k) 4 independent display outputs	Integrated Graphics Processor - Intel® Iris X <sup>e</sup> Graphics: 1 x HDMI 2.0 (SDM), 2 x HDMI 2.0 (Rear), 1 x DisplayPort (SDM) 4 independent display outputs	Integrated Graphics Processor - Intel® UHD Graphics: 1 x HDMI 2.0 (SDM), 2 x HDMI 2.0 (Rear), 1 x DisplayPort (SDM) 4 independent display outputs
<b>Audio</b>	Intel® Integrated Audio	Intel® Integrated Audio	Intel® Integrated Audio
<b>Storage</b>	1 x 2280 M.2 M-Key (Support NVME only) Default SSD supplied with 128GB and heatsink	—	—
<b>Expansion Slots</b>	1 x 2230 M.2 E-Key (with Intel AX210 Wi-Fi Card) 1 x 3052 M.2 B-Key (Support 5G)	1 x 2280 M.2 M-Key (PCIe x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0)	1 x 2280 M.2 M-Key (PCIe x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0)
<b>Internal I/O</b>	—	—	—
<b>Rear I/O</b>	2 x HDMI 1 x RJ45 LAN Port 2 x USB 3.2 Type A Gen 2x1 1 x USB 3.2 Type C Gen 2x1 (with DP output) 1 x PWR LED 1 x HDD LED 4 x External Antenna Holes (Optional) 1 x Reset button 1 x Power button	2 x HDMI 1 x RJ45 LAN Port 3 x USB 3.2 Gen 1 1 x USB 2.0 1 x PWR LED 1 x HDD LED 2 x External Antenna Holes (Optional) 1 x Reset button 1 x Power button	2 x HDMI 1 x RJ45 LAN Port 3 x USB 3.2 Gen 1 1 x USB 2.0 1 x PWR LED 1 x HDD LED 2 x External Antenna Holes (Optional) 1 x Reset button 1 x Power button
<b>TPM</b>	1 x TPM header (SPI interface)	1 x TPM header	1 x TPM header
<b>Operating Temp.</b>	0°C to 55°C	0°C to 55°C	0°C to 55°C
<b>Ordering Information</b>	9MTGU7BLMR-IA (Box packing)	9MTGU5ALMR-SI (Box packing)	9MTGU3ALMR-SI (Box packing)
<b>Built-in Components</b>	—	—	—

## SDM-L Series



SDM-L Series/SDM Docking Board Series

Model Name	SDM-7300L	SDM-7100L
<b>Dimensions</b>	SDM-Large, 175W x 100D (mm)	SDM-Large, 175W x 100D (mm)
<b>CPU</b>	Intel® Core™ i5-7300U Processor, 14nm, 2 cores, 4 threads, up to 3.5 GHz, vPro support	Intel® Core™ i3-7100U Processor, 14nm, 2 cores, 4 threads, 2.40 GHz
<b>VPro</b>	Intel® vPro™ Platform Eligibility	—
<b>Memory</b>	2 x DDR4 SO-DIMM sockets, Max. Capacity 32 GB, Support Dual Channel DDR4 2133 MHz	2 x DDR4 SO-DIMM sockets, Max. Capacity 32 GB, Support Dual Channel DDR4 2133 MHz
<b>Ethernet</b>	1 x GbE LAN Port (Intel® I219LM)	1 x GbE LAN Port (Intel® I219V)
<b>Graphic</b>	Integrated Graphics Processor - Intel® HD Graphics 620: 1 x HDMI 2.0 (SDM), 1 x Display Port (Rear/SDM) 2 independent display outputs	Integrated Graphics Processor - Intel® HD Graphics 620: 1 x HDMI 2.0 (SDM), 1 x Display Port (Rear/SDM) 2 independent display outputs
<b>Audio</b>	Intel® Integrated Audio	Intel® Integrated Audio
<b>Storage</b>	—	—
<b>Expansion Slots</b>	1 x 2280 M.2 M-Key (PCIe x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0)	1 x 2280 M.2 M-Key (PCIe x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0)
<b>Internal I/O</b>	—	—
<b>Rear I/O</b>	1 x Display Port 1 x RJ45 LAN Port 4 x USB 3.2 Gen 1 1 x Power/ HDD LED 2 x External Antenna Holes (Optional) 1 x Reset button 1 x Power button	1 x Display Port 1 x RJ45 LAN Port 4 x USB 3.2 Gen 1 1 x Power/ HDD LED 2 x External Antenna Holes (Optional) 1 x Reset button 1 x Power button
<b>TPM</b>	1 x TPM header	1 x TPM header
<b>Operating Temp.</b>	0°C to 55°C	0°C to 55°C
<b>Ordering Information</b>	9MFLP5ALMR-SI (Box packing)	9MFLP3ALMR-SI (Box packing)
<b>Built-in Components</b>	—	—



## SDM Docking Board Series



Model Name	CIBPT	CIBPX
<b>Dimensions</b>	227W x 49D (mm)	190W x 54.7D (mm)
<b>Support model</b>	Support SDM module as follows. SDM-1135G7L SDM-1115G4L SDM-7300L – Intel vPro support SDM-7100L SDM-4000L SDM-3350L-QV SDM-3350L-HW	Support SDM module as follows. SDM-1185G7EL
<b>CPU</b>	—	—
<b>VPro</b>	—	—
<b>Memory</b>	—	—
<b>Ethernet</b>	—	—
<b>Graphic</b>	—	—
<b>Audio</b>	—	—
<b>Storage</b>	—	—
<b>Expansion Slots</b>	1 x PCIe x8 slot for SDM-L module 1 x Full-size Mini PCIe (PCIe only)	1 x PCIe x8 slot for SDM-L module 1 x Full-size Mini PCIe (PCIe only)
<b>Internal I/O</b>	2 x I2C 1 x GPIO 1 x UART (TX, RX only)	2 x I2C 1 x GPIO 1 x UART (TX, RX only)
<b>Rear I/O</b>	1 x USB 3.2 Gen 1 1 x Display Port 1 x HDMI 1 x DC-Jack 1 x 2x2 Power connector	1 x USB 3.2 Gen 2x1 2 x HDMI 1 x DC-Jack 1 x 2x2 Power connector
<b>TPM</b>	—	—
<b>Operating Temp.</b>	0°C to 60°C	0°C to 60°C
<b>Ordering Information</b>	—	—
<b>Built-in Components</b>	—	—

## ATX Series

New



ATX Series/ Micro-ATX Series

Model Name	ATX-Q670A
<b>CPU</b>	Support for 13th/12th Generation Intel® Core™ i9/i7/i5/i3, Pentium® & Celeron® processors
<b>Socket</b>	LGA 1700
<b>Chipset</b>	Intel® Q670 Chipset
<b>Memory</b>	4 x DDR4 DIMM sockets, Max. Capacity 128 GB, Support Dual Channel DDR4 3200MHz
<b>Ethernet</b>	2 x 2.5GbE LAN Ports (Intel® I226LM and Intel® I226V)
<b>Graphic</b>	Integrated Graphics Processor - depends on CPU: 2 x HDMI 2.0 1 x DP 1.4b 1 x VGA 4 independent display outputs
<b>Audio</b>	Realtek® Audio Codec
<b>Storage</b>	4 x SATA 6Gb/s Ports (RAID 0/1/5/10) 1 x PCIe x16 (Gen 4x16)(PCIEX16_1) * The PCIEX16_1 slot shares bandwidth with the PCIEX16_2 slot. * The PCIEX16_1 slot operates at up to x8 mode when a device is installed in the PCIEX16_2 slot. 1 x PCIe x16 (Gen 4x8)(PCIEX16_2)
<b>Expansion Slots</b>	3 x PCIe x4 (Gen 3x4) 2 x PCI 1 x 2280/2242 M.2 M-Key (PCIe Gen3x4, SATA 6Gb/s)(M2M_1) 1 x 2280/2242 M.2 M-Key (PCIe Gen3x4)(M2M_2) 1 x 2230 M.2 E-Key
<b>Internal I/O</b>	1 x 24-pin ATX main power connector 1 x 8-pin ATX 12V power connector 1 x CPU fan header 2 x System fan headers 1 x Front panel header 1 x Front panel audio header 4 x USB 2.0 headers 2 x USB 3.2 Gen 1 headers 1 x COM header (RS-232/422/485 & RI/5V/12V) 4 x COM headers (RS-232) 1 x GPIO (8 bits) & SMBus header 1 x Clear CMOS jumper 1 x Buzzer 1 x AT/ATX mode select jumper
<b>Rear I/O</b>	3 x Audio Jacks (Line in, Line out, Mic in) 1 x COM Port (RS-232/422/485 & RI/5V/12V) 2 x HDMI 1 x Display Port 1 x VGA 2 x RJ45 LAN Ports 4 x USB 3.2 Gen 1
<b>TPM</b>	Onboard TPM 2.0 security chip INFINEON SLB9670VQ2.0
<b>Operating Temp.</b>	0°C to 60°C
<b>Ordering Information</b>	9MQ670AXMR-SI (Box packing)

## Micro-ATX Series



Model Name	uATX-Q670A	uATX-H610A
<b>CPU</b>	Support for 13th/12th Generation Intel® Core™ i9/i7/i5/i3, Pentium® & Celeron® processors	Support for 13th/12th Generation Intel® Core™ i9/i7/i5/i3, Pentium® & Celeron® processors
<b>Socket</b>	LGA 1700	LGA 1700
<b>Chipset</b>	Intel® Q670 Chipset	Intel® H610 Chipset
<b>Memory</b>	4 x DDR4 DIMM sockets, Max. Capacity 128 GB, Support Dual Channel DDR4 3200MHz	2 x DDR4 DIMM sockets, Max. Capacity 64 GB, Support Dual Channel DDR4 3200MHz
<b>Ethernet</b>	1 x GbE LAN Port (Intel® I219LM) 1 x 2.5GbE LAN Port (Intel® I226V)	1 x GbE LAN Port (Intel® I219V) 1 x 2.5GbE LAN Port (Intel® I226V)
<b>Graphic</b>	Integrated Graphics Processor - depends on CPU: 2 x HDMI 2.0, 1 x DP 1.4, 1 x VGA, 1 x LVDS 4 independent display outputs	Integrated Graphics Processor - depends on CPU: 2 x HDMI 2.0, 1 x DP 1.4, 1 x VGA, 1 x LVDS 3 independent display outputs
<b>Audio</b>	Realtek® Audio Codec	Realtek® Audio Codec
<b>Storage</b>	6 x SATA 6Gb/s Ports (RAID 0/1/5/10)	4 x SATA 6Gb/s Ports
<b>Expansion Slots</b>	1 x PCIe x16 (Gen 4x16)(PCIEX16_A) * The PCIEX16_A slot shares bandwidth with the PCIEX16_B slot. * The PCIEX16_A slot operates at up to x8 mode when a device is installed in the PCIEX16_B slot. 1 x PCIe x16 (Gen 4x8)(PCIEX16_B) 1 x PCIe x4 (Gen3 x4) 1 x PCIe x1 (Gen3 x1) 1 x 2280/2242 M.2 M-Key (PCIe Gen4x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0)	1 x PCIe x16 (Gen4 x16) 1 x PCIe x4 (Gen3 x4) 1 x PCIe x1 (Gen3 x1) 1 x 2280/2242 M.2 M-Key (SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0)
<b>Internal I/O</b>	1 x 24-pin ATX main power connector 1 x 8-pin ATX 12V power connector 1 x CPU fan header 1 x System fan header 1 x Front panel header 1 x Front panel audio header 6 x USB 2.0 headers 2 x USB 3.2 Gen 1 headers 3 x COM headers (RS-232) 1 x GPIO (8 bits) & SMBus header 1 x Backlight Control header 1 x Clear CMOS jumper 1 x Buzzer 1 x AT/ATX mode select jumper 1 x Case open header	1 x 24-pin ATX main power connector 1 x 8-pin ATX 12V power connector 1 x CPU fan header 1 x System fan header 1 x Front panel header 1 x Front panel audio header 4 x USB 2.0 headers 3 x COM headers (RS-232) 1 x GPIO (8 bits) & SMBus header 1 x Backlight Control header 1 x Clear CMOS jumper 1 x Buzzer 1 x AT/ATX mode select jumper 1 x Case open header
<b>Rear I/O</b>	3 x Audio Jacks (Line in, Line out, Mic in) 2 x HDMI 1 x DisplayPort 1 x VGA 1 x COM Port (RS-232/422/485 & RI/5V/12V) 2 x RJ45 LAN Ports 2 x USB 3.2 Gen 2x1 2 x USB 3.2 Gen 1	3 x Audio Jacks (Line in, Line out, Mic in) 2 x HDMI 1 x DisplayPort 1 x VGA 1 x COM Port (RS-232/422/485 & RI/5V/12V) 2 x RJ45 LAN Ports 2 x USB 3.2 Gen 2x1 2 x USB 3.2 Gen 1
<b>TPM</b>	1 x TPM header	1 x TPM header
<b>Operating Temp.</b>	0°C to 60°C	0°C to 60°C
<b>Ordering Information</b>	9MQ670AMMR-SI (Box packing)	9MH610AMMR-SI (Box packing)

## Micro-ATX Series



Micro-ATX Series

Model Name	uATX-W48EA	uATX-Q47EA	uATX-H410A
<b>CPU</b>	Support for 11th/10th Generation Intel® Xeon® W-1200 series, Core™ i3, Pentium® & Celeron® processors	Support for 11th/10th Generation Intel® Core™ i9/i7/i5/i3, Pentium® & Celeron® processors	Support for 10th Generation Intel® Core™ i9/i7/i5/i3, Pentium® & Celeron® processors
<b>Socket</b>	LGA 1200	LGA 1200	LGA 1200
<b>Chipset</b>	Intel® W480E Chipset	Intel® Q470E Chipset	Intel® H410 Chipset
<b>Memory</b>	4 x DDR4 DIMM sockets, Max. Capacity 128 GB, Support Dual Channel DDR4 2933/2666 MHz	4 x DDR4 DIMM sockets, Max. Capacity 128 GB, Support Dual Channel DDR4 2933/2666 MHz	2 x DDR4 DIMM sockets, Max. Capacity 64 GB, Support Dual Channel DDR4 2933/2666 MHz
<b>Ethernet</b>	4 x GbE LAN Ports (Intel® I219LM and Intel® I211AT)	4 x GbE LAN Ports (Intel® I219LM and Intel® I211AT)	2 x GbE LAN Ports (Intel® I219V and Realtek® RTL8111HS)
<b>Graphic</b>	Integrated Graphics Processor - depends on CPU: 1 x HDMI 1.4, 1 x DP, 1 x VGA, 1 x LVDS 3 independent display outputs	Integrated Graphics Processor - depends on CPU: 1 x HDMI 1.4, 1 x DP, 1 x VGA, 1 x LVDS 3 independent display outputs	Integrated Graphics Processor - depends on CPU: 1 x HDMI 1.4, 1 x DVI-D, 1 x VGA 2 independent display outputs
<b>Audio</b>	Realtek® Audio Codec	Realtek® Audio Codec	Realtek® Audio Codec
<b>Storage</b>	6 x SATA 6Gb/s Ports (RAID 0/1/5/10)	4 x SATA 6Gb/s Ports (RAID 0/1/5/10)	4 x SATA 6Gb/s Ports
<b>Expansion Slots</b>	1 x PCIe x16 (Gen 3x16)(PCIEX16_A) * The PCIEX16_A slot shares bandwidth with the PCIEX16_B slot. * The PCIEX16_A slot operates at up to x8 mode when a device is installed in the PCIEX16_B slot. 1 x PCIe x16 (Gen 3x8)(PCIEX16_B) 1 x PCIe x4 (Gen3 x4) 1 x PCIe x1 (Gen3 x1) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0) 1 x 2280/2242 M.2 M-Key (PCIe x4, SATA 6Gb/s)	1 x PCIe x16 (Gen 3x16)(PCIEX16_A) * The PCIEX16_A slot shares bandwidth with the PCIEX16_B slot. * The PCIEX16_A slot operates at up to x8 mode when a device is installed in the PCIEX16_B slot. 1 x PCIe x16 (Gen 3x8)(PCIEX16_B) 1 x PCIe x4 (Gen3 x4) 1 x PCIe x1 (Gen3 x1) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0) 1 x 2280/2242 M.2 M-Key (PCIe x4, SATA 6Gb/s)	1 x PCIe x16 (Gen3 x16) 1 x PCIe x4 (Gen3 x2) 2 x PCIe x1 (Gen3 x1)
<b>Internal I/O</b>	1 x 24-pin ATX main power connector 1 x 8-pin ATX 12V power connector 1 x CPU fan header 1 x System fan header 1 x Front panel header 1 x Front panel audio header 1 x VGA header 1 x Backlight Control header 1 x AT/ATX mode select jumper 4 x USB 2.0 headers 1 x COM header (RS-232/422/485 & RI/5V/12V) 1 x COM header (RS-232 & RI/5V/12V) 2 x COM headers (RS-232) 1 x GPIO (8 bits) & SMBus header 1 x Buzzer 1 x Clear CMOS jumper	1 x 24-pin ATX main power connector 1 x 8-pin ATX 12V power connector 1 x CPU fan header 1 x System fan header 1 x Front panel header 1 x Front panel audio header 1 x VGA header 1 x Backlight Control header 1 x AT/ATX mode select jumper 4 x USB 2.0 headers 1 x COM header (RS-232/422/485 & RI/5V/12V) 1 x COM header (RS-232 & RI/5V/12V) 2 x COM headers (RS-232) 1 x GPIO (8 bits) & SMBus header 1 x Buzzer 1 x Clear CMOS jumper	1 x 24-pin ATX main power connector 1 x 8-pin ATX 12V power connector 1 x CPU fan header 2 x System fan headers 1 x Front panel header 1 x Front panel audio header 4 x USB 2.0 headers 3 x COM headers (RS-232) 1 x Clear CMOS jumper 1 x Buzzer 1 x Case open header
<b>Rear I/O</b>	1 x HDMI 1 x Display Port 4 x RJ45 LAN Ports 8 x USB 3.2 Gen 1, 4 x USB 2.0	1 x HDMI 1 x Display Port 4 x RJ45 LAN Ports 8 x USB 3.2 Gen 1, 4 x USB 2.0	3 x Audio Jacks (Line in, Line out, Mic in) 1 x COM Port (RS-232) 1 x HDMI, 1 x DVI-D, 1 x VGA 2 x RJ45 LAN Ports, 4 x USB 3.2 Gen 1
<b>TPM</b>	1 x TPM header	1 x TPM header	Onboard TPM 2.0 security chip INFINEON SLB9670VQ2.0
<b>Operating Temp.</b>	0°C to 60°C	0°C to 60°C	0°C to 60°C
<b>Ordering Information</b>	9MW48EAMMR-SI (Box packing)	9MQ47EAMMR-SI (Box packing)	9MH410AMNR-SI (Bulk packing)

