# GIGAIPC

## GIGABYTE GROUP

# Building a SMARTER Tomorrow

# Company Profile

**GIGAIPC**

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.

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.

**Customer Driven**

- **01 Technology** • Support • Advanced
- **02 Flexibility** • Off-the-shelf OEM/ODM • High-mix Low Volume
- **03 Quality** • Design • Service • Production
- **04 Service** • Customization • Global Service
- **05 Capability** • Technical Support • Development Schedule

## Key Advantages to work with GIGAIPC

| | |
|---|---|
| **Technology** | 1. Intel®, AMD etc. Key vendor direct support<br>2. Latest technical and over 10 years RD development experiences<br>3. Large coverage rate of design verification |
| **Flexibility** | 1. Huge off-the-shelf products combination and rich ODM/OEM experiences<br>2. Multiple manufacturing sites for different high-mix and low-volume requirements<br>3. Task-force team with multiple functions to align customer's requirements |
| **Quality** | 1. Component IPC, audit and approval system<br>2. Rich resources and equipments on design and manufacture quality system<br>3. Emphasizing closed-loop of PDCA cycle for continuous improvement |
| **Service** | 1. Worldwide RMA service coverage more than 80 service centers globally |
| **Capability** | 1. Customization capability<br>2. Direct field application engineer support and quick response<br>3. Customized manufacturing process, quality control and delivery solutions |

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**GIGAIPC**

## QBiX Series

| Model Name | QBiX-WHLA8265H-A1 | QBiX-WHLA8145H-A1 | QBiX-KBLA7100H-A1 |
|---|---|---|---|
| **Dimension** | 138W x 118D x 74.2H (mm) | 138W x 118D x 74.2H (mm) | 138W x 118D x 74.2H (mm) |
| **CPU** | Intel® Core™ i5-8265U Processor, 14nm, 4 cores, 8 threads, up to 3.9 GHz, TDP 15W | Intel® Core™ i3-8145UE Processor, 14nm, 2 cores, 4 threads, up to 3.9 GHz, TDP 15W | Intel® Core™ i3-7100U Processor, 14nm, 2 cores, 4 threads, 2.4 GHz, TDP 15W |
| **Chipset** | SOC | SOC | SOC |
| **Memory** | 2 x DDR4 SO-DIMM sockets, Max. Capacity 32 GB, Support Dual Channel DDR4 2400 MHz | 2 x DDR4 SO-DIMM sockets, Max. Capacity 32 GB, Support Dual Channel DDR4 2400 MHz | 2 x DDR4 SO-DIMM sockets, Max. Capacity 32 GB, Support Dual Channel DDR4 2133 MHz |
| **Ethernet** | 2 x GbE LAN ports (Intel® I219V and Realtek® RTL8111HS) | 2 x GbE LAN ports (Intel® I219V and Realtek® RTL8111HS) | 1 x GbE LAN port (Intel® I219V) |
| **Graphic** | Integrated Graphics Processor - Intel® UHD Graphics 620: 2 x HDMI 1.4 2 independent display outputs | Integrated Graphics Processor - Intel® UHD Graphics 620: 2 x HDMI 1.4 2 independent display outputs | Integrated Graphics Processor - Intel® HD Graphics 620: 1 x HDMI 2.0, 1 x mini Display Port 2 independent display outputs |
| **Audio** | Realtek® ALC269 | Realtek® ALC269 | Intel® Integrated Audio |
| **Storage** | 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) |
| **Expansion Slots** | 1 x 2280 M.2 M-Key (PCIe x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key 1 x Vertical USB 3.0 | 1 x 2280 M.2 M-Key (PCIe x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key 1 x Vertical USB 3.0 | 1 x 2280 M.2 M-Key (PCIe x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key |
| **Front I/O** | 2 x USB 3.1 Gen2 1 x Power switch 2 x External Antenna Holes (Optional) 1 x Power & HDD LED 1 x COM port (RS-232/422/485) | 2 x USB 3.1 Gen2 1 x Power switch 2 x External Antenna Holes (Optional) 1 x Power & HDD LED 1 x COM port (RS-232/422/485) | 2 x USB 3.0 1 x Power switch 2 x External Antenna Holes (Optional) 1 x Power LED 1 x HDD LED |
| **Rear I/O** | 2 x HDMI 2 x RJ45 LAN ports 2 x USB 3.1 Gen2 1 x Screw type DC Jack | 2 x HDMI 2 x RJ45 LAN ports 2 x USB 3.1 Gen2 1 x Screw type DC Jack | 1 x RJ45 LAN port 2 x USB 3.0 1 x HDMI 1 x Mini Display port 1 x COM port (RS-232) 1 x Screw type DC Jack |
| **Side I/O** | — | — | — |
| **TPM** | — | — | — |
| **Power** | +9V~36VDC (Adapter 19V/90W) | +9V~36VDC (Adapter 19V/90W) | +12V~24VDC (Adapter 19V/65W) |
| **Operating Temp.** | 0°C to 50°C | 0°C to 50°C | 0°C to 50°C |
| **Mounting** | Wall mount | Wall mount | Wall mount |
| **Ordering Information** | 6BQB8265AMR-SI (Box packing) | 6BQB8145AMR-SI (Box packing) | 6BCKAAMR-SI (Box packing) |