## Micro-ATX Series



Model Name	uATX-Q370A	uATX-H310A	uATX-RYZEN
<b>CPU</b>	Support for 9th/8th Generation Intel® Core™ i7/i5/i3, Pentium® & Celeron® processors	Support for 9th/8th Generation Intel® Core™ i7/i5/i3, Pentium® & Celeron® processors	Support AMD® RYZEN™ 2 7'5'3 CPU AM4 μPGA (Matisse/ Picasso/ Raven2/ Pinnacle/ Raven/Summit Ridge)
<b>Socket</b>	LGA 1151	LGA 1151	Socket AM4
<b>Chipset</b>	Intel® Q370 Chipset	Intel® H310 Chipset	AMD® B450
<b>Memory</b>	4 x DDR4 DIMM sockets, Max. Capacity 64 GB, Support Dual Channel DDR4 2666/2400 MHz	2 x DDR4 DIMM sockets, Max. Capacity 32 GB, Support Dual Channel DDR4 2666/2400 MHz	4 x DDR4 DIMM sockets, Max. Capacity 64 GB, Support Dual Channel DDR4 2666/2400/2133 MHz
<b>Ethernet</b>	2 x GbE LAN Ports (Intel® I219V and Realtek® RTL8111HS)	2 x GbE LAN Ports (Intel® I219V and Realtek® RTL8111HS)	2 x GbE LAN Ports (Realtek® RTL8111HS)
<b>Graphic</b>	Integrated Graphics Processor - depends on CPU: 1 x HDMI 1.4, 1 x DVI-D, 1 x VGA 3 independent display outputs	Integrated Graphics Processor - depends on CPU: 1 x HDMI 1.4 1 x DVI-D 1 x VGA 2 independent display outputs	Integrated Graphics Processor - Radeon™ Vega 11/ 8/ 3/ Graphics 1 x HDMI 1.4 1 x Display Port 1 x VGA 3 independent display outputs
<b>Audio</b>	Realtek® Audio Codec	Realtek® Audio Codec	Realtek® Audio Codec
<b>Storage</b>	6 x SATA 6Gb/s Ports (RAID 0/1/5/10)	4 x SATA 6Gb/s Ports	4 x SATA 6Gb/s Ports (RAID 0/1/10)
<b>Expansion Slots</b>	1 x PCIe x16 (Gen3 x16) 1 x PCIe x4 (Gen3 x4) 2 x PCIe x1 (Gen3 x1) 1 x 2280/2260 M.2 M-Key (PCIe x4)	1 x PCIe x16 (Gen3 x16) 1 x PCIe x4 (Gen2 x2) 2 x PCIe x1 (Gen2 x1)	1 x PCIe x16 (Gen3 x16) 1 x PCIe x4 (Gen2 x2) 2 x PCIe x1 (Gen2 x1) 1 x 2280/2260/2242 M.2 M-Key (PCIe x4, SATA 6Gb/s)
<b>Internal I/O</b>	1 x 24-pin ATX main power connector 1 x 8-pin ATX 12V power connector 1 x CPU fan header 2 x System fan headers 1 x Front panel header 1 x Front panel audio header 4 x USB 2.0 headers 2 x USB 3.2 Gen 1 headers 3 x COM headers (RS-232) 1 x Clear CMOS jumper 1 x Buzzer 1 x AT/ATX mode select jumper	1 x 24-pin ATX main power connector 1 x 8-pin ATX 12V power connector 1 x CPU fan header 2 x System fan headers 1 x Front panel header 1 x Front panel audio header 4 x USB 2.0 headers 3 x COM headers (RS-232) 1 x Clear CMOS jumper 1 x Buzzer	1 x 24-pin ATX main power connector 1 x 4-pin ATX 12V power connector 1 x CPU fan header 2 x System fan headers 1 x Front panel header 1 x Front audio header 1 x 2W Speaker out header 4 x USB 2.0 headers 2 x USB 3.2 Gen 1 headers 5 x COM headers (RS-232) 1 x PS/2 Keyboard/ Mouse Connector 1 x GPIO (8 bits) & SMBus header 1 x Clear CMOS jumper 1 x Buzzer 1 x AT/ATX mode select jumper
<b>Rear I/O</b>	3 x Audio Jacks (Line in, Line out, Mic in) 1 x COM Port (RS-232) 1 x HDMI 1 x DVI-D 1 x VGA 2 x RJ45 LAN Ports 3 x USB 3.2 Gen 1 1 x USB 3.2 Gen 2x1	3 x Audio Jacks (Line in, Line out, Mic in) 1 x COM Port (RS-232) 1 x HDMI 1 x DVI-D 1 x VGA 2 x RJ45 LAN Ports 4 x USB 3.2 Gen 1	3 x Audio Jacks (Line in, Line out, Mic in) 1 x COM Port (RS-232/422/485 & RI/5V/12V) 1 x HDMI 1 x Display Port 1 x VGA 2 x RJ45 LAN Ports 4 x USB 3.2 Gen 1 1 x USB 3.2 Gen 2x1 1 x USB 3.2 Gen 2x1 (Type C)
<b>TPM</b>	Onboard TPM 2.0 security chip INFINEON SLB9665VQ2.0	Onboard TPM 2.0 security chip INFINEON SLB9665VQ2.0	1 x TPM header
<b>Operating Temp.</b>	0°C to 60°C	0°C to 60°C	0°C to 60°C
<b>Ordering Information</b>	9MQ370AMNR-SI (Bulk packing)	9MCH31AMNR-SI (Bulk packing)	9MZRYZBMNR-SI (Bulk packing)



## Mini-ITX Series



Model Name	mITX-Q670A	mITX-H610A	mITX-Q67EB
<b>CPU</b>	Support for 13th/12th Generation Intel® Core™ i9/i7/i5/i3, Pentium® and Celeron® processors	Support for 13th/12th Generation Intel® Core™ i9/i7/i5/i3, Pentium® and Celeron® processors	Support for 13th/12th Generation Intel® Core™ i9/i7/i5/i3, Pentium® and Celeron® processors
<b>Socket</b>	LGA 1700	LGA 1700	LGA 1700
<b>Chipset</b>	Intel® Q670 Chipset	Intel® H610 Chipset	Intel® Q670E Chipset
<b>Memory</b>	2 x DDR4 SO-DIMM sockets, Max. Capacity 64 GB, Support Dual Channel DDR4 3200 MHz	2 x DDR4 SO-DIMM sockets, Max. Capacity 64 GB, Support Dual Channel DDR4 3200 MHz	2 x DDR4 SO-DIMM sockets, Max. Capacity 64 GB, Support Dual Channel DDR4 3200 MHz
<b>Ethernet</b>	1 x GbE LAN Port (Intel® I219LM) 1 x 2.5GbE LAN Port (Intel® I226V)	1 x GbE LAN Port (Intel® I219V) 1 x 2.5GbE LAN Port (Intel® I226V)	1 x GbE LAN Port (Intel® I219LM) 1 x 2.5GbE LAN Port (Intel® I226V)
<b>Graphic</b>	Integrated Graphics Processor - depends on CPU: 1 x HDMI 2.0 1 x Display Port 1 x VGA 1 x LVDS 4 independent display outputs	Integrated Graphics Processor - depends on CPU: 1 x HDMI 2.0 1 x Display Port 1 x VGA 1 x LVDS 3 independent display outputs	Integrated Graphics Processor - depends on CPU: 1 x HDMI 2.0 1 x Display Port 1 x VGA 3 independent display outputs
<b>Audio</b>	Realtek® Audio Codec	Realtek® Audio Codec	Realtek® Audio Codec
<b>Storage</b>	2 x SATA 6Gb/s Ports (RAID 0/1)	2 x SATA 6Gb/s Ports	4 x SATA 6Gb/s Ports (RAID 0/1/5/10)
<b>Expansion Slots</b>	1 x PCIe x16 (Gen4 x16) 1 x 2280 M.2 M-Key (PCIe x4) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0)	1 x PCIe x16 (Gen4 x16) 1 x 2280 M.2 M-Key (PCIe x4) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0)	1 x PCIe x16 (Gen4 x16) 1 x 2280 M.2 M-Key (PCIe x4) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0)
<b>Internal I/O</b>	1 x 4-pin ATX main power connector 2 x SATA power connectors 1 x CPU fan header 1 x System fan header 1 x Front panel header 1 x Front panel audio header 1 x 2W Speaker out header 6 x USB 2.0 headers 1 x COM header (RS-232) 1 x GPIO (8 bits) & SMBus header 1 x Backlight Control header 1 x Clear CMOS jumper 1 x Buzzer header 1 x AT/ATX mode select jumper	1 x 4-pin ATX main power connector 2 x SATA power connectors 1 x CPU fan header 1 x System fan header 1 x Front panel header 1 x Front panel audio header 1 x 2W Speaker out header 4 x USB 2.0 headers 1 x COM header (RS-232) 1 x GPIO (8 bits) & SMBus header 1 x Backlight Control header 1 x Clear CMOS jumper 1 x Buzzer header 1 x AT/ATX mode select jumper	1 x 24-pin ATX main power connector 1 x 8-pin ATX 12V power connector 1 x CPU fan header 1 x System fan header 1 x Front panel header 1 x Front panel audio header 1 x 2W Speaker out header 6 x USB 2.0 headers 1 x COM header (RS-232) 1 x GPIO (8 bits) & SMBus header 1 x Clear CMOS jumper 1 x Buzzer 1 x AT/ATX mode select jumper
<b>Rear I/O</b>	2 x Audio Jacks (Line out, Mic in) 1 x COM Port (RS-232/422/485 & RI/5V/12V) 1 x HDMI 1 x Display Port 1 x VGA 2 x RJ45 LAN Ports 4 x USB 3.2 Gen 1 1 x DC Jack (+12V/+19V~+24VDC)	2 x Audio Jacks (Line out, Mic in) 1 x COM Port (RS-232/422/485 & RI/5V/12V) 1 x HDMI 1 x Display Port 1 x VGA 2 x RJ45 LAN Ports 4 x USB 3.2 Gen 1 1 x DC Jack (+12V/+19V~+24VDC)	2 x Audio Jacks (Line out, Mic in) 1 x COM Port (RS-232/422/485 & RI/5V/12V) 1 x HDMI 1 x DisplayPort 1 x VGA 2 x RJ45 LAN Ports 4 x USB 3.2 Gen 1
<b>TPM</b>	1 x TPM header	1 x TPM header	1 x TPM header
<b>Operating Temp.</b>	0°C to 60°C	0°C to 60°C	0°C to 60°C
<b>Ordering Information</b>	9MQ670AIMR-SI (Box packing)	9MH610AIMR-SI (Box packing)	9MQ67EBIMR-SI (Box packing)

## Mini-ITX Series



New



Model Name	mITX-H61EC	mITX-H610E
<b>CPU</b>	Support for 13th/12th Generation Intel® Core™ i9/i7/i5/i3, Pentium® and Celeron® processors	Support for 13th/12th Generation Intel® Core™ i9/i7/i5/i3, Pentium® and Celeron® processors
<b>Socket</b>	LGA 1700	LGA 1700
<b>Chipset</b>	Intel® H610E Chipset	Intel® H610 Chipset
<b>Memory</b>	2 x DDR4 SO-DIMM sockets, Max. Capacity 64 GB, Support Dual Channel DDR4 3200 MHz	2 x DDR5 SO-DIMM sockets, Max. Capacity 64 GB Support Dual channel DDR5 4800 MHz
<b>Ethernet</b>	6 x 2.5GbE LAN Ports (Intel® I226V)	1 x GbE LAN Port (Intel® I219V) 1 x 2.5GbE LAN Port (Intel® I226V)
<b>Graphic</b>	Integrated Graphics Processor - depends on CPU: 1 x HDMI 2.0 1 x VGA 2 independent display outputs	Integrated Graphics Processor - depends on CPU: 1 x HDMI 2.0 1 x DP 1 x VGA 1 x LVDS 3 independent display outputs
<b>Audio</b>	Realtek® Audio Codec	Realtek® Audio Codec
<b>Storage</b>	2 x SATA 6Gb/s Ports	2 x SATA 6Gb/s Ports
<b>Expansion Slots</b>	1 x PCIe x16 (Gen4 x16) 1 x 2280 M.2 M-Key (SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0)	1 x PCIe x16 (Gen 3x16) 1 x 2280 M.2 M-Key (PCIe Gen3x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key
<b>Internal I/O</b>	1 x 4-pin ATX main power connector 1 x SATA power connector 1 x CPU fan header 1 x System fan header 1 x Front panel header 1 x Front panel audio header 4 x USB 2.0 headers 1 x COM header (RS-232/422/485 & RI/5V/12V) 1 x COM header (RS-232) 1 x GPIO (8 bits) & SMBus header 1 x Clear CMOS jumper 1 x Buzzer header 1 x AT/ATX mode select jumper	1 x 24-pin ATX main power connector 1 x 8-pin ATX 12V power connector 1 x CPU fan header 1 x System fan header 1 x Front panel header 1 x Front panel audio header 1 x 2W speaker out header (3W optional) 4 x USB 2.0 headers 1 x COM header (RS-232/422/485) 4 x COM headers (RS-232) 1 x GPIO (8 bits) & SMBus header 1 x Backlight control header 1 x Clear CMOS jumper 1 x Buzzer 1 x AT/ATX mode select jumper
<b>Rear I/O</b>	2 x Audio Jacks ( Line out, Mic in) 1 x HDMI 1 x VGA 6 x RJ45 LAN Ports 4 x USB 3.2 Gen 1 1 x DC Jack (+12V/+19V/+24VDC)	2 x Audio Jacks (Line out, Mic in) 1 x COM Port (RS-232/422/485 & RI/5V/12V) 1 x HDMI 1 x Display port 1 x VGA 2 x RJ45 LAN Ports 4 x USB 3.2 Gen 1
<b>TPM</b>	Onboard TPM 2.0 security chip Infineon SLB9670VQ2.0	Onboard TPM 2.0 security chip Infineon SLB9670VQ2.0
<b>Operating Temp.</b>	0°C to 60°C	0°C to 60°C
<b>Ordering Information</b>	9MH61ECIMR-SI (Box packing)	9MH610EIMR-SI (Box packing)

## Mini-ITX Series



Mini-ITX Series

Model Name	mITX-Q47EA	mITX-H42EA	mITX-Q370A
<b>CPU</b>	Support for 10th Generation Intel® Core™ i9/i7/i5/i3, Pentium® & Celeron® processors	Support for 10th Generation Intel® Core™ i9/i7/i5/i3, Pentium® & Celeron® processors	Support for 9th/8th Generation Intel® Core™ i7/i5/i3, Pentium® & Celeron® processors
<b>Socket</b>	LGA 1200	LGA 1200	LGA 1151
<b>Chipset</b>	Intel® Q470E Chipset	Intel® H420E Chipset	Intel® Q370 Chipset
<b>Memory</b>	2 x DDR4 SO-DIMM sockets, Max. Capacity 64 GB, Support Dual Channel DDR4 2933/2666 MHz	2 x DDR4 SO-DIMM sockets, Max. Capacity 64 GB, Support Dual Channel DDR4 2933/2666 MHz	2 x DDR4 SO-DIMM sockets, Max. Capacity 32 GB, Support Dual Channel DDR4 2666/2400 MHz
<b>Ethernet</b>	2 x GbE LAN Ports (Intel® I219LM and Intel® I211AT)	2 x GbE LAN Ports (Intel® I219V and Intel® I211AT)	2 x GbE LAN Ports (Intel® I219LM and Intel® I211AT)
<b>Graphic</b>	Integrated Graphics Processor - depends on CPU: 1 x HDMI 2.0 1 x Display Port 1 x VGA 1 x LVDS or eDP 3 independent display outputs	Integrated Graphics Processor - depends on CPU: 1 x HDMI 2.0 1 x Display Port 1 x VGA 1 x LVDS or eDP 2 independent display outputs	Integrated Graphics Processor - depends on CPU: 1 x HDMI 1.4 1 x Display Port 1 x VGA, 1 x eDP 3 independent display outputs
<b>Audio</b>	Realtek® Audio Codec	Realtek® Audio Codec	Realtek® Audio Codec
<b>Storage</b>	3 x SATA 6Gb/s Ports (RAID 0/1/5/10)	3 x SATA 6Gb/s Ports	3 x SATA 6Gb/s Ports (RAID 0/1/5/10)
<b>Expansion Slots</b>	1 x PCIe x16 (Gen3 x16) 1 x 2280/2242 M.2 M-Key (PCIe x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0)	1 x PCIe x16 (Gen3 x16) 1 x 2280/2242 M.2 M-Key (PCIe x2) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0)	1 x PCIe x16 (Gen3 x16) 1 x 2280/2242 M.2 M-Key (PCIe x4, SATA 6Gb/s, Optane memory) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0)
<b>Internal I/O</b>	1 x 4-pin ATX main power connector 2 x SATA power connectors 1 x CPU fan header 1 x System fan header 1 x Front panel header 1 x Front panel audio header 1 x 2W Speaker out header 4 x USB 2.0 headers 2 x USB 3.2 Gen 1 headers 1 x COM header (RS-232) 1 x Clear CMOS jumper 1 x GPIO (8 bits) & SMBus header 1 x Backlight Control header 1 x Buzzer 1 x ATX Control header 1 x AT/ATX mode select jumper	1 x 4-pin ATX main power connector 2 x SATA power connectors 1 x CPU fan header 1 x System fan header 1 x Front panel header 1 x Front panel audio header 1 x 2W Speaker out header 3 x USB 2.0 headers 2 x USB 3.2 Gen 1 headers 1 x COM header (RS-232) 1 x Clear CMOS jumper 1 x GPIO (8 bits) & SMBus header 1 x Backlight Control header 1 x Buzzer 1 x ATX Control header 1 x AT/ATX mode select jumper	1 x 4-pin ATX main power connector 2 x SATA power connectors 1 x CPU fan header 1 x System fan header 1 x Front panel header 1 x Front panel audio header 1 x 2W Speaker out header 4 x USB 2.0 headers 2 x USB 3.2 Gen 1 headers 1 x COM header (RS-232) 1 x GPIO (8-bits) & SMBus header 1 x Backlight Control header 1 x Clear CMOS jumper 1 x Buzzer 1 x Case open header 1 x AT/ATX mode select jumper
<b>Rear I/O</b>	2 x Audio Jacks (Line out, Mic in) 1 x COM Port (RS-232/422/485 & RI/5V/12V) 1 x HDMI 1 x Display Port 1 x VGA 2 x RJ45 LAN Ports 3 x USB 3.2 Gen 1 1 x USB 3.2 Gen 2x1 1 x DC Jack (+12V/+19V~+24VDC)	2 x Audio Jacks (Line out, Mic in) 1 x COM Port (RS-232/422/485 & RI/5V/12V) 1 x HDMI 1 x Display Port 1 x VGA 2 x RJ45 LAN Ports 4 x USB 3.2 Gen 1 1 x DC Jack (+12V/+19V~+24VDC)	3 x Audio Jacks (Line in, Line out, Mic in) 1 x COM Port (RS-232/422/485 & RI/5V/12V) 1 x HDMI 1 x Display Port 1 x VGA 2 x RJ45 LAN Ports 3 x USB 3.2 Gen 1 1 x USB 3.2 Gen 2x1 1 x DC Jack (+12V/+19V/+24VDC)
<b>TPM</b>	1 x TPM header(LPC)	1 x TPM header	1 x TPM header
<b>Operating Temp.</b>	0°C to 60°C	0°C to 60°C	0°C to 60°C
<b>Ordering Information</b>	9MQ47EAIMR-SI (Box packing)	9MH42EAIMR-SI (Box packing)	9MCQ37AINR-SI (Bulk packing)

## Mini-ITX Series



Model Name	mITX-H310A	mITX-Q170A
<b>CPU</b>	Support for 9th/8th Generation Intel® Core™ i7/i5/i3, Pentium® & Celeron® processors	Support for 7th/6th Generation Intel® Core™ i7/i5/i3, Pentium® & Celeron® processors
<b>Socket</b>	LGA 1151	LGA 1151
<b>Chipset</b>	Intel® H310 Chipset	Intel® Q170 Chipset
<b>Memory</b>	2 x DDR4 SO-DIMM sockets, Max. Capacity 32 GB, Support Dual Channel DDR4 2666/2400 MHz	2 x DDR4 SO-DIMM sockets, Max. Capacity 32 GB, Support Dual Channel DDR4 2400/2133 MHz
<b>Ethernet</b>	2 x GbE LAN Ports (Intel® I219V and Intel® I211AT)	2 x GbE LAN Ports (Intel® I219LM and Intel® I211AT)
<b>Graphic</b>	Integrated Graphics Processor - depends on CPU: 1 x HDMI 1.4 1 x Display Port 1 x VGA, 1 x LVDS or eDP 2 independent display outputs	Integrated Graphics Processor - depends on CPU: 1 x HDMI 1.4 1 x Display Port 1 x LVDS or eDP 3 independent display outputs
<b>Audio</b>	Realtek® Audio Codec	Realtek® Audio Codec
<b>Storage</b>	2 x SATA 6Gb/s Ports	3 x SATA 6Gb/s Ports (RAID 0/1/5/10) (incl. 1 x SATA supports SATA DOM)
<b>Expansion Slots</b>	1 x PCIe x16 (Gen3 x16) 1 x 2280/2242 M.2 M-Key (SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0)	1 x PCIe x16 (Gen3 x16) 1 x 2280/2242 M.2 M-Key (PCIe x4, SATA 6Gb/s) 1 x Full-size Mini PCIe/mSATA
<b>Internal I/O</b>	1 x 4-pin ATX main power connector 1 x SATA power connector 1 x CPU fan header 1 x System fan header 1 x Front panel header 1 x Front panel audio header 1 x 2W Speaker out header 4 x USB 2.0 headers 2 x COM headers (RS-232) 1 x COM header (RS-232/422/485 & RI/5V/12V) 1 x GPIO (8-bits) & SMBus header 1 x Backlight Control header 1 x Clear CMOS jumper 1 x Buzzer 1 x ATX Control header 1 x AT/ATX mode select jumper	1 x 4-pin ATX main power connector 2 x SATA power connectors 1 x CPU fan header 1 x System fan header 1 x Front panel header 1 x Front panel audio header 1 x 2W Speaker out header 4 x USB 2.0 headers 2 x USB 3.2 Gen 1 headers 1 x COM header (RS-232/422/485 & RI/5V/12V) 1 x GPIO (8 bits) & SMBus header 1 x Backlight Control header 1 x Clear CMOS jumper 1 x Buzzer 1 x AT/ATX mode select jumper
<b>Rear I/O</b>	3 x Audio Jacks (Line in, Line out, Mic in) 1 x COM Port (RS-232/422/485 & RI/5V/12V) 1 x HDMI 1 x Display Port 1 x VGA 2 x RJ45 LAN Ports 4 x USB 3.2 Gen 1 1 x DC Jack (+12V/+19V/+24VDC)	3 x Audio Jacks (Line in, Line out, Mic in) 1 x COM Port (RS-232/422/485 & RI/5V/12V) 1 x HDMI 1 x Display Port 1 x VGA 2 x RJ45 LAN Ports 4 x USB 3.2 Gen 1 1 x DC Jack (+12V/+19V/+24VDC)
<b>TPM</b>	1 x TPM header	1 x TPM header
<b>Operating Temp.</b>	0°C to 60°C	0°C to 60°C
<b>Ordering Information</b>	9MH310AIMR-SI (Box packing)	9MDQ17BIMR-SI (Box packing)

## Mini-ITX Series



Model Name	mITX-6412A	mITX-4125A
<b>CPU</b>	Intel® Celeron® J6412 Processor, 10nm, 4 cores, 4 threads, up to 2.6 GHz, fan-less design	Intel® Celeron® J4125 Processor, 14nm, 4 cores, 4 threads, up to 2.7 GHz, fan-less design
<b>Socket</b>	FCBGA1493	FCBGA1090
<b>Chipset</b>	—	—
<b>Memory</b>	2 x DDR4 SO-DIMM sockets, Max. Capacity 32 GB, Support Dual Channel DDR4 3200 MHz	2 x DDR4 SO-DIMM sockets, Max. Capacity 8 GB, Support Dual Channel DDR4 2400 MHz
<b>Ethernet</b>	2 x GbE LAN Ports (Realtek® RTL8111H)	2 x GbE LAN Ports (Realtek® RTL8111HS)
<b>Graphic</b>	Integrated Graphics Processor - Intel® UHD Graphics for 10th Gen Intel® Processors: 1 x HDMI 2.0, 1 x VGA, 1 x LVDS or eDP 3 independent display outputs	Integrated Graphics Processor - Intel® UHD Graphics 600: 1 x HDMI 2.0, 1 x VGA, 1 x LVDS or eDP 3 independent display outputs
<b>Audio</b>	Realtek® Audio Codec	Realtek® Audio Codec
<b>Storage</b>	5 x SATA 6Gb/s Ports (4 x Asmedia ASM1064) (1 x supports SATA DOM)	5 x SATA 6Gb/s Ports (4 x Marvell 88SE9230, support RAID 0/1/10) (1 x supports SATA DOM)
<b>Expansion Slots</b>	1 x PCIe x1 (Gen3 x1) 1 x 2280 M.2 M-Key (SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0)	1 x PCIe x4 (Gen2 x2) 1 x 2280/2260/2242 M.2 M-Key (SATA 6Gb/s) 1 x 2230 M.2 E-Key (CNVi cards only)
<b>Internal I/O</b>	1 x 4-pin ATX main power connector 3 x SATA power connectors 1 x CPU fan header 1 x System fan header 1 x Front panel header 1 x Front panel audio header 1 x 2W Speaker out header 4 x USB 2.0 headers 4 x COM headers (RS-232) 1 x GPIO (8 bits) & SMBus header 1 x Case open header 1 x AT/ATX mode select jumper 1 x Backlight Control header 1 x Buzzer 1 x ATX Control header 4 x SATA LED header	1 x 4-pin ATX main power connector 3 x SATA power connectors 1 x CPU fan header 1 x System fan header 1 x Front panel header 1 x Front panel audio header 1 x 2W Speaker out header 2 x USB 2.0 headers 2 x USB 3.2 Gen 1 headers 4 x COM headers (RS-232) 1 x GPIO (8 bits) & SMBus header 1 x Case open header 1 x AT/ATX mode select jumper 1 x Backlight Control header 1 x RAID LED header 2 x LAN LED headers 1 x Buzzer
<b>Rear I/O</b>	2 x Audio Jacks (Line out, Mic in) 2 x COM Ports (RS-232/422/485 & RI/5V/12V) 1 x HDMI 1 x VGA 2 x RJ45 LAN Ports 2 x USB 2.0 2 x USB 3.2 Gen 1 1 x DC Jack (+12V/ +19V~24VDC)	3 x Audio Jacks (Line in, Line out, Mic in) 2 x COM Ports (RS-232/422/485 & RI/5V/12V) 1 x HDMI 1 x VGA 2 x RJ45 LAN Ports 2 x USB 2.0 2 x USB 3.2 Gen 1 1 x DC Jack (+12VDC)
<b>TPM</b>	Onboard TPM 2.0 Infineon SLB9670V20	1 x TPM header
<b>Operating Temp.</b>	0°C to 60°C	0°C to 60°C
<b>Ordering Information</b>	9MEHLJAIMR (Box packing)	9MGMLJAINR-SI (Bulk packing)



## Mini-ITX Series



Model Name	mITX-1505A	mITX-2748A	mITX-1605A
<b>CPU</b>	AMD Ryzen™ R1505G Embedded Processor with Radeon™ Vega 3 Graphics 2 cores, 4 threads, 2.4GHz, up to 3.3GHz	AMD Ryzen™ V2748 Embedded Processor, 7nm, 8 cores, 16 threads, 2.9 GHz, up to 4.25GHz	AMD® Ryzen™ V1605B Embedded Processor, 14nm, 4 cores, 8 threads, 2.0 GHz, up to 3.6 GHz
<b>Socket</b>	FP5 BGA	FP6 BGA	FP5 BGA
<b>Chipset</b>	—	—	—
<b>Memory</b>	2 x DDR4 SO-DIMM sockets, Max. Capacity 32 GB, Support Dual channel DDR4 2400 MHz	2 x DDR4 SO-DIMM sockets, Max. Capacity 64 GB, Support Dual channel DDR4 3200 MHz	2 x DDR4 SO-DIMM sockets, Max. Capacity 32 GB, Support Dual Channel DDR4 2400 MHz
<b>Ethernet</b>	2 x GbE LAN Ports (Realtek® RTL8118-CG)	2 x GbE LAN Ports (Realtek® RTL8118-CG)	2 x GbE LAN Ports (Realtek® RTL8111HS)
<b>Graphic</b>	Integrated Graphics Processor - AMD Radeon™ Vega 8 Graphics: 2 x HDMI 2.0 1 x Display Port 3 independent display outputs	Integrated Graphics Processor - AMD Radeon™ Graphics: 4 x Display Ports 1 x LVDS port (switch from DP) 4 independent display outputs	Integrated Graphics Processor - AMD Radeon™ Vega 8 Graphics: 4 x Display Ports 1 x LVDS (switch from DP) 4 independent display outputs
<b>Audio</b>	Realtek® Audio Codec	Realtek® Audio Codec	Realtek® Audio Codec
<b>Storage</b>	2 x SATA 6Gb/s ports	1 x SATA 6Gb/s Port	1 x SATA 6Gb/s Port
<b>Expansion Slots</b>	1 x PCIe x16 (Gen3 x4) 1 x 2280 M.2 M-Key (SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0) 1 x Full-size Mini PCIe with SIM slot (PCIe x1, USB 2.0)	1 x PCIe x16 (Gen3 x8) 1 x 2280 M.2 M-Key (SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0) 1 x Full-size Mini PCIe with SIM slot	1 x PCIe x16 (Gen3 x8) 1 x 2280 M.2 M-Key (SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0) 1 x Full-size Mini PCIe with SIM slot
<b>Internal I/O</b>	1 x 4-pin ATX main power connector 2 x SATA power connectors 1 x CPU fan header 1 x System fan header 1 x Front panel header 1 x Front panel audio header 1 x 2W Speaker out header 1 x Chassis Intrusion detect header 4 x USB 2.0 headers 3 x COM headers (RS-232) 1 x ccTalk header 1 x GPIO (8 bits) & SMBus header 1 x Clear CMOS jumper 1 x AT/ATX mode select jumper	1 x 4-pin ATX power connector 1 x SATA power connector 1 x CPU fan header 1 x System fan header 1 x Front panel header 1 x Front panel audio header 1 x 2W Speaker out header 6 x USB 2.0 headers 2 x COM headers (RS-232/422/485) 1 x GPIO (8 bits) & SMBus header 1 x Backlight Control header 1 x LVDS/ DP Jumper 1 x AT/ATX mode select jumper 1 x ATX Control header 1 x Clear CMOS jumper	1 x 4-pin ATX power connector 1 x SATA power connector 1 x CPU fan header 1 x System fan header 1 x Front panel header 1 x Front panel audio header 1 x 2W Speaker out header 6 x USB 2.0 headers 2 x COM headers (RS-232) 1 x GPIO (8 bits) & SMBus header 1 x Backlight Control header 1 x LVDS/ DP jumper 1 x AT/ATX mode select jumper 1 x Clear CMOS jumper
<b>Rear I/O</b>	2 x Audio Jacks (Line out, Mic in) 2 x COM Ports (RS-232) 2 x HDMI 1 x Display Port 2 x RJ45 LAN Ports 4 x USB 3.2 Gen 1 1 x DC Jack (+12V~+24VDC)	2 x Audio Jacks (Line out, Mic in) 2 x COM Ports (RS-232/422/485 & RI/5V/12V) 4 x Display Ports 2 x RJ45 LAN Ports 4 x USB 3.2 Gen 1 1 x DC Jack (+12V~+24VDC)	3 x Audio Jacks (Line in, Line out, Mic in) 2 x COM Ports (RS-232/422/485 & RI/5V/12V) 4 x Display Ports 2 x RJ45 LAN Ports 4 x USB 3.2 Gen 1 1 x DC Jack (+12V~+24VDC)
<b>TPM</b>	1 x TPM header	1 x TPM header	1 x TPM header
<b>Operating Temp.</b>	0°C to 60°C	0°C to 60°C	0°C to 60°C
<b>Ordering Information</b>	9MRZNRMIMR-SI (Box packing)	Fan version: 9MRZV2MIMR-SI (Box packing)	Fan version: 9MRZNVMMIMR-SI (Box packing)