## QBiX Series



Coming Soon...

| Model Name | QBiX2-GLKA5005H-A1 | QBiX-GLKA5005H-A1 | QBiX-GLKA4125-A1 | QBiX-APLA4200H-A1 |
|---|---|---|---|---|
| **Dimension** | 118W x 109.4D x 74.4H (mm) | 118W x 109.4D x 54.4H (mm) | 118W x 109.4D x 44.4H (mm) | 118W x 109.4D x 54.4H (mm) |
| **CPU** | Intel® Pentium® Silver J5005 Processor, 14nm ,4 cores, 4 threads, up to 2.8 GHz, TDP 10W | Intel® Pentium® Silver J5005 Processor, 14nm, 4 cores, 4 threads, up to 2.8 GHz, TDP 10W | Intel® Celeron® Processor J4125, 14nm, 4 cores, 4 threads, up to 2.7 GHz, TDP 10W | Intel® Pentium® Processor N4200, 14nm, 4 cores, 4 threads, up to 2.5 GHz, TDP 6W |
| **Chipset** | SOC | SOC | SOC | SOC |
| **Memory** | 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 | 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 1866 MHz |
| **Ethernet** | 1 x GbE LAN port (Realtek® RTL8111HS) | 1 x GbE LAN port (Realtek® RTL8111HS) | 2 x GbE LAN ports (Intel® I211AT and Realtek® RTL8111HS) | 1 x GbE LAN port (Realtek® RTL8111HS) |
| **Graphic** | Integrated Graphics Processor - Intel® UHD Graphics 605: 1 x HDMI 1.4 1 x VGA 2 independent display outputs | Integrated Graphics Processor - Intel® UHD Graphics 605: 1 x HDMI 1.4 1 x VGA 2 independent display outputs | Integrated Graphics Processor - Intel® UHD Graphics 600: 2 x HDMI 1.4 2 independent display outputs | Integrated Graphics Processor - Intel® HD Graphics 505: 1 x HDMI 1.4 1 x VGA 2 independent display outputs |
| **Audio** | Realtek® ALC891 | Realtek® ALC891 | Realtek® ALC891 | Realtek®ALC255 |
| **Storage** | 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) |
| **Expansion Slots** | 1 x 2230 M.2 E-Key | 1 x 2230 M.2 E-Key | 1 x 2280 M.2 M-Key (SATA 6Gb/s) 1 x 2230 M.2 E-Key | 1 x 2230 M.2 E-Key |
| **Front I/O** | 2 x USB 3.0 2 x USB 2.0 3 x COM ports (RS-232) 1 x Headphone Jack 1 x Microphone Jack 1 x Power button with LED | 2 x USB 3.0 1 x COM port (RS-232) 1 x Headphone Jack 1 x Microphone Jack 1 x Power button with LED | 2 x USB3.0 1 x COM Port (RS-232) 1 x Headphone Jack 1 x Power button with LED | 2 x USB 3.0 1 x Power button with LED 1 x Headphone Jack |
| **Rear I/O** | 1 x RJ45 LAN port 2 x USB 3.0 1 x HDMI 1 x VGA 2 x External Antenna Holes (Optional) 2 x COM ports (RS-232) 1 x Screw type DC Jack | 1 x RJ45 LAN port 2 x USB 3.0 1 x HDMI 1 x VGA 2 x External Antenna Holes (Optional) | 2 x RJ45 LAN ports 2 x USB 3.0 2 x HDMI 2 x External Antenna Hole (Optional) 1 x Screw type DC Jack | 1 x RJ45 LAN port 2 x USB 3.0 1 x HDMI 1 x VGA 2 x External Antenna Holes (Optional) |
| **Side I/O** | 2 x USB 2.0 1 x RJ11 Cash Draw | 1 x DC Jack | — | 1 x DC Jack |
| **TPM** | — | — | — | — |
| **Power** | +19VDC (Adapter 19V/65W) | +12V~19VDC (Adapter 19V/65W) | +12V~19VDC (Adapter 19V/65W) | +12V~24VDC (Adapter 19V/65W) |
| **Operating Temp.** | 0°C to 50°C | 0°C to 50°C | 0°C to 50°C | 0°C to 50°C |
| **Mounting** | VESA 75/100 | VESA 75/100 | VESA 75/100 | VESA 75/100 |
| **Ordering Information** | 6BQ25005AMR-SI (Box packing) | 6BCGAAMR-SI (Box packing) | TBD | 6BCBAAMR-SI (Box packing) |

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## QBiX-Pro Series



| Model Name | QBiX-Pro-WHLA8265H-A1 | QBiX-Pro-WHLA8145H-A2 | QBiX2-Pro-KBLB7100H-A1 |
|---|---|---|---|
| Dimension | 178W x 125D x 52.7H (mm) | 178W x 125D x 52.7H (mm) | 178W x 125D x 90.2H (mm) |
| CPU | Intel® Core™ i5-8265U Processor, 14nm, 4 cores, 8 threads, up to 3.9 GHz, TDP 15W | Intel® Core™ i3-8145UE Processor, 14nm, 2 cores, 4 threads, up to 3.9 GHz, TDP 15W | Intel® Core™ i3-7100U Processor, 14nm, 2 cores, 4 threads, 2.4 GHz, TDP 15W |
| Chipset | SOC | SOC | SOC |
| Memory | 2 x DDR4 SO-DIMM sockets, Max. Capacity 32 GB, Support Dual Channel DDR4 2400 MHz | 2 x DDR4 SO-DIMM sockets, Max. Capacity 32 GB, Support Dual Channel DDR4 2400 MHz | 2 x DDR4 SO-DIMM sockets, Max. Capacity 32 GB, Support Dual Channel DDR4 2133 MHz |
| Ethernet | 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) |
| Graphic | Integrated Graphics Processor - Intel® UHD Graphics 620: 2 x HDMI 1.4 2 independent display outputs | Integrated Graphics Processor - Intel® UHD Graphics 620: 2 x HDMI 1.4 2 independent display outputs | Integrated Graphics Processor - Intel® HD Graphics 620: 1 x HDMI 2.0, 1 x Display Port 2 independent display outputs |
| Audio | Realtek® ALC269 | Realtek® ALC269 | Realtek® ALC269 |
| Storage | 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) |
| Expansion Slots | 1 x 2280 M.2 M-Key (PCIe x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key 1 x Full-size Mini PCIe with SIM slot | 1 x 2280 M.2 M-Key (PCIe x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key 1 x Full-size Mini PCIe with SIM slot | 1 x 2280 M.2 M-Key (PCIe x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key 1 x Full-size Mini PCIe with SIM slot |
| Front I/O | 2 x RJ45 LAN ports 4 x USB 3.1 Gen2 2 x HDMI 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 3.1 Gen2 2 x HDMI 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 3.0 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) 4 x COM ports (RS-232/422/485) |
| Rear I/O | 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 DC Jack Screw Type | 4 x USB 2.0 3 x COM ports (RS-232) 1 x GPIO (8 bits), SMBUS & Remote control 1 x 3-pin Terminal Block |
| Side I/O | 2 x External Antenna Holes (Optional) | 2 x External Antenna Holes (Optional) | 2 x External Antenna Holes (Optional) |
| TPM | — | — | — |
| Power | +9V~36VDC (Full Range) | +9V~36VDC (Adapter 19V/90W) | +9V~36VDC (Full Range) |
| Operating Temp. | 0°C to 50°C | 0°C to 50°C | 0°C to 50°C |
| Mounting | Wall mount (Optional) | Wall mount (Optional) | Wall mount (Optional) |
| Ordering Information | 6BQP8265AMR-SI (Box packing) | 6BQP8145AMR-SI (Box packing) | 9BQD7100AMR-SI (Box packing) |
| Components | — | — | Memory: 4GB DDR4 SO-DIMM Storage: 128GB M.2 SSD |