## Thin Mini-ITX Series



Thin Mini-ITX Series

Model Name	iTXL-H610A	iTXL-Q47EA	iTXL-H42EA
<b>CPU</b>	Support for 13th/12th Generation Intel® Core™ i9/i7/i5/i3, Pentium® & Celeron® processors	Support for 10th Generation Intel® Core™ i9/i7/i5/i3, Pentium® & Celeron® processors	Support for 10th Generation Intel® Core™ i9/i7/i5/i3, Pentium® & Celeron® processors
<b>Socket</b>	LGA 1700	LGA 1200	LGA 1200
<b>Chipset</b>	Intel® H610 Chipset	Intel® Q470E Chipset	Intel® H420E Chipset
<b>Memory</b>	2 x DDR4 SO-DIMM sockets, Max. Capacity 64 GB, Support Dual Channel DDR4 3200 MHz	2 x DDR4 SO-DIMM sockets, Max. Capacity 64 GB, Support Dual Channel DDR4 2933/2666 MHz	2 x DDR4 SO-DIMM sockets, Max. Capacity 64 GB, Support Dual Channel DDR4 2933/2666 MHz
<b>Ethernet</b>	2 x GbE LAN Ports (Realtek® RTL8118-CG)	2 x GbE LAN Ports (Intel® I219LM and Intel® I211AT)	2 x GbE LAN Ports (Intel® I219V and Intel® I211AT)
<b>Graphic</b>	Integrated Graphics Processor - depends on CPU: 1 x HDMI 2.0 1 x Display Port 1 x LVDS 3 independent display outputs	Integrated Graphics Processor - depends on CPU: 1 x HDMI 2.0 1 x Display Port 1 x LVDS or eDP 3 independent display outputs	Integrated Graphics Processor - depends on CPU: 1 x HDMI 2.0 1 x Display Port 1 x LVDS or eDP 2 independent display outputs
<b>Audio</b>	Realtek® Audio codec	Realtek® Audio codec	Realtek® Audio Codec
<b>Storage</b>	2 x SATA 6Gb/s Ports	4 x SATA 6Gb/s Ports (RAID 0/1/5/10)	4 x SATA 6Gb/s Ports
<b>Expansion Slots</b>	1 x 2280 M.2 M-Key (PCIe x4) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0)	1 x PCIe x16 (Gen3 x8) 1 x 2280 M.2 M-Key (PCIe x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0)	1 x PCIe x16 (Gen3 x8) 1 x 2280 M.2 M-Key (PCIe x2) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0)
<b>Internal I/O</b>	1 x 4-pin ATX main power connector 1 x SATA Power connector 1 x CPU fan header 1 x System fan header 1 x Front panel header 1 x Front panel audio header 1 x 2W Speaker out header 1 x GPIO (8 bits) & SMBus header 4 x USB 2.0 headers 1 x COM header (RS-232) 1 x COM header (RS-232/422/485 & RI/5V/12V) 1 x Clear CMOS jumper 1 x Backlight Control header 1 x AT/ATX mode select jumper	1 x 4-pin ATX main power connector 2 x SATA Power connectors 1 x CPU fan header 1 x System fan header 1 x Front panel header 1 x Front panel audio header 1 x 2W Speaker out header 6 x USB 2.0 headers 1 x COM header (RS-232) 1 x COM header (RS-232/422/485 & RI/5V/12V) 1 x GPIO (8 bits) & SMBus header 1 x Clear CMOS jumper 1 x Backlight Control header 1 x ATX Control header 1 x AT/ATX mode select jumper	1 x 4-pin ATX main power connector 2 x SATA Power connectors 1 x CPU fan header 1 x System fan header 1 x Front panel header 1 x Front panel audio header 1 x 2W Speaker out header 5 x USB 2.0 headers 1 x COM header (RS-232) 1 x COM header (RS-232/422/485 & RI/5V/12V) 1 x GPIO (8 bits) & SMBus header 1 x Clear CMOS jumper 1 x Backlight Control header 1 x ATX Control header 1 x AT/ATX mode select jumper
<b>Rear I/O</b>	2 x Audio Jacks (Line out, Mic in) 1 x HDMI 1 x Display Port 2 x RJ45 LAN Ports 2 x USB 3.2 Gen 2x1 2 x USB 3.2 Gen 1 1 x DC Jack (+12V/+19V~+24VDC)	2 x Audio Jacks (Line out, Mic in) 1 x HDMI 1 x Display Port 2 x RJ45 LAN Ports 4 x USB 3.2 Gen 1 1 x DC Jack (+12V/+19V~+24VDC)	2 x Audio Jacks (Line out, Mic in) 1 x HDMI 1 x Display Port 2 x RJ45 LAN Ports 4 x USB 3.2 Gen 1 1 x DC Jack (+12V/+19V~+24VDC)
<b>TPM</b>	1 x TPM header	1 x TPM header	1 x TPM header
<b>Operating Temp.</b>	0°C to 60°C	0°C to 60°C	0°C to 60°C
<b>Ordering Information</b>	9MH610ATMR-SI (Box packing)	9MQ47EATMR-SI (Box packing)	9MH42EATMR-SI (Box packing)

## Thin Mini-ITX Series



Model Name	iTXL-Q370A	iTXL-1135G7A/ iTXL-1115G4EA
<b>CPU</b>	Support for 9th/8th Generation Intel® Core™ i7/i5/i3, Pentium® & Celeron® processors	Intel® Core™ i5-1135G7 Processor 10nm SuperFin, 4 cores, 8 threads, up to 4.2 GHz Intel® Core™ i3-1115G4E Processor 10nm SuperFin, 2 cores, 4 threads, up to 3.90 GHz
<b>Socket</b>	LGA 1151	FCBGA1449
<b>Chipset</b>	Intel® Q370 Chipset	—
<b>Memory</b>	2 x DDR4 SO-DIMM sockets, Max. Capacity 32 GB, Support Dual Channel DDR4 2666/2400 MHz	2 x DDR4 SO-DIMM sockets, Max. Capacity 64 GB, Support Dual Channel DDR4 3200 MHz
<b>Ethernet</b>	1 x GbE LAN Port (Intel® I219LM)	1 x GbE LAN Port (Intel® I219V) 1 x 2.5GbE LAN Port (Intel® I226V)
<b>Graphic</b>	Integrated Graphics Processor - depends on CPU: 1 x HDMI 2.0 1 x Display Port 1 x LVDS 3 independent display outputs	Integrated Graphics Processor - Intel® Iris® X* Graphics: 4 x HDMI 2.0 1 x LVDS 1 x eDP 4 independent display outputs
<b>Audio</b>	Realtek® Audio Codec	Realtek® Audio Codec
<b>Storage</b>	4 x SATA 6Gb/s Ports (RAID 0/1/5/10)	1 x SATA 6Gb/s Port (RAID 0/1)
<b>Expansion Slots</b>	1 x PCIe x4 (Gen3 x4) 1 x 2280/2260 M.2 M-Key (PCIe x4, SATA 6Gb/s, Optane memory) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0)	1 x 2280 M.2 M-Key (PCIe Gen4 x4, SATA 6Gb/s) 1 x Full-size Mini PCIe with SIM slot (PCIe x1, USB 2.0) 1 x 2230 M.2 E-key (PCIe x1, USB 2.0)
<b>Internal I/O</b>	1 x 2-pin ATX main power connector 1 x SATA Power connector 1 x CPU fan header 1 x System fan header 1 x Front panel header 1 x Front panel audio header 1 x 3W Speaker out header 1 x DMIC header 5 x USB 2.0 headers 2 x USB 3.2 Gen 1 headers 1 x COM header (RS-232) 1 x FPD (For LVDS 19V) 1 x FPD_SW 1x3 (For Panel Power SW) 1 x LCD_VCC Pin header 1 x Backlight Control header 1 x Clear CMOS jumper	1 x 4-pin ATX main power connector 1 x SATA Power connector 1 x CPU fan header 1 x System fan header 1 x Front panel header 1 x Front panel audio header 4 x USB 2.0 headers 2 x USB 3.2 Gen 1 headers 4 x COM headers (RS-232/422/485 & RI/5V/12V) 1 x 2W Speaker out header 1 x Backlight Control header for eDP 1 x Backlight Control header for LVDS 1 x GPIO (8 bits) & SMBus header 1 x Buzzer 1 x AT/ATX mode select jumper
<b>Rear I/O</b>	2 x Audio Jacks (Line out, Mic in) 1 x HDMI 1 x Display Port 1 x RJ45 LAN Port 3 x USB 3.2 Gen 1 1 x USB 3.2 Gen 1 (Type C) 1 x DC Jack (+12V/+19VDC)	2 x Audio Jacks (Line out, Mic in) 4 x HDMI 2 x RJ45 LAN Ports 2 x USB 3.2 Gen 2x1 2 x USB 3.2 Gen 1 1 x DC Jack (+12~+24VDC)
<b>TPM</b>	1 x TPM header	1 x TPM header
<b>Operating Temp.</b>	0°C to 60°C	0°C to 60°C
<b>Ordering Information</b>	9MQ370ATMR-SI (Box packing)	9MTGU5ATMR-SI (Box packing) 9MTGU3ATMR-SI (Box packing)

## Thin Mini-ITX Series

New



Thin Mini-ITX Series

Model Name	iTXL-N97A	iTXL-6412A/ iTXL-6210A
<b>CPU</b>	Intel® Processor N97 Intel® 7, 4 cores, 6M Cache, up to 3.60 GHz	Intel® Celeron® J6412 Processor, 10nm, 4 cores, 4 threads, up to 2.6 GHz Intel® Celeron® N6210 Processor, 10nm, 2 cores, 2 threads, up to 2.6 GHz
<b>Socket</b>	FCBGA1264	FCBGA1493
<b>Chipset</b>	—	—
<b>Memory</b>	1 x DDR4 SO-DIMM socket, Max. Capacity 32 GB, Support Dual Channel DDR4 3200 MHz	2 x DDR4 SO-DIMM sockets, Max. Capacity 32 GB, Support Dual Channel DDR4 3200 MHz
<b>Ethernet</b>	2 x GbE LAN Ports (Realtek® RTL8111H)	2 x GbE LAN Ports (Realtek® RTL8118-CG)
<b>Graphic</b>	Integrated Graphics Processor - Intel® UHD Graphics: 2 x HDMI 2.0 1 x LVDS or eDP 3 independent display outputs	Integrated Graphics Processor - Intel® UHD Graphics for 10th Gen Intel® Processors: 2 x HDMI 2.0 1 x LVDS or eDP 3 independent display outputs
<b>Audio</b>	Realtek® Audio Codec	Realtek® Audio Codec
<b>Storage</b>	1 x SATA 6Gb/s Port	1 x SATA 6Gb/s Port
<b>Expansion Slots</b>	1 x 2280 M.2 M-Key (SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0)	1 x PCIe x1 (Gen3 x1) 1 x 2280 M.2 M-Key (PCIe x2, SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0)
<b>Internal I/O</b>	1 x 4-pin ATX main power connector 1 x SATA Power connector 1 x CPU fan header 1 x System fan header 1 x Front panel header 1 x Front panel audio header 1 x 2W Speaker out header 6 x USB 2.0 headers 1 x COM header (RS-232/422/485 & RI/5V/12V) 3 x COM headers (RS-232) 1 x GPIO (8 bits) & SMBus header 1 x Backlight Control header for eDP 1 x Backlight Control header for LVDS 1 x AT/ATX mode select jumper 1 x ATX control header	1 x 4-pin ATX main power connector 1 x SATA Power connector 1 x CPU fan header 1 x System fan header 1 x Front panel header 1 x Front panel audio header 1 x 2W Speaker out header 5 x USB 2.0 headers 1 x Buzzer 1 x COM header (RS-232/422/485 & RI/5V/12V) 1 x COM header (RS-232 & RI/5V/12V) 2 x COM headers (RS-232) 1 x GPIO (8 bits) & SMBus header 1 x Backlight Control header 1 x AT/ATX mode select jumper 1 x ATX control header
<b>Rear I/O</b>	2 x Audio Jacks (Line out, Mic in) 2 x HDMI 2 x RJ45 LAN Ports 4 x USB 3.2 Gen 1 1 x DC Jack (+12V/+19~+24VDC)	2 x Audio Jacks (Line out, Mic in) 2 x HDMI 2 x RJ45 LAN Ports 3 x USB 3.2 Gen 1 1 x USB 2.0 1 x DC Jack (+12V/+19~+24VDC)
<b>TPM</b>	Onboard TPM 2.0 security chip INFINEON SLB9672VU2.0	—
<b>Operating Temp.</b>	0°C to 60°C	0°C to 60°C
<b>Ordering Information</b>	9MADN9ATMR-SI (Box packing)	9MEHLJATMR-SI (Box packing) 9MEHLNATMR-SI (Box packing)

## Thin Mini-ITX Series



Model Name	iTXL-5105A/ iTXL-4500A	iTXL-3350A
<b>CPU</b>	Intel® Celeron® N5105 Processor, 10nm, 4 cores, 4 threads, up to 2.9 GHz Intel® Celeron® N4500 Processor, 10nm, 2 cores, 2 threads, up to 2.8 GHz	Intel® Celeron® N3350 Processor, 14nm, 2 cores, 2 threads, up to 2.4 GHz
<b>Socket</b>	FCBGA1338	FCBGA1296
<b>Chipset</b>	—	—
<b>Memory</b>	2 x DDR4 SO-DIMM sockets, Max. Capacity 16 GB, Support Dual Channel DDR4 2933 MHz	2 x DDR3L SO-DIMM sockets, Max. Capacity 8 GB, Support Dual Channel DDR3L 1866 MHz
<b>Ethernet</b>	2 x GbE LAN Ports (Realtek® RTL8118-CG)	2 x GbE LAN Ports (Realtek® RTL8111HS)
<b>Graphic</b>	Integrated Graphics Processor - Intel® UHD Graphics: 2 x HDMI 2.0 1 x LVDS or eDP 3 independent display outputs	Integrated Graphics Processor - Intel® HD Graphics 500: 1 x HDMI 1.4 1 x Display Port 1 x LVDS or eDP 3 independent display outputs
<b>Audio</b>	Realtek® Audio Codec	Realtek® Audio Codec
<b>Storage</b>	1 x SATA 6Gb/s Port	2 x SATA 6Gb/s Ports (1 x switches with mSATA) (incl. 1 x SATA supports SATA DOM)
<b>Expansion Slots</b>	1 x PCIe x1 (Gen3 x1) 1 x 2280 M.2 M-Key (SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0)	1 x Full-size Mini PCIe/mSATA 1 x Half-size Mini PCIe (PCIe Only)
<b>Internal I/O</b>	1 x 4-pin ATX main power connector 1 x ATX control header (For Standard ATX PSU use) 1 x SATA Power connector 1 x System fan header 1 x Front panel header 1 x Front panel audio header 1 x 2W Speaker out header 6 x USB 2.0 headers 1 x COM header (RS-232/422/485 & RI/5V/12V) 3 x COM headers (RS-232) 1 x GPIO (8 bits) & SMBus header 1 x Backlight Control header 1 x AT/ATX mode select jumper	1 x 4-pin ATX main power connector 2 x SATA Power connectors 1 x CPU fan header 1 x System fan header 1 x Front panel header 1 x Front panel audio header 1 x 2W Speaker out header 1 x USB 2.0 header 2 x USB 3.2 Gen 1 headers 4 x COM headers (RS-232) 2 x COM headers (RS-232/422/485 & RI/5V/12V) 1 x Backlight Control header 1 x PS/2 KB/MS Connector 1 x GPIO (8 bits) & SMBus header 1 x Buzzer 1 x Clear CMOS jumper 1 x AT/ATX mode select jumper 1 x Case open header
<b>Rear I/O</b>	2 x Audio Jacks (Line out, Mic in) 2 x HDMI 2 x RJ45 LAN Ports 4 x USB 3.2 Gen 1 1 x DC Jack (+12V~+24VDC)	2 x Audio Jacks (Line out, Mic in) 1 x HDMI 1 x Display Port 2 x RJ45 LAN Ports 2 x USB 2.0 2 x USB 3.2 Gen 1 1 x DC Jack (+12VDC)
<b>TPM</b>	—	1 x TPM header
<b>Operating Temp.</b>	0°C to 60°C	0°C to 60°C
<b>Ordering Information</b>	9MJPLNATMR-SI (Box packing) 9MJPLNBTMR-SI (Box packing)	9MZAPLBIMR-SI (Box packing)

## QBiP Series (3.5" SBC)

Preliminary



New



QBiP Series (3.5" SBC)