QBiX-Pro Series

## QBiX-Pro Series



| Model Name | QBiX-Pro-KBLB7200H-A2 | QBiX-Pro-KBLB7100H-A1 | QBiX-Pro-KBLB7100H-B1 |
|---|---|---|---|
| Dimension | 178W x 125D x 52.7H (mm) | 178W x 125D x 52.7H (mm) | 178W x 125D x 52.7H (mm) |
| CPU | Intel® Core™ i5-7200U Processor, 14nm, 2 cores, 4 threads, up to 3.1 GHz, TDP 15W | Intel® Core™ i3-7100U Processor, 14nm, 2 cores, 4 threads, up to 2.4 GHz, TDP 15W | Intel® Core™ i3-7100U Processor, 14nm, 2 cores, 4 threads, up to 2.4 GHz, TDP 15W |
| Chipset | SOC | SOC | SOC |
| Memory | 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 |
| Ethernet | 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) |
| Graphic | 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 620: 1 x HDMI 2.0, 1 x Display Port 2 independent display outputs |
| Audio | Realtek® ALC269 | Realtek® ALC269 | Realtek® ALC269 |
| Storage | 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) |
| Expansion Slots | 1 x 2280 M.2 M-Key (PCIe x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key 1 x Full-size Mini PCIe with SIM slot | 1 x 2280 M.2 M-Key (PCIe x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key 1 x Full-size Mini PCIe with SIM slot | 1 x 2280 M.2 M-Key (PCIe x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key 1 x Full-size Mini PCIe with SIM slot |
| Front I/O | 2 x RJ45 LAN ports 4 x USB 3.0 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 3.0 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 3.0 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) |
| Rear I/O | 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 2 x COM ports (RS-232) 1 x GPIO (8 bits) 1 x Headphone Jack 1 x 3-pin Terminal Block |
| Side I/O | 2 x External Antenna Holes (Optional) | 2 x External Antenna Holes (Optional) | 2 x External Antenna Holes (Optional) |
| TPM | — | — | — |
| Power | +9V~36VDC (Adapter 19V/65W) | +9V~36VDC (Full Range) | +9V~36VDC (Full Range) |
| Operating Temp. | 0°C to 50°C | 0°C to 50°C | 0°C to 50°C |
| Mounting | Wall mount (Optional) | Wall mount (Optional) | Wall mount (Optional) |
| Ordering Information | 6BQP7200AMR-SI (Box packing) | 6BCKACMR-SI (Box packing) | 6BQP7100AMR-SI (Box packing) |
| Components | — | — | — |