Model Name	QBiP-1360A/ QBiP-1340A	QBiP-1355B/ QBiP-1335B/ QBiP-1315EB
<b>CPU</b>	Intel® Core™ i7-1360P Processor, Intel® 7, 12 cores, 4P+8E, 16 threads, up to 5.0 GHz Intel® Core™ i5-1340P Processor, Intel® 7, 12 cores, 4P+8E, 16 threads, up to 4.6 GHz	Intel® Core™ i7-1355U Processor, Intel® 7, 10 cores, 2P+8E, 12 threads, up to 5.0 GHz Intel® Core™ i5-1335U Processor, Intel® 7, 10 cores, 2P+8E, 12 threads, up to 4.6 GHz Intel® Core™ i3-1315UE Processor, Intel® 7, 6 cores, 2P+4E, 8 threads, up to 4.5 GHz
<b>Socket</b>	FCBGA1744	FCBGA1744
<b>Chipset</b>	SoC	SoC
<b>Memory</b>	2 x DDR5 SO-DIMM sockets, Max. Capacity 64 GB, Support Dual Channel DDR5 5200 MHz	2 x DDR4 SO-DIMM sockets, Max. Capacity 64 GB, Support Dual Channel DDR4 3200 MHz
<b>Ethernet</b>	2 x 2.5GbE LAN Ports (Intel® I226V and Intel® I226LM)	2 x 2.5GbE LAN Ports (Intel® I226V)
<b>Graphic</b>	Integrated Graphics Processor - Intel® Iris® Xe Graphics: 2 x HDMI 2.1 2 x DP 1.4b 1 x eDP 4 independent display outputs	Integrated Graphics Processor - Intel® Iris® Xe/UHD Graphics for 13th Gen Intel® Processors: 2 x HDMI 2.0 1 x LVDS 3 independent display outputs
<b>Audio</b>	Realtek® Audio Codec	Realtek® Audio Codec
<b>Storage</b>	1 x SATA 6Gb/s Port (RAID 0/1)	1 x SATA 6Gb/s Port (RAID 0/1)
<b>Expansion Slots</b>	1 x 2280 M.2 M-Key (PCIe x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0) 1 x 3052/3042 M.2 B-Key (PCIe x1, USB3.0) with SIM Slot (Support 5G) 1 x PCIe x4 (Board to Wire connector)	1 x 2280 M.2 M-Key (PCIe Gen4x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0) 1 x Full-size Mini PCIe with SIM slot
<b>Internal I/O</b>	1 x 4-pin box power connector (+12V~24VDC) 1 x SATA Power header 1 x CPU fan header 1 x System fan header 1 x Front panel header 1 x Front panel audio header 1 x 2W Speaker out header 4 x USB 2.0 headers 1 x COM header (RS-232 & RI/5V/12V) 1 x Backlight Control header 1 x AT/ATX mode select jumper 1 x GPIO (8-bits) & SMBus header	1 x 4-pin box power connector (+9V~36VDC) 1 x SATA Power header 1 x CPU fan header 1 x System fan header 1 x Front panel header 1 x Front panel audio header 1 x 2W Speaker out header 4 x USB 2.0 headers 3 x COM headers (RS-232/422/485) 1 x Backlight Control header 1 x AT/ATX mode select jumper 1 x GPIO (8-bits) & SMBus header
<b>Rear I/O</b>	1 x USB type C (USB 3.2 Gen 2x1 + DP output-share with DP) & PD v3.0 Out -100W 1 x USB type C (USB 3.2 Gen 2x1, PD v3.0 input-100W ), 4 x USB 3.2 Gen 2x1 2 x HDMI 2 x DP 2 x RJ45 LAN Ports	1 x COM Port (RS-232/422/485 & RI/5V/12V) 2 x HDMI 2 x RJ45 LAN Ports 4 x USB 3.2 Gen 2x1
<b>TPM</b>	Onboard TPM 2.0 security chip INFINEON SLB9670VQ2.0	Onboard TPM 2.0 security chip INFINEON SLB9672VU2.0
<b>Operating Temp.</b>	0°C to 60°C	0°C to 60°C
<b>Ordering Information</b>	9MRLP7ASMR-SI (Box packing) 9MRLP5ASMR-SI (Box packing)	9MRLU7BSMR-SI (Box packing) 9MRLU5BSMR-SI (Box packing) 9MRLU3BSMR-SI (Box packing)



## QBiP Series (3.5" SBC)



Model Name	QBiP-1255A/ QBiP-1235A/ QBiP-1215EA	QBiP-1185G7EB/ QBiP-1145G7EB	QBiP-1165G7A/ QBiP-1135G7A/ QBiP-1115G4EA
<b>CPU</b>	Intel® Core™ i7-1255U Processor, Intel® 7, 10 cores, 12 threads, up to 4.7 GHz Intel® Core™ i5-1235U Processor, Intel® 7, 10 cores, 12 threads, up to 4.4 GHz Intel® Core™ i3-1215UE Processor, Intel® 7, 6 cores, 8 threads, up to 4.4 GHz	Intel® Core™ i7-1185G7E Processor 10nm SuperFin, 4 cores, 8 threads, up to 4.4 GHz, vPro support Intel® Core™ i5-1145G7E Processor 10nm SuperFin, 4 cores, 8 threads, up to 4.1 GHz, vPro support	Intel® Core™ i7-1165G7 Processor, 10nm SuperFin, 4 cores, 8 threads, up to 4.7 GHz Intel® Core™ i5-1135G7 Processor, 10nm SuperFin, 4 cores, 8 threads, up to 4.2 GHz Intel® Core™ i3-1115G4E Processor, 10nm SuperFin, 2 cores, 4 threads, up to 3.9 GHz
<b>Socket</b>	FCBGA1744	FCBGA1449	FCBGA1449
<b>Chipset</b>	—	SoC	SoC
<b>Memory</b>	2 x DDR4 SO-DIMM sockets, Max. Capacity 64 GB, Support Dual Channel DDR4 3200 MHz	2 x DDR4 SO-DIMM sockets, Max. Capacity 64 GB, Support Dual Channel DDR4 3200 MHz	2 x DDR4 SO-DIMM sockets, Max. Capacity 64 GB, Support Dual Channel DDR4 3200 MHz
<b>Ethernet</b>	2 x 2.5GbE LAN Ports (Intel® I226V)	2 x GbE LAN Ports (Intel® I219LM and Intel® I211AT)	2 x GbE LAN Ports (Intel® I219V and Intel® I211AT)
<b>Graphic</b>	Integrated Graphics Processor - Intel® Iris® Xe/UHD Graphics 2 x HDMI 2.0 1 x LVDS 3 independent display outputs	Integrated Graphics Processor - Intel® Iris® X <sup>e</sup> Graphics 2 x HDMI 2.0 1 x LVDS 3 independent display outputs	Integrated Graphics Processor - Intel® Iris® X <sup>e</sup> /UHD Graphics 2 x HDMI 2.0, 2 x DP 1.4 (8K), 1 x DP 1.4 (USB Type C (8K)), 1 x eDP 4 independent display outputs
<b>Audio</b>	Realtek® Audio Codec	Realtek® Audio Codec	Realtek® Audio Codec
<b>Storage</b>	1 x SATA 6Gb/s Port (RAID 0/1)	1 x SATA 6Gb/s Port (RAID 0/1)	1 x SATA 6Gb/s Port (RAID 0/1)
<b>Expansion Slots</b>	1 x 2280 M.2 M-Key (PCIe Gen4x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0) 1 x Full-size Mini PCIe with SIM slot (PCIe x1, USB 2.0)	1 x 2280 M.2 M-Key (PCIe x2, SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0) 1 x Full-size Mini PCIe with SIM slot 1 x PCIe x1 (Board to Wire connector)	1 x 2280 M.2 M-Key (PCIe x2, SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0) 1 x 3052 M.2 B-Key with SIM Slot (Support 5G) 1 x PCIe x4 (Board to Wire connector)
<b>Internal I/O</b>	1 x 4-pin box power connector (+9V~36VDC) 1 x SATA Power header 1 x CPU fan header 1 x System fan header 1 x Front panel header 1 x Front panel audio header 1 x 2W Speaker out header 4 x USB 2.0 headers 3 x COM headers (RS-232/422/485) 1 x Backlight Control header 1 x AT/ATX mode select jumper 1 x GPIO (8-bits) & SMBus header	1 x 4-pin box power connector (+9V~48VDC) 1 x SATA Power header 1 x CPU fan header 1 x System fan header 1 x Front panel header 1 x Front panel audio header 1 x 2W Speaker out header 4 x USB 2.0 headers 3 x COM headers (RS-232/422/485) 1 x Backlight Control header 1 x AT/ATX mode select jumper 1 x GPIO (8-bits) & SMBus header 1 x SPI header	1 x 4-pin box power connector (+12V~24VDC) 1 x SATA Power header 1 x CPU fan header 1 x System fan header 1 x Front panel header 1 x Front panel audio header 1 x 2W Speaker out header 4 x USB 2.0 headers 1 x COM header (RS-232 & RI/5V/12V) 1 x eDP power header
<b>Rear I/O</b>	1 x COM Port (RS-232/422/485 & RI/5V/12V) 2 x HDMI 2 x RJ45 LAN Ports 4 x USB 3.2 Gen 2x1	1 x COM Port (RS-232/422/485 & RI/5V/12V) 2 x HDMI 2 x RJ45 LAN Ports 4 x USB 3.2 Gen 2x1	1 x USB type C (USB 3.2 Gen 2x1 + DP output-share with DP) & PD Out -100W 1 x USB type C (USB 3.2 Gen 2x1, PD input-100W), 4 x USB 3.2 Gen 2x1 2 x HDMI, 2 x DP, 2 x RJ45 LAN Ports
<b>TPM</b>	1 x TPM header	1 x TPM header	1 x TPM header
<b>Operating Temp.</b>	0°C to 60°C	0°C to 60°C	0°C to 60°C
<b>Ordering Information</b>	9MADU7ASMR-SI (Box packing) 9MADU5ASMR-SI (Box packing) 9MADU3ASMR-SI (Box packing)	9MTGU7DSMR-SI (Box packing) 9MTGU5DSMR-SI (Box packing)	9MTGU7ASMR-SI (Box packing) 9MTGU5ASMR-SI (Box packing) 9MTGU3ASMR-SI (Box packing)

## QBiP Series (3.5" SBC)



QBiP Series (3.5" SBC)

Model Name	QBiP-1165G7B/ QBiP-1135G7B/ QBiP-1115G4EB	QBiP-8665A/ QBiP-8365A	QBiP-8565A/ QBiP-8265A/ QBiP-8145A
<b>CPU</b>	Intel® Core™ i7-1165G7 Processor, 10nm SuperFin, 4 cores, 8 threads, up to 4.7 GHz (QBiP-1165G7B) Intel® Core™ i5-1135G7 Processor, 10nm SuperFin, 4 cores, 8 threads, up to 4.2 GHz (QBiP-1135G7B) Intel® Core™ i3-1115G4E Processor, 10nm SuperFin, 2 cores, 4 threads, up to 3.9 GHz (QBiP-1115G4EB)	Intel® Core™ i7-8665UE Processor, 14nm, 4 cores, 8 threads, up to 4.4 GHz, vPro support (QBiP-8665A) Intel® Core™ i5-8365UE Processor, 14nm, 4 cores, 8 threads, up to 4.1 GHz, vPro support (QBiP-8365A)	Intel® Core™ i7-8565U Processor, 14nm, 4 cores, 8 threads, up to 4.6 GHz (QBiP-8565A) Intel® Core™ i5-8265U Processor, 14nm, 4 cores, 8 threads, up to 3.9 GHz (QBiP-8265A) Intel® Core™ i3-8145UE Processor, 14nm, 2 cores, 4 threads, up to 3.9 GHz (QBiP-8145A)
<b>Socket</b>	FCBGA1449	FCBGA1528	FCBGA1528
<b>Chipset</b>	SoC	SoC	SoC
<b>Memory</b>	2 x DDR4 SO-DIMM sockets, Max. Capacity 64 GB, Support Dual Channel DDR4 3200 MHz	2 x DDR4 SO-DIMM sockets, Max. Capacity 64 GB, Support Dual Channel DDR4 2400 MHz	2 x DDR4 SO-DIMM sockets, Max. Capacity 64 GB, Support Dual Channel DDR4 2400 MHz
<b>Ethernet</b>	2 x GbE LAN Ports (Intel® I219V and Intel® I211AT)	2 x GbE LAN Ports (Intel® I219LM and Intel® I211AT)	2 x GbE LAN Ports (Intel® I219V and Intel® I211AT)
<b>Graphic</b>	Integrated Graphics Processor - Intel® Iris® Xe /UHD Graphics 2 x HDMI 2.0 1 x LVDS 3 independent display outputs	Integrated Graphics Processor - Intel® UHD Graphics 620: 2 x HDMI 1.4 1 x LVDS 3 independent display outputs	Integrated Graphics Processor - Intel® UHD Graphics 620: 2 x HDMI 1.4 1 x LVDS 3 independent display outputs
<b>Audio</b>	Realtek® Audio Codec	Realtek® Audio Codec	Realtek® Audio Codec
<b>Storage</b>	1 x SATA 6Gb/s Port (RAID 0/1)	2 x SATA 6Gb/s Ports (RAID 0/1/5)	2 x SATA 6Gb/s Ports (RAID 0/1/5)
<b>Expansion Slots</b>	1 x 2280 M.2 M-Key (PCIe x2, SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0) 1 x Full-size Mini PCIe with SIM slot (PCIe x1, USB 2.0) 1 x PCIe x1 (Board to Wire connector)	1 x 2280 M.2 M-Key (PCIe x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0) 1 x Full-size Mini PCIe with SIM slot (PCIe x1, USB 2.0)	1 x 2280 M.2 M-Key (PCIe x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0) 1 x Full-size Mini PCIe with SIM slot (PCIe x1, USB 2.0)
<b>Internal I/O</b>	1 x 4-pin box power connector (+9V~48VDC) 1 x SATA Power header 1 x CPU fan header 1 x System fan header 1 x Front panel header 1 x Front panel audio header 1 x 2W Speaker out header 4 x USB 2.0 headers 3 x COM headers (RS-232/422/485) 1 x Backlight Control header 1 x AT/ATX mode select jumper 1 x GPIO (8-bits) & SMBus header 1 x SPI header	1 x 4-pin box power connector (+9V~36VDC) (+48VDC Optional) 2 x SATA power headers 1 x CPU fan header 1 x System fan header 1 x Front panel header 1 x Front panel audio header 1 x 2W Speaker out header 2 x USB 2.0 headers 3 x COM headers (RS-232) 1 x Backlight Control header 1 x AT/ATX mode select jumper 1 x GPIO (8 bits) & SMBus header	1 x 4-pin box power connector (+9V~36VDC) (+48VDC Optional) 2 x SATA power headers 1 x CPU fan header 1 x System fan header 1 x Front panel header 1 x Front panel audio header 1 x 2W Speaker out header 2 x USB 2.0 headers 3 x COM headers (RS-232) 1 x Backlight Control header 1 x AT/ATX mode select jumper 1 x GPIO (8 bits) & SMBus header
<b>Rear I/O</b>	1 x COM Port (RS-232/422/485 & RI/5V/12V) 2 x HDMI 2 x RJ45 LAN Ports 4 x USB 3.2 Gen 2x1 1 x TPM header	1 x COM Port (RS-232/422/485 & RI/5V/12V) 2 x HDMI 2 x RJ45 LAN Ports 4 x USB 3.2 Gen 2x1 1 x TPM header	1 x COM Port (RS-232/422/485 & RI/5V/12V) 2 x HDMI 2 x RJ45 LAN Ports 4 x USB 3.2 Gen 2x1 1 x TPM header
<b>TPM</b>	1 x TPM header	1 x TPM header	1 x TPM header
<b>Operating Temp.</b>	0°C to 60°C	0°C to 60°C	0°C to 60°C
<b>Ordering Information</b>	9MTGU7BSMR-SI (Box packing) 9MTGU5BSMR-SI (Box packing) 9MTGU3BSMR-SI (Box packing)	9MWHLUDSMR-SI (Box packing) 9MWHLUESMR-SI (Box packing)	9MWHLUASMR-SI (Box packing) 9MWHLUBSMR-SI (Box packing) 9MWHLUCSMR-SI (Box packing)

## QBiP Series (3.5" SBC)



Model Name	QBiP-7600A/ QBiP-7200A/ QBiP-7100A	QBiP-3965A
<b>CPU</b>	Intel® Core™ i7-7600U Processor, 14nm, 2 cores, 4 threads, up to 3.9 GHz, vPro support (QBiP-7600A) Intel® Core™ i5-7200U Processor, 14nm, 2 cores, 4 threads, up to 3.1 GHz (QBiP-7200A) Intel® Core™ i3-7100U Processor, 14nm, 2 cores, 4 threads, 2.4 GHz (QBiP-7100A)	Intel® Celeron® 3965U Processor, 14nm, 2 cores, 2 threads, 2.2 GHz
<b>Socket</b>	FCBGA1356	FCBGA1356
<b>Chipset</b>	SoC	SoC
<b>Memory</b>	2 x DDR4 SO-DIMM sockets, Max. Capacity 32 GB, Support Dual Channel DDR4 2133 MHz	2 x DDR4 SO-DIMM sockets, Max. Capacity 32 GB, Support Dual Channel DDR4 2133 MHz
<b>Ethernet</b>	2 x GbE LAN Ports (Intel® I219V and Intel® I211AT) (7600A: Intel® I219LM and Intel® I211AT)	2 x GbE LAN Ports (Intel® I219V and Intel® I211AT)
<b>Graphic</b>	Integrated Graphics Processor - Intel® HD Graphics 620: 1 x HDMI 2.0 1 x Display Port 1 x LVDS 3 independent display outputs	Integrated Graphics Processor - Intel® HD Graphics 610: 1 x HDMI 2.0 1 x Display Port 1 x LVDS 3 independent display outputs
<b>Audio</b>	Realtek® Audio Codec	Realtek® Audio Codec
<b>Storage</b>	2 x SATA 6Gb/s Ports (RAID 0/1/5)	1 x SATA 6Gb/s Port
<b>Expansion Slots</b>	1 x 2280 M.2 M-Key (PCIe x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0) 1 x Full-size Mini PCIe with SIM slot (PCIe x1, USB 2.0)	1 x 2280 M.2 M-Key (SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0) 1 x Full-size Mini PCIe with SIM slot (PCIe x1, USB 2.0)
<b>Internal I/O</b>	1 x 4-pin box power connector (+9V~36VDC) 2 x SATA power headers 1 x CPU fan header 1 x System fan header 1 x Front panel header 1 x Front panel audio header 1 x 2W Speaker out header 2 x USB 2.0 headers 3 x COM headers (RS-232) 1 x Backlight Control header 1 x AT/ATX mode select jumper 1 x GPIO (8 bits) & SMBus header	1 x 4-pin box power connector (+9V~36VDC) 1 x SATA Power header 1 x CPU fan header 1 x System fan header 1 x Front panel header 1 x Front panel audio header 1 x 2W Speaker out header 2 x USB 2.0 headers 3 x COM headers (RS-232) 1 x Backlight Control header 1 x AT/ATX mode select jumper 1 x GPIO (8-bits) & SMBus header
<b>Rear I/O</b>	1 x COM Port (RS-232/422/485 & RI/5V/12V) 1 x HDMI 1 x Display Port 2 x RJ45 LAN Ports 4 x USB 3.2 Gen 1	1 x COM Port (RS-232/422/485 & RI/5V/12V) 1 x HDMI 1 x Display Port 2 x RJ45 LAN Ports 4 x USB 3.2 Gen 1
<b>TPM</b>	1 x TPM header	1 x TPM header
<b>Operating Temp.</b>	0°C to 60°C	0°C to 60°C
<b>Ordering Information</b>	9MFLP7B5MR-SI (Box packing) (QBiP-7600A) 9MFLP5ASMR-SI (Box packing) (QBiP-7200A) 9MFLP3ASMR-SI (Box packing) (QBiP-7100A)	9MFLPCASMR-SI (Box packing)

## QBiP Series (3.5" SBC)

Preliminary



Model Name	QBiP-N97A	QBiP-x6413EA	QBiP-6412A/ QBiP-6210A
<b>CPU</b>	Intel® Processor N97 Intel® 7, 4 cores, 6M Cache, up to 3.60 GHz	Intel® Atom® x6413E Processor 10nm, 4 cores, 4 threads, up to 3.0 GHz	Intel® Celeron® J6412 Processor, 10nm, 4 cores, 4 threads, up to 2.6 GHz Intel® Celeron® N6210 Processor, 10nm, 2 cores, 2 threads, up to 2.6 GHz
<b>Socket</b>	FCBGA1264	FCBGA1493	FCBGA1493
<b>Chipset</b>	—	—	—
<b>Memory</b>	1 x DDR5 SO-DIMM sockets, Max. Capacity 16 GB, Support Single Channel DDR5 4800 MHz	2 x DDR4 SO-DIMM sockets, Max. Capacity 32 GB, Support Dual Channel DDR4 3200 MHz	2 x DDR4 SO-DIMM sockets, Max. Capacity 32 GB, Support Dual Channel DDR4 3200 MHz
<b>Ethernet</b>	2 x GbE LAN ports (Intel® I225V)	2 x GbE LAN Ports (Intel® I210AT)	2 x GbE LAN Ports (Intel® I211AT)
<b>Graphic</b>	Integrated Graphics Processor - Intel UHD Graphics: 2 x HDMI 2.0b 1 x LVDS 3 independent display outputs	Integrated Graphics Processor - Intel® UHD Graphics for 10th Gen Intel® Processors: 2 x HDMI 2.0 1 x LVDS 3 independent display outputs	Integrated Graphics Processor - Intel® UHD Graphics for 10th Gen Intel® Processors: 2 x HDMI 2.0 1 x LVDS 3 independent display outputs
<b>Audio</b>	Realtek® Audio Codec	Realtek® Audio Codec	Realtek® Audio Codec
<b>Storage</b>	1 x SATA 6Gb/s Port	1 x SATA 6Gb/s Port	1 x SATA 6Gb/s Port
<b>Expansion Slots</b>	1 x 2280 M.2 M-Key (PCIe x2) 1 x Full-size mini PCIe with SIM slot (CLK_REQ_by R Jumper) 1 x 2230 M.2 E-Key (PCIe x1, USB2.0)	1 x 2280 M.2 M-Key (PCIex2, SATA 6Gb/s) 1 x Full-size Mini PCIe with SIM slot (PCIe x1, USB 2.0)	1 x 2280 M.2 M-Key (PCIex2, SATA 6Gb/s) 1 x Full-size Mini PCIe with SIM slot (PCIe x1, USB 2.0)
<b>Internal I/O</b>	1 x 4-pin box power connector (+9V~36VDC) 1 x SATA Power header 1 x CPU fan header 1 x Front panel header 1 x Front panel audio header 1 x 2W Speaker out header 2 x USB 2.0 headers 1 x COM header (RS-232/422/485 & RI/5V/12V) 1 x COM header (RS-232/422/485) 2 x COM headers (RS-232) 1 x Backlight Control header 1 x AT/ATX mode select jumper 1 x GPIO (8 bits) & SMBus header 1 x Buzzer header	1 x 4-pin box power connector (+9V~36VDC) 1 x SATA Power header 1 x CPU fan header 1 x Front panel header 1 x Front panel audio header 1 x 2W Speaker out header 2 x USB 2.0 headers 1 x COM header (RS-232/422/485 & RI/5V/12V) 1 x COM header (RS-232/422/485) 2 x COM headers (RS-232) 1 x Backlight Control header 1 x AT/ATX mode select jumper 1 x GPIO (8 bits) & SMBus header 1 x Buzzer header	1 x 4-pin box power connector (+9V~36VDC) 1 x SATA Power header 1 x CPU fan header 1 x Front panel header 1 x Front panel audio header 1 x 2W Speaker out header 2 x USB 2.0 headers 1 x COM header (RS-232/422/485 & RI/5V/12V) 1 x COM header (RS-232/422/485) 2 x COM headers (RS-232) 1 x Backlight Control header 1 x AT/ATX mode select jumper 1 x GPIO (8 bits) & SMBus header 1 x Buzzer header
<b>Rear I/O</b>	1 x Headphone Jack 2 x HDMI 2 x RJ45 LAN Ports 2 x USB 3.2 Gen 2x1 2 x USB 2.0	1 x Headphone Jack 2 x HDMI 2 x RJ45 LAN Ports 4 x USB 3.2 Gen 1	1 x Headphone Jack 2 x HDMI 2 x RJ45 LAN Ports 4 x USB 3.2 Gen 1
<b>TPM</b>	Onboard TPM 2.0 security chip INFINEON SLB9670VQ2.0	—	—
<b>Operating Temp.</b>	0°C to 60°C	0°C to 60°C	0°C to 60°C
<b>Ordering Information</b>	9MADN9ASMR-SI (Box packing)	9MEHLEASMR-SI (Box packing)	9MEHLJASMR-SI (Box packing) (QBiP-6412A) 9MEHLNASMR-SI (Box packing) (QBiP-6210A)

## QBiP Series (3.5" SBC)



New



Model Name	QBiP-4200B/ QBiP-4200C/ QBiP-3350A	QBiP-4200D/ QBiP-4200E/ QBiP-3350B
<b>CPU</b>	Intel® Pentium® N4200 Processor, 14nm, 4 cores, 4 threads, up to 2.5 GHz (QBiP-4200B/4200C) Intel® Celeron® N3350 Processor, 14nm, 2 cores, 2 threads, up to 2.4 GHz (QBiP-3350A)	Intel® Pentium® N4200 Processor, 14nm, 4 cores, 4 threads, up to 2.5 GHz (QBiP-4200B/4200C) Intel® Celeron® N3350 Processor, 14nm, 2 cores, 2 threads, up to 2.4 GHz (QBiP-3350A)
<b>Socket</b>	FCBGA1296	FCBGA1296
<b>Chipset</b>	SoC	SoC
<b>Memory</b>	2 x DDR3L SO-DIMM sockets, Max. Capacity 8 GB, Support Dual Channel DDR3L 1866 MHz	2 x DDR3L SO-DIMM sockets, Max. Capacity 8 GB, Support Dual Channel DDR3L 1866 MHz
<b>Ethernet</b>	2 x GbE LAN Ports (Intel® I211AT)	2 x GbE LAN Ports (Realtek® RTL8111H)
<b>Graphic</b>	Integrated Graphics Processor - Intel® HD Graphics 505: 1 x HDMI 1.4 1 x VGA 1 x LVDS 3 independent display outputs	Integrated Graphics Processor - Intel® HD Graphics 505: 1 x HDMI 1.4 1 x VGA 1 x LVDS 3 independent display outputs
<b>Audio</b>	Realtek® Audio Codec	Realtek® Audio Codec
<b>Storage</b>	1 x SATA 6Gb/s Port 1 x eMMC 32GB (4200B only)	1 x SATA 6Gb/s Port 1 x eMMC 32GB (4200D only)
<b>Expansion Slots</b>	1 x 2242 M.2 M-Key (SATA 6Gb/s) 1 x Full-size Mini PCIe with SIM slot (PCIe x1, USB 2.0)	1 x 2242 M.2 M-Key (SATA 6Gb/s) 1 x Full-size Mini PCIe with SIM slot (PCIe x1, USB 2.0)
<b>Internal I/O</b>	1 x 4-pin box power connector (+9V~36VDC) 1 x SATA power header 1 x System fan header 1 x Front panel header 1 x 2W Speaker out header 4 x USB 2.0 headers 3 x COM headers (RS-232) 1 x COM header (RS-232/422/485 & RI/5V/12V) 1 x Backlight Control header 1 x AT/ATX mode select jumper 1 x GPIO (8 bits) & SMBus header 1 x Buzzer header	1 x 4-pin box power connector (+9V~36VDC) 1 x SATA power header 1 x System fan header 1 x Front panel header 1 x 2W Speaker out header 4 x USB 2.0 headers 3 x COM headers (RS-232) 1 x COM header (RS-232/422/485 & RI/5V/12V) 1 x Backlight Control header 1 x AT/ATX mode select jumper 1 x GPIO (8 bits) & SMBus header 1 x Buzzer header
<b>Rear I/O</b>	1 x Headphone Jack 1 x HDMI 1 x VGA 2 x RJ45 LAN Ports 2 x USB 3.2 Gen 1	1 x Headphone Jack 1 x HDMI 1 x VGA 2 x RJ45 LAN Ports 2 x USB 3.2 Gen 1
<b>TPM</b>	1 x TPM header	1 x TPM header
<b>Operating Temp.</b>	0°C to 60°C	0°C to 60°C
<b>Ordering Information</b>	9MZAPLCSMR-SI (Box packing) (QBiP-4200B) 9MZAPLDSMR-SI (Box packing) (QBiP-4200C) 9MZAPLESMSR-SI (Box packing) (QBiP-3350A)	9MAPLNASMR-SI (Box packing) (QBiP-4200D) 9MAPLNBSMR-SI (Box packing) (QBiP-4200E) 9MAPLNCSMR-SI (Box packing) (QBiP-3350B)



## QBiP Series (3.5" SBC)



New



Model Name	QBiP-E3940A	QBiP-E3940B	QBiP-1900A
<b>CPU</b>	Intel® Atom® x5-E3940 Processor 14nm, 4 cores, 4 threads, up to 1.8 GHz 2M Cache	Intel® Atom® x5-E3940 Processor 14nm, 4 cores, 4 threads, up to 1.8 GHz 2M Cache	Intel® Celeron® J1900 Processor 22nm, 4 cores, 4 threads, up to 2.42 GHz
<b>Socket</b>	FCBGA1296	FCBGA1296	FCBGA1170
<b>Chipset</b>	SoC	SoC	SoC
<b>Memory</b>	2 x DDR3L SO-DIMM sockets, Max. Capacity 8 GB, Support Dual channel DDR3L 1866 MHz	2 x DDR3L SO-DIMM sockets, Max. Capacity 8 GB, Support Dual channel DDR3L 1866 MHz	1 x DDR3L SO-DIMM sockets, Max. Capacity 8 GB, Support Single channel DDR3L 1333 MHz
<b>Ethernet</b>	2 x GbE LAN Ports (Intel® I211AT)	2 x GbE LAN Ports (Realtek® RTL8111H)	2 x GbE LAN Ports (Intel® I211AT)
<b>Graphic</b>	Integrated Graphics Processor - Intel® HD Graphics 500: 1 x HDMI 1.4 1 x VGA 1 x LVDS 3 independent display outputs	Integrated Graphics Processor - Intel® HD Graphics 500: 1 x HDMI 1.4 1 x VGA 1 x LVDS 3 independent display outputs	Integrated Graphics Processor - Intel® HD Graphics 500: 1 x HDMI 1.4 1 x VGA 1 x LVDS 2 independent display outputs
<b>Audio</b>	Realtek® Audio Codec	Realtek® Audio Codec	Realtek® Audio Codec
<b>Storage</b>	1 x SATA 6Gb/s Port	1 x SATA 6Gb/s Port	1 x SATA 3Gb/s Port
<b>Expansion Slots</b>	1 x 2242 M.2 M-Key (SATA 6Gb/s) 1 x Full-size Mini PCIe with SIM slot (PCIe x1, USB2.0) -- support 3G module	1 x 2242 M.2 M-Key (SATA 6Gb/s) 1 x Full-size Mini PCIe with SIM slot (PCIe x1, USB2.0) -- support 3G module	1 x 2280 M.2 M-Key (SATA 3Gb/s) 1 x Full-size Mini PCIe with SIM slot (PCIe x1, USB 2.0)
<b>Internal I/O</b>	1 x 4-pin box power connector (+9V~36VDC Full Range) 1 x SATA Power header 1 x System fan header 1 x Front panel header 1 x 2W Speaker out header 4 x USB 2.0 headers 3 x COM headers (RS-232) 1 x COM header (RS-232/422/485 & RI/5V/12V) 1 x Backlight Control header 1 x AT/ATX mode select jumper 1 x GPIO (8-bits) & SMBus header 1 x Buzzer header	1 x 4-pin box power connector (+9V~36VDC Full Range) 1 x SATA Power header 1 x System fan header 1 x Front panel header 1 x 2W Speaker out header 4 x USB 2.0 headers 3 x COM headers (RS-232) 1 x COM header (RS-232/422/485 & RI/5V/12V) 1 x Backlight Control header 1 x AT/ATX mode select jumper 1 x GPIO (8-bits) & SMBus header 1 x Buzzer header	1 x 4-pin box power connector (DC in +9V~36VDC) (+48VDC Optional) 1 x SATA Power header 1 x System fan header 1 x Front panel header 1 x 2W Speaker out header 4 x USB 2.0 headers 2 x COM headers (RS-232) 1 x COM header (RS-232/422/485) & RI/5V/12V) 1 x Backlight Control header 1 x AT/ATX mode select jumper 1 x GPIO (8-bits) & SMBus header 1 x Buzzer header
<b>Rear I/O</b>	1 x Headphone Jack 1 x HDMI 1 x VGA 2 x RJ45 LAN Ports 2 x USB 3.2 Gen 1	1 x Headphone Jack 1 x HDMI 1 x VGA 2 x RJ45 LAN Ports 2 x USB 3.2 Gen 1	1 x Headphone Jack 1 x HDMI 1 x VGA 2 x RJ45 LAN Ports 1 x USB 2.0 1 x USB 3.2 Gen 1
<b>TPM</b>	1 x TPM Header	1 x TPM Header	1 x TPM Header
<b>Operating Temp.</b>	0°C to 60°C	0°C to 60°C	0°C to 60°C
<b>Ordering Information</b>	9MAPLKASMR-SI (Box Packing)	9MAPLEASMR-SI (Box Packing)	9MBAYTASMR-SI (Box Packing)