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## QBiX-Pro Series

| Model Name | QBiX-Pro-KBLB3965H-A1 | QBiX2-Pro-APLB4200H-A1 | QBiX-Pro-APLB4200H-A1 |
|---|---|---|---|
| Dimension | 178W x 125D x 52.7H (mm) | 178W x 125D x 90.2H (mm) | 178W x 125D x 52.7H (mm) |
| CPU | Intel® Celeron® Processor 3965U, 14nm, 2 cores, 2 threads, up to 2.2 GHz, TDP 15W | Intel® Pentium® Processor N4200, 14nm, 4 cores, 4 threads, up to 2.5 GHz, TDP 6W | Intel® Pentium® Processor N4200, 14nm, 4 cores, 4 threads, up to 2.5 GHz, TDP 6W |
| Chipset | SOC | SOC | SOC |
| Memory | 2 x DDR4 SO-DIMM sockets, Max. Capacity 32 GB, Support Dual Channel DDR4 2133 MHz | 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 |
| Ethernet | 2 x GbE LAN ports (Intel® I219V and Intel® I211AT) | 2 x GbE LAN ports (Intel® I211AT) | 2 x GbE LAN ports (Intel® I211AT) |
| Graphic | Integrated Graphics Processor - Intel® HD Graphics 610: 1 x HDMI 2.0, 1 x Display Port 2 independent display outputs | 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 |
| Audio | Realtek® ALC269 | Realtek® ALC269 | Realtek® ALC269 |
| Storage | 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) |
| Expansion Slots | 1 x 2280 M.2 M-Key (SATA 6Gb/s) 1 x 2230 M.2 E-Key 1 x Full-size Mini PCIe with SIM slot | 1 x 2242 M.2 M-Key (SATA 6Gb/s) 1 x Full-size Mini PCIe with SIM slot | 1 x 2242 M.2 M-Key (SATA 6Gb/s) 1 x Full-size Mini PCIe with SIM slot |
| Front I/O | 2 x RJ45 LAN ports 4 x USB 3.0 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 2 x USB 3.0 1 x HDMI 1 x VGA 1 x Power switch 1 x Power & HDD LED 1 x Headphone Jack 4 x COM ports (RS-232/422/485 & RI/5V/12V) | 2 x RJ45 LAN ports 2 x USB 3.0 1 x HDMI 1 x VGA 1 x Power switch 1 x Power & HDD LED 1 x Headphone Jack |
| Rear I/O | 2 x USB 2.0 3 x COM ports (RS-232) 1 x 3-pin Terminal Block | 6 x USB 2.0 1 x COM port (RS-232/422/485 & RI/5V/12V) 3 x COM ports (RS-232) 1 x GPIO (8 bits), SMBUS & Remote control 1 x 3-pin Terminal Block | 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 |
| Side I/O | 2 x External Antenna Holes (Optional) | 2 x External Antenna Holes (Optional) | 2 x External Antenna Holes (Optional) |
| TPM | — | — | — |
| Power | +9V~36VDC (Full Range) | +9V~36VDC (Full Range) | +9V~36VDC (Full Range) |
| Operating Temp. | 0°C to 50°C | 0°C to 50°C | 0°C to 50°C |
| Mounting | Wall mount (Optional) | Wall mount (Optional) | Wall mount (Optional) |
| Ordering Information | 6BQP3965AMR-SI (Box packing) | 9BQD4200AMR-SI (Box packing) | 6BCBABMR-SI (Box packing) |
| Built-in Components | — | Memory: 4GB DDR3L SO-DIMM Storage: 128GB M.2 SSD | — |