## QBiP Series (3.5" SBC)



Model Name	QBiP-2718A	QBiP-1605B
<b>CPU</b>	AMD Ryzen™ V2718 Embedded Processor, 7nm, 8 cores, 16 threads, 1.7 GHz, up to 4.15 GHz	AMD® Ryzen™ V1605B Embedded Processor, 14nm, 4 cores, 8 threads, 2.0 GHz, up to 3.6 GHz
<b>Socket</b>	FP6 BGA	FP5 type 1
<b>Chipset</b>	SoC	SoC
<b>Memory</b>	2 x DDR4 SO-DIMM sockets, Max. Capacity 64 GB, Support Dual Channel DDR4 3200 MHz	2 x DDR4 SO-DIMM sockets, Max. Capacity 32 GB, Support Dual Channel DDR4 2400/2133 MHz
<b>Ethernet</b>	2 x GbE LAN Ports (Realtek® RTL8118-CG)	2 x GbE LAN Ports (Realtek® RTL8111HS)
<b>Graphic</b>	Integrated Graphics Processor - AMD Radeon™ Graphics: 4 x HDMI 2.1 4 independent display outputs	Integrated Graphics Processor - AMD® Radeon™ Vega 8 Graphics: 4 x HDMI 2.0 1 x eDP (share from HDMI) 4 independent display outputs
<b>Audio</b>	Realtek® Audio Codec	Realtek® Audio Codec
<b>Storage</b>	1 x SATA 6Gb/s Port	1 x SATA 6Gb/s Port
<b>Expansion Slots</b>	1 x 2280 M.2 M-Key (PCIe x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0) 1 x Full-size Mini PCIe with SIM slot (PCIe x1, USB 2.0)	1 x 2280 M.2 M-Key (PCIe x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0) 1 x Full-size Mini PCIe with SIM slot (PCIe x1, USB 2.0)
<b>Internal I/O</b>	1 x 4-pin box power connector (DC in +9V~48VDC) 1 x SATA Power header 1 x CPU fan header 1 x Front panel header 1 x Front panel audio header 1 x 2W Speaker out header 2 x USB 2.0 headers 3 x COM headers (RS-232/422/485) 1 x COM header (RS-232/422/485 & RI/5V/12V) 1 x AT/ATX mode select jumper 1 x GPIO (8-bits) & SMBus header	1 x 4-pin box power connector (+9V~36VDC) 1 x SATA power header 1 x CPU fan header 1 x System fan header 1 x Front panel header 1 x Front panel audio header 1 x 2W Speaker out header 4 x USB 2.0 headers 2 x COM headers (RS-232) 2 x COM headers (RS-232/422/485 & RI/5V/12V) 1 x Backlight Control header 1 x AT/ATX mode select jumper 1 x eDP/HDMI jumper 1 x GPIO (8 bits) & SMBus header 1 x Buzzer
<b>Rear I/O</b>	4 x HDMI 2 x RJ45 LAN Ports 2 x USB 3.2 Gen 2x1 2 x USB 2.0	4 x HDMI 2 x RJ45 LAN Ports 2 x USB 3.2 Gen 1
<b>TPM</b>	—	Onboard TPM 2.0 security chip INFINEON SLB9665TT2.0
<b>Operating Temp.</b>	0°C to 60°C	0°C to 60°C
<b>Ordering Information</b>	9MRZV2MSMR-SI (Box Packing)	9MRZNVOSMR-SI (Box packing)

## QBiP Wide Temperature Series

New



New



QBiP Wide Temperature Series

Model Name	QBiP-1185G7EBT/ QBiP-1145G7EBT	QBiP-1115G4EBT
<b>CPU</b>	Intel® Core™ i7-1185G7E Processor 10nm SuperFin, 4 cores, 8 threads, up to 4.4 GHz vPro support (QBiP-1185G7EBT) Intel® Core™ i5-1145G7E Processor 10nm SuperFin, 4 cores, 8 threads, up to 4.1 GHz vPro support (QBiP-1145G7EBT)	Intel® Core™ i3-1115G4E Processor 10nm SuperFin, 2 cores, 4 threads, up to 3.90 GHz
<b>Socket</b>	FCBGA1449	FCBGA1449
<b>Chipset</b>	—	—
<b>Memory</b>	2 x DDR4 SO-DIMM sockets, Max. Capacity 64 GB, Support Dual channel DDR4 3200 MHz	2 x DDR4 SO-DIMM sockets, Max. Capacity 64 GB, Support Dual Channel DDR4 3200 MHz
<b>Ethernet</b>	2 x GbE LAN Ports (Intel® I219LM and Intel® I211AT)	2 x GbE LAN Ports (Intel® I219V and Intel® I211AT)
<b>Graphic</b>	Integrated Graphics Processor - Intel® Iris® X <sup>e</sup> Graphics: 2 x HDMI 2.0 1 x LVDS 3 independent display outputs	Integrated Graphics Processor - Intel® UHD Graphics: 1 x HDMI 2.0 1 x Display Port 1 x LVDS 3 independent display outputs
<b>Audio</b>	Realtek® Audio Codec	Realtek® Audio Codec
<b>Storage</b>	1 x SATA 6Gb/s Port	1 x SATA 6Gb/s Port (RAID 0/1)
<b>Expansion Slots</b>	1 x 2280 M.2 M-Key (PCIe x2, SATA 6Gb/s) 1 x 2230 M.2 E-Key 1 x Full-size Mini PCIe with SIM slot 1 x PCIe x1 (Board to Wire connector, PCIe Gen3 x1)	1 x 2280 M.2 M-Key (PCIe x2, SATA 6Gb/s) 1 x 2230 M.2 E-Key 1 x Full-size Mini PCIe with SIM slot 1 x PCIe x1 (Board to Wire connector, PCIe Gen3 x1)
<b>Internal I/O</b>	1 x 4-pin box power connector (DC in +9V~48VDC) 1 x SATA Power header 1 x CPU fan header 1 x System fan header 1 x Front panel header 1 x Front panel audio header 1 x 2W Speaker out header 4 x USB 2.0 headers 3 x COM headers (RS-232/422/485) 1 x Backlight Control header 1 x AT/ATX mode select jumper 1 x GPIO (8-bits) & SMBus header 1 x SPI header	1 x 4-pin box power connector (DC in +9V~48VDC) 1 x SATA Power header 1 x CPU fan header 1 x System fan header 1 x Front panel header 1 x Front panel audio header 1 x 2W Speaker out header 4 x USB 2.0 headers 3 x COM headers (RS-232/422/485) 1 x Backlight Control header 1 x AT/ATX mode select jumper 1 x GPIO (8-bits) & SMBus header 1 x SPI header
<b>Rear I/O</b>	1 x COM Port (RS-232/422/485 & RI/5V/12V) 2 x HDMI 2 x RJ45 LAN Ports 4 x USB 3.2 Gen 2x1	1 x COM Port (RS-232/422/485 & RI/5V/12V) 2 x HDMI 2 x RJ45 LAN Ports 4 x USB 3.2 Gen 2x1
<b>TPM</b>	1 x TPM header	1 x TPM header
<b>Operating Temp.</b>	-20°C to 70°C	-20°C to 70°C
<b>Ordering Information</b>	9MTGU7DSMR-SI1 (Box Packing) 9MTGU5DSMR-SI1 (Box Packing)	9MTGU3BSMR-SI1 (Box Packing)

## QBiP Wide Temperature Series



Model Name	QBiP-7200AT/ QBiP-7100AT	QBiP-x6413EAT
<b>CPU</b>	Intel® Core™ i5-7200U Processor, 14nm, 2 cores, 4 threads, up to 3.1GHz (QBiP-7200AT) Intel® Core™ i3-7100U Processor, 14nm, 2 cores, 4 threads, 2.4GHz (QBiP-7100AT)	Intel® Atom® x6413E Processor 10nm, 4 cores, 4 threads, up to 3.0 GHz
<b>Socket</b>	FCBGA1356	FCBGA1493
<b>Chipset</b>	SoC	—
<b>Memory</b>	2 x DDR4 SO-DIMM sockets, Max. Capacity 32 GB, Support Dual Channel DDR4 2133 MHz	2 x DDR4 SO-DIMM sockets, Max. Capacity 32 GB, Support Dual channel DDR4 3200 MHz
<b>Ethernet</b>	2 x GbE LAN Ports (Intel® I219V and Intel® I211AT)	2 x GbE LAN Ports (Intel® I210AT)
<b>Graphic</b>	Integrated Graphics Processor - Intel® HD Graphics 620: 1 x HDMI 2.0 1 x Display Port 1 x LVDS 3 independent display outputs	Integrated Graphics Processor - Intel® UHD Graphics for 10th Gen Intel® Processors: 2 x HDMI 2.0 1 x LVDS 3 independent display outputs
<b>Audio</b>	Realtek® Audio Codec	Realtek® Audio Codec
<b>Storage</b>	2 x SATA 6Gb/s Ports (RAID 0/1/5)	1 x SATA 6Gb/s Port
<b>Expansion Slots</b>	1 x 2280 M.2 M-Key (PCIe x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0) 1 x Full-size Mini PCIe with SIM slot (PCIe x1, USB 2.0)	1 x 2280 M.2 M-Key (PCIe2, SATA 6Gb/s) 1 x Full-size Mini PCIe with SIM slot (PCIe x1, USB 2.0)
<b>Internal I/O</b>	1 x 4-pin box power connector (+9V~36VDC) 2 x SATA power headers 1 x CPU fan header 1 x System fan header 1 x Front panel header 1 x Front panel audio header 1 x 2W Speaker out header 2 x USB 2.0 headers 3 x COM headers (RS-232) 1 x Backlight Control header 1 x AT/ATX mode select jumper 1 x GPIO (8 bits) & SMBus header	1 x 4-pin box power connector (+9V~36VDC) 1 x SATA Power header 1 x CPU fan header 1 x Front panel header 1 x Front panel audio header 1 x 2W Speaker out header 2 x USB 2.0 headers 1 x COM header (RS-232/422/485 & RI/5V/12V) 1 x COM header (RS-232/422/485) 2 x COM headers (RS-232) 1 x Backlight Control header 1 x AT/ATX mode select jumper 1 x GPIO (8 bits) & SMBus header 1 x Buzzer header
<b>Rear I/O</b>	1 x COM Port (RS-232/422/485 & RI/5V/12V) 1 x HDMI 1 x Display Port 2 x RJ45 LAN Ports 4 x USB 3.2 Gen 1	1 x Headphone Jack 2 x HDMI 2 x RJ45 LAN Ports 4 x USB 3.2 Gen 1
<b>TPM</b>	1 x TPM header	—
<b>Operating Temp.</b>	-20°C to 70°C	-40°C to 85°C
<b>Ordering Information</b>	9MFLP5ASMR-SI1 (Box packing) (QBiP-7200AT) 9MFLP3ASMR-SI1 (Box packing) (QBiP-7100AT)	9MEHLEASMR-SI1 (Box packing)

## QBiP Wide Temperature Series



New



Model Name	QBiP-E3940AT	QBiP-E3940BT	QBiP-1900AT
<b>CPU</b>	Intel® Atom® x5-E3940 Processor, 14nm, 4 cores, 4 threads, up to 1.8 GHz	Intel® Atom® x5-E3940 Processor, 14nm, 4 cores, 4 threads, up to 1.8 GHz	Intel® Celeron® J1900 Processor, 22nm, 4 cores, 4 threads, up to 2.42 GHz
<b>Socket</b>	FCBGA1296	FCBGA1296	FCBGA1170
<b>Chipset</b>	SoC	SoC	SoC
<b>Memory</b>	2 x DDR3L SO-DIMM sockets, Max. Capacity 8 GB, Support Dual Channel DDR3L 1866 MHz	2 x DDR3L SO-DIMM sockets, Max. Capacity 8 GB, Support Dual Channel DDR3L 1866 MHz	1 x DDR3L SO-DIMM socket, Max. Capacity 8 GB, Support Single Channel DDR3L 1333 MHz
<b>Ethernet</b>	2 x GbE LAN Ports (Intel® I211AT)	2 x GbE LAN Ports (Realtek® RTL8111H)	2 x GbE LAN Ports (Intel® I211AT)
<b>Graphic</b>	Integrated Graphics Processor - Intel® HD Graphics 500: 1 x HDMI 1.4 1 x VGA 1 x LVDS 3 independent display outputs	Integrated Graphics Processor - Intel® HD Graphics 500: 1 x HDMI 1.4 1 x VGA 1 x LVDS 3 independent display outputs	Integrated Graphics Processor - Intel® HD Graphics: 1 x HDMI 1.4 1 x VGA 1 x LVDS 2 independent display outputs
<b>Audio</b>	Realtek® Audio Codec	Realtek® Audio Codec	Realtek® Audio Codec
<b>Storage</b>	1 x SATA 6Gb/s Port	1 x SATA 6Gb/s Port	1 x SATA 3Gb/s Port
<b>Expansion Slots</b>	1 x 2242 M.2 M-Key (SATA 6Gb/s) 1 x Full-size Mini PCIe with SIM slot (PCIe x1, USB 2.0)	1 x 2242 M.2 M-Key (SATA 6Gb/s) 1 x Full-size Mini PCIe with SIM slot (PCIe x1, USB 2.0)	1 x 2280 M.2 M-Key (SATA 3Gb/s) 1 x Full-size Mini PCIe with SIM slot (PCIe x1, USB 2.0)
<b>Internal I/O</b>	1 x 4-pin box power connector (+9V~36VDC) 1 x SATA power header 1 x System fan header 1 x Front panel header 1 x 2W Speaker out header 4 x USB 2.0 headers 3 x COM headers (RS-232) 1 x COM header (RS-232/422/485 & RI/5V/12V) 1 x Backlight Control header 1 x AT/ATX mode select jumper 1 x GPIO (8 bits) & SMBus header 1 x Buzzer header	1 x 4-pin box power connector (+9V~36VDC) 1 x SATA power header 1 x System fan header 1 x Front panel header 1 x 2W Speaker out header 4 x USB 2.0 headers 3 x COM headers (RS-232) 1 x COM header (RS-232/422/485 & RI/5V/12V) 1 x Backlight Control header 1 x AT/ATX mode select jumper 1 x GPIO (8 bits) & SMBus header 1 x Buzzer header	1 x 4-pin box power connector (+9V~36VDC) (+48VDC optional) 1 x SATA power header 1 x System fan header 1 x Front panel header 1 x 2W Speaker out header 4 x USB 2.0 headers 2 x COM headers (RS-232) 1 x COM header (RS-232/422/485) 1 x COM header (RS-232/422/485 & RI/5V/12V) 1 x Backlight Control header 1 x AT/ATX mode select jumper 1 x GPIO (8 bits) & SMBus header 1 x Buzzer header
<b>Rear I/O</b>	1 x Headphone Jack 1 x HDMI 1 x VGA 2 x RJ45 LAN Ports 2 x USB 3.2 Gen 1	1 x Headphone Jack 1 x HDMI 1 x VGA 2 x RJ45 LAN Ports 2 x USB 3.2 Gen 1	1 x Headphone Jack 1 x HDMI 1 x VGA 2 x RJ45 LAN Ports 1 x USB 2.0 1 x USB 3.2 Gen 1
<b>TPM</b>	1 x TPM header	1 x TPM header	1 x TPM header
<b>Operating Temp.</b>	-40°C to 85°C	-40°C to 85°C	-40°C to 85°C
<b>Ordering Information</b>	9MAPLKASMR-SI1 (Box packing)	9MAPLEASMR-SI1 (Box Packing)	9MBAYTASMR-SI1 (Box packing)

QBiP Wide Temperature Series/ QBi Series (10 x 10 Embedded Compact Board)

## QBi Series (10 x 10 Embedded Compact Board)

Preliminary



Model Name	QBi-1355A/ QBi-1335A/ QBi-1315EA	QBi-1165G7A/ QBi-1135G7A/ QBi-1115G4EA	QBi-8665A/ QBi-8365A
<b>CPU</b>	Intel® Core™ i7-1355U Processor, Intel® 7, 10 cores, 2P+8E, 12 threads, up to 5.0 GHz (QBi-1355A) Intel® Core™ i5-1335U Processor, Intel® 7, 10 cores, 2P+8E, 12 threads, up to 4.6 GHz (QBi-1335A) Intel® Core™ i3-1315UE Processor, Intel® 7, 6 cores, 2P+4E, 8 threads, up to 4.5 GHz (QBi-1315EA)	Intel® Core™ i7-1165G7 Processor, 10nm SuperFin, 4 cores, 8 threads, up to 4.7 GHz (QBi-1165G7A) Intel® Core™ i5-1135G7 Processor, 10nm SuperFin, 4 cores, 8 threads, up to 4.2 GHz (QBi-1135G7A) Intel® Core™ i3-1115G4E Processor, 10nm SuperFin, 2 cores, 4 threads, up to 3.90 GHz (QBi-1115G4EA)	Intel® Core™ i7-8665UE Processor, 14nm, 4 cores, 8 threads, up to 4.4 GHz, vPro support (QBi-8665A) Intel® Core™ i5-8365UE Processor, 14nm, 4 cores, 8 threads, up to 4.1 GHz, vPro support (QBi-8365A)
<b>Socket</b>	FCBGA1774	FCBGA1449	FCBGA1528
<b>Chipset</b>	SoC	SoC	SoC
<b>Memory</b>	2 x DDR5 SO-DIMM sockets, Max. Capacity 64 GB, Support Dual Channel DDR5 4800 MHz	2 x DDR4 SO-DIMM sockets, Max. Capacity 64 GB, Support Dual Channel DDR4 3200 MHz	2 x DDR4 SO-DIMM sockets, Max. Capacity 64 GB, Support Dual Channel DDR4 2400 MHz
<b>Ethernet</b>	1 x 2.5 GbE LAN ports (Intel® I226V) 1 x GbE LAN ports (Realtek® RTL8111H)	2 x GbE LAN Ports (Intel® I219V and Realtek® RTL8118-CG)	2 x GbE LAN Ports (Intel® I219LM and Realtek® RTL8111HS)
<b>Graphic</b>	Integrated Graphics Processor - Intel® Iris® Xe/UHD Graphics for 13th Gen Intel® Processors: 2 x HDMI 2.0 1 x DP 1.4 through USB Type C (DP Alt. mode) 3 independent display outputs	Integrated Graphics Processor - Intel® Iris® Xe® /UHD Graphics: 2 x HDMI 2.0 2 independent display outputs	Integrated Graphics Processor - Intel® UHD Graphics 620: 2 x HDMI 1.4 1 x eDP 3 independent display outputs
<b>Audio</b>	Realtek® Audio Codec	Realtek® Audio Codec	Realtek® Audio Codec
<b>Storage</b>	1 x SATA 6Gb/s Port	—	1 x SATA 6Gb/s Port (RAID 0/1)
<b>Expansion Slots</b>	1 x 2280 M.2 M-Key (PCIe x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0)	1 x 2280 M.2 M-Key (PCIe x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0)	1 x 2280 M.2 M-Key (PCIe x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0)
<b>Internal I/O</b>	1 x CPU fan header 1 x Front panel header 1 x Front panel audio header 1 x USB 2.0 header 1 x SATA Power header	1 x 2-pin power connector 1 x CPU fan header 1 x Front panel header 1 x Front panel audio header 1 x USB 2.0 header	1 x 2-pin power connector 1 x SATA/eDP Power header 1 x CPU fan header 1 x Front panel header 1 x Front panel audio header 1 x USB 2.0 header 1 x Vertical USB 3.2 Gen 1
<b>Front IO</b>	1 x USB 3.2 Gen 2x1 1 x Power button 1 x Audio Jack (Combo) 1 x USB 3.2 Type C Gen 2x1 (with DP Alt. mode) 1 x COM Port (RS-232/422/485)	2 x USB 3.2 Gen 2x1 1 x Power button 1 x COM Port (RS-232/422/485)	2 x USB 3.2 Gen 2x1 1 x Power button 1 x COM Port (RS-232/422/485)
<b>Rear IO</b>	2 x HDMI 2 x RJ45 LAN Ports 2 x USB 3.2 Gen 2x1 1 x Screw type DC Jack (+12V~24VDC)	2 x HDMI 2 x RJ45 LAN Ports 2 x USB 3.2 Gen 2x1 1 x Screw type DC Jack (+9V~48VDC)	2 x HDMI 2 x RJ45 LAN Ports 2 x USB 3.2 Gen 2x1 1 x Screw type DC Jack (+9V~36VDC)
<b>Side IO</b>	—	—	—
<b>TPM</b>	Onboard TPM 2.0 security chip INFINEON SLB9670VQ2.0	1 x TPM header	1 x TPM header (LPC)
<b>Operating Temp.</b>	0°C to 60°C	0°C to 60°C	0°C to 60°C
<b>Ordering Information</b>	9MRLU7AHMR-SI (Box packing) (QBi-1355A) 9MRLU5AHMR-SI (Box packing) (QBi-1335A) 9MRLU3AHMR-SI (Box packing) (QBi-1315EA)	9MTGU7AHMR-SI (Box packing) (QBi-1165G7A) 9MTGU5AHMR-SI (Box packing) (QBi-1135G7A) 9MTGU3AHMR-SI (Box packing) (QBi-1115G4EA)	9MWHLUDHMR-SI (Box packing) (QBi-8665A) 9MWHLUEHMR-SI (Box packing) (QBi-8365A)

## QBi Series (10 x 10 Embedded Compact Board)



QBi Series (10 x 10 Embedded Compact Board)

Model Name	QBi-8565A/ QBi-8265A/ QBi-8145A	QBi-6412A/ QBi-6210A
<b>CPU</b>	Intel® Core™ i7-8565U Processor, 14nm, 4 cores, 8 threads, up to 4.6 GHz (QBi-8565A) Intel® Core™ i5-8265U Processor, 14nm, 4 cores, 8 threads, up to 3.9 GHz (QBi-8265A) Intel® Core™ i3-8145UE Processor, 14nm, 2 cores, 4 threads, up to 3.9 GHz (QBi-8145A)	Intel® Celeron® J6412 Processor, 10nm, 4 cores, 4 threads, up to 2.6 GHz (QBi-6412A) Intel® Celeron® N6210 Processor, 10nm, 2 cores, 2 threads, up to 2.6 GHz (QBi-6210A)
<b>Socket</b>	FCBGA1528	FCBGA1493
<b>Chipset</b>	SoC	—
<b>Memory</b>	2 x DDR4 SO-DIMM sockets, Max. Capacity 64 GB, Support Dual Channel DDR4 2400 MHz	1 x DDR4 SO-DIMM socket, Max. Capacity 32 GB, Support Single Channel DDR4 3200 MHz
<b>Ethernet</b>	2 x GbE LAN Ports (Intel® I219V and Realtek® RTL8111HS)	2 x GbE LAN Ports (Intel® I211AT)
<b>Graphic</b>	Integrated Graphics Processor - Intel® UHD Graphics 620: 2 x HDMI 1.4 1 x eDP 3 independent display outputs	Integrated Graphics Processor - Intel® UHD Graphics for 10th Gen Intel® Processors: 2 x HDMI 2.0 2 independent display outputs
<b>Audio</b>	Realtek® Audio Codec	Realtek® Audio Codec
<b>Storage</b>	1 x SATA 6Gb/s Port (RAID 0/1)	1 x SATA 6Gb/s Port
<b>Expansion Slots</b>	1 x 2280 M.2 M-Key (PCIe x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0)	1 x 2280 M.2 M-Key (PCIe x2, SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0)
<b>Internal I/O</b>	1 x 2-pin power connector 1 x SATA/eDP power header 1 x CPU fan header 1 x Front panel header 1 x Front panel audio header 1 x USB 2.0 header 1 x Vertical USB 3.2 Gen 1	1 x 2-pin power connector 1 x SATA power header 1 x CPU fan header 1 x Front panel header 2 x USB 2.0 headers
<b>Front IO</b>	2 x USB 3.2 Gen 2x1 1 x Power button 1 x COM Port (RS-232/422/485)	2 x USB 3.2 Gen 2x1 1 x COM Port (RS-232) 1 x Combo Audio Jack (Headphone & Headset) 1 x Power button
<b>Rear IO</b>	2 x HDMI 2 x RJ45 LAN Ports 2 x USB 3.2 Gen 2x1 1 x Screw type DC Jack (+9V~36VDC)	2 x RJ45 LAN Ports 2 x HDMI 2 x USB 3.2 Gen 2x1 1 x Screw type DC Jack (+12V~19VDC)
<b>Side IO</b>	—	—
<b>TPM</b>	1 x TPM header (LPC)	—
<b>Operating Temp.</b>	0°C to 60°C	0°C to 60°C
<b>Ordering Information</b>	9MWHLUAHMR-SI (Box packing) (QBi-8565A) 9MWHLUBHMR-SI (Box packing) (QBi-8265A) 9MWHLUCHMR-SI (Box packing) (QBi-8145A)	9MEHLJAHMR-SI (Box packing) 9MEHLNAHMR-SI (Box packing)



## QBi Series (10 x 10 Embedded Compact Board)

New



Model Name	QBi-6412B	QBi-4125A
<b>CPU</b>	Intel® Celeron® J6412 Processor, 10nm, 4 cores, 4 threads, up to 2.6 GHz	Intel® Celeron® J4125 Processor, 14nm, 4 cores, 4 threads, up to 2.7 GHz
<b>Socket</b>	FCBGA1493	FCBGA1090
<b>Chipset</b>	—	SoC
<b>Memory</b>	1 x DDR4 SO-DIMM socket, Max. Capacity 32 GB, Support Single Channel DDR4 3200 MHz	1 x DDR4 SO-DIMM socket, Max. Capacity 8 GB, Support Single Channel DDR4 2400 MHz
<b>Ethernet</b>	2 x GbE LAN Ports (Realtek® RTL8111H)	2 x GbE LAN Ports (Intel® I211AT and Realtek® RTL8111HS)
<b>Graphic</b>	Integrated Graphics Processor - Intel® UHD Graphics for 10th Gen Intel® Processors: 2 x HDMI 2.0 2 independent display outputs	Integrated Graphics Processor - Intel® UHD Graphics 600: 2 x HDMI 1.4 1 x eDP 3 independent display outputs
<b>Audio</b>	Realtek® Audio Codec	Realtek® Audio Codec
<b>Storage</b>	1 x SATA 6Gb/s Port	1 x SATA 6Gb/s Port
<b>Expansion Slots</b>	1 x 2280 M.2 M-Key (PCIe x2, SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0)	1 x 2280 M.2 M-Key (SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0)
<b>Internal I/O</b>	1 x 2-pin power connector 1 x SATA power header 1 x CPU fan header 1 x Front panel header 2 x USB 2.0 headers	1 x SATA power header 1 x CPU fan header 1 x power button header 2 x USB 2.0 headers 1 x Speaker out header
<b>Front IO</b>	2 x USB 3.2 Gen 2x1 1 x COM Port (RS-232) 1 x Combo Audio Jack (Headphone & Headset) 1 x Power button	2 x USB 3.2 Gen 1 1 x COM Port (RS-232) 1 x Headphone Jack 1 x Power button
<b>Rear IO</b>	2 x RJ45 LAN Ports 2 x HDMI 2 x USB 3.2 Gen 2x1 1 x Screw type DC Jack (+12V~19VDC)	2 x RJ45 LAN Ports 2 x USB 3.2 Gen 1 2 x HDMI 1 x DC Jack (+12V~19VDC)
<b>Side IO</b>	—	—
<b>TPM</b>	Onboard TPM 2.0 security chip Infineon SLB9670VQ2.0	—
<b>Operating Temp.</b>	0°C to 60°C	0°C to 60°C
<b>Ordering Information</b>	9MEHLJBHMR-SI (Box packing)	9MGMLKAHMR-SI (Box packing)

## Pico-ITX Series

Preliminary



Pico-ITX Series/ COM Express Series

Model Name	PICO-G350A/ PICO-G350B
<b>CPU</b>	MT8365 Arm® Quad-Core Cortex®-A53 up to 2.0GHz
<b>Socket</b>	FCBGA
<b>Chipset</b>	—
<b>Memory</b>	LPDDR4X 4GB (on board)
<b>Ethernet</b>	Integrated 100M Ethernet
<b>Graphic</b>	Integrated Graphics Processor – Mali-G52: 1 x HDMI 1 x LVDS (Optional) 1 x MIPI-DSI (Optional)
<b>Audio</b>	Integrated - Audio codec and amplifier
<b>Storage</b>	eMMC 8GB/32GB (option) –on board (8G: Yocto, 32GB: Android)
<b>Expansion Slots</b>	1 x 2230 M.2 E-Key, support AW-CB451NF-D (IEEE 802.11a/b/g/n/ac Wireless LAN 2T2R and Bluetooth 5.1 Combo Module)
<b>USB</b>	2 x USB 2.0 Ports on the back panel 2 x USB 2.0/1.1 Ports available through the internal USB headers 1 x OTG USB (internal micro-USB Connector)
<b>Internal I/O</b>	1 x Front panel header 1 x Front panel audio header 1 x Speaker header (2W/ 4ohm) 2 x UART 2 x USB 2.0 header (host) 1 x USB 2.0 header (OTG) 1 x GPIO (8 bits) header 1 x MIPI-CSI (Optional) 1 x Micro SD slot
<b>Rear I/O</b>	1 x DC In power Jack - System adapter 12~24V 2 x USB 2.0 Ports (Host) 1 x RJ45 LAN Port 1 x HDMI
<b>TPM</b>	—
<b>Operating Temp.</b>	0°C to 60°C
<b>Ordering Information</b>	9MI350AJMR-SI (Box packing), including 8G eMMC, support Yocto OS 9MI350BJMR-SI (Box packing), including 32G eMMC, support Android OS

## COM Express Series

New



New



Model Name	CE6-6412A	Model Name	CE6-Evaluation board
<b>Form Factor</b>	COM Express® R3.0 Compact Module Type 6 (95mm x 95mm)	<b>COM Express</b>	PICMG COM Express® R3.0 Type6 Type 6 pinout compatible
<b>CPU</b>	Intel® Celeron® J6412 Processor 10nm, 4 cores, 4 threads, up to 2.60 GHz	<b>Ethernet</b>	2 x GbE LAN Ports (Realtek RTL8111H)
<b>Socket</b>	FCBGA1493	<b>Graphic Support</b>	Integrated Graphics Processor : 2 x HDMI 2.0 1 x LVDS or eDP 3 independent display outputs
<b>Memory</b>	2 x DDR4 SO-DIMM sockets, Max. Capacity 32 GB, Support Dual Channel DDR4 3200 MHz	<b>Audio</b>	Realtek® Audio Codec
<b>BIOS</b>	AMI UEFI 256Mbit	<b>Storage</b>	1 x SATA 6Gb/s Port
<b>Super I/O</b>	ITE IT8613E/NX	<b>Expansion Slots</b>	1 x PCIe x1 (Gen3 x1) 1 x 2280 M.2 M-Key (SATA 6Gb/s) 1 x 2230 M.2 E-Key (PCIe x1, USB 2.0) 1 x Mini PCIe with SIM slot (PCIe x1, USB2.0)
<b>Graphic Support</b>	Intel® UHD Graphics for 10th Gen. Intel Processors - LCD (LVDS/eDP): LVDS dual channel: 1920 x 1200 @60Hz (option support eDP 3840x2160 @60Hz) - 2 x DDI ports support configurable HDMI/ DisplayPort HDMI 2.0b: 4096 x 2160 @60Hz 3 independent display outputs	<b>Internal I/O</b>	1 x 24 pin ATX main power connector 1 x SATA Power connector 1 x System fan header 1 x Front panel header 1 x Front panel audio header 4 x COM headers (RS-232/422/485 & RI/5V/12V) 1 x Backlight Control header 1 x 2W Speaker out header 2 x USB 2.0 headers 1 x Buzzer
<b>Audio</b>	Intel® HD Audio	<b>Rear I/O</b>	2 x Audio Jacks (Line out, Mic in) 2 x HDMI 2 x RJ45 LAN Ports 3 x USB 3.2 Gen 1 1 x USB 2.0
<b>Storage</b>	2 x SATA 6Gb/s Ports	<b>Operating Temp.</b>	0°C to 60°C
<b>Expansion Slots</b>	6 x PCI Express x1 (Gen3)	<b>Ordering Information</b>	9CICC1MR-SI (Box packing)
<b>USB</b>	2 x USB 3.2 (Gen2) (10Gb/s) 2 x USB 3.2 (Gen2) (10Gb/s) - Optional Ports by PCIe co-lay 8 x USB 2.0 Ports (480 Mbps)		
<b>Internal header</b>	1 x SPI 1 x SMBUS 1 x I2C 1 x GPIO (8 bits) 1 x Smart Fan header		
<b>Power Requirement</b>	Vin: 8.5V ~ 20V; VSB: 4.75V ~ 5.25V; RTC Battery: 2.0V ~ 3.3V		
<b>Watch Dog</b>	65536 level, 0 ~ 65535 sec		
<b>Operating Temp.</b>	0°C to 60°C		
<b>Ordering Information</b>	9MEHLJACMR-SI (Box packing)		

## MXM Series

New



Preliminary



MXM Series

Model Name	MXM-A-A370M	MXM-B-A730M
<b>Dimension</b>	MXM module type A (82mm x 70mm)	MXM module type B (82mm x 105mm)
<b>Processor</b>	Intel® Arc™ A370M Graphics Microarchitecture : Xe HPG Xe-cores : 8 Intel® XMN Engines : 128 Graphics clock : 1550 MHZ TGP : 35-50W	Intel® Arc™ A730M Graphics Microarchitecture : Xe HPG Xe-cores : 24 Intel® XMN Engines : 384 Graphics clock : 1100 MHZ TGP : 80-120W
<b>PCI Express configurations</b>	PCI Express 4.0 x8	Up to PCI Express 4.0 x16
<b>Memory</b>	GDDR6 4GB, 64bit memory bus Memory speed: 14 Gbps Bandwidth: 112 GB/s	GDDR6 12GB, 192bit memory Bus Memory speed : 14 Gbps Bandwidth: 336 GB/s
<b>Graphics</b>	Reserved 4 x DP 2.0 4 independent display outputs	Reserved 4 x DP 2.0 4 independent display outputs
<b>Operating Temp.</b>	0°C to 60°C	0°C to 60°C
<b>Ordering Information</b>	9CMBIE1MR-SI (Box packing)	9CMBIE2MR-SI (Box packing)



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# GIGAIPC

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