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## QBiX-Pro Series




| Model Name | QBiX-Pro-APLB4200H-B1 | QBiX-Pro-BYTA1900H-A1 |
|---|---|---|
| Dimension | 178W x 125D x 52.7H (mm) | 178W x 125D x 52.7H (mm) |
| CPU | Intel® Pentium® Processor N4200, 14nm, 4 cores, 4 threads, up to 2.5 GHz, TDP 6W | Intel® Celeron® Processor J1900, 22nm, 4 cores, 4 threads, up to 2.42 GHz, TDP 10W |
| Chipset | SOC | SOC |
| Memory | 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 |
| Ethernet | 2 x GbE LAN ports (Intel® I211AT) | 2 x GbE LAN ports (Intel® I211AT) |
| Graphic | 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: 1 x HDMI 1.4 1 x VGA 2 independent display outputs |
| Audio | Realtek® ALC269 | Realtek® ALC269 |
| Storage | 1 x 2.5" HDD/SSD (SATA 6Gb/s) | 1 x 2.5" HDD/SSD (SATA 3Gb/s) |
| Expansion Slots | 1 x 2242 M.2 M-Key (SATA 6Gb/s) 1 x Full-size Mini PCIe with SIM slot | 1 x 2280 M.2 M-Key (SATA 3Gb/s) 1 x Full-size Mini PCIe with SIM slot |
| Front I/O | 2 x RJ45 LAN ports 2 x USB 3.0 1 x HDMI 1 x VGA 1 x Power switch 1 x Power & HDD LED 1 x Headphone Jack | 2 x RJ45 LAN ports 1 x USB 3.0 1 x USB 2.0 1 x HDMI 1 x VGA 1 x Power switch 1 x Power & HDD LED 1 x Headphone Jack |
| Rear I/O | 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 | 2 x USB 2.0 1 x COM port (RS-232 & RI/5V/12V) 3 x COM ports (RS-232) 1 x 3-pin Terminal Block |
| Side I/O | 2 x External Antenna Holes (Optional) | 2 x External Antenna Holes (Optional) |
| TPM | — | — |
| Power | +9V~36VDC (Full Range) | +9V~36VDC (Full Range) |
| Operating Temp. | 0°C to 50°C | 0°C to 50°C |
| Mounting | Wall mount (Optional) | Wall mount (Optional) |
| Ordering Information | 6BQP4200AMR-SI (Box packing) | 6BQP1900AMR-SI (Box packing) |
| Built-in Components | — | — |

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## QBiX-Pro Series

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| Model Name | QBiX-Pro-KBLB7100HD-A1 | QBiX-Pro-GLKA5005HD-A1 | QBiX-Pro-BYTA1900HD-A1 |
|---|---|---|---|
| Dimension | 160W x 118D x 62.6H (mm) | 160W x 118D x 62.6H (mm) | 160W x 118D x 62.6H (mm) |
| CPU | Intel® Core™ i3-7100U Processor, 14nm, 2 cores, 4 threads, up to 2.40 GHz, TDP 15W | Intel® Pentium® Silver J5005 Processor, 14nm, 4 cores, 4 threads, up to 2.8 GHz, TDP 10W | Intel® Celeron® Processor J1900, 22nm, 4 cores, 4 threads, up to 2.42 GHz, TDP 10W |
| Chipset | SOC | SOC | SOC |
| Memory | 2 x DDR4 SO-DIMM sockets, Max. Capacity 32 GB, Support Dual Channel DDR4 2133 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 |
| Ethernet | 2 x GbE LAN ports (Intel® I219V and Intel® I211AT) | 2 x GbE LAN ports (Intel® I211AT) | 2 x GbE LAN ports (Intel® I211AT) |
| Graphic | Integrated Graphics Processor - Intel® HD Graphics 620 support 1 x HDMI 2.0 1 x Display Port 2 independent display outputs | Integrated Graphics Processor - Intel® UHD Graphics 605: 1 x HDMI 1.4 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 |
| Audio | Realtek® ALC269 | Realtek® ALC269 | Realtek® ALC269 |
| Storage | 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) |
| Expansion Slots | 1 x 2280 M.2 M-Key (PCIe x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key 1 x Full-size Mini PCIe with SIM slot | 1 x 2280 M.2 M-Key (SATA 6Gb/s) 1 x 2230 M.2 E-Key 1 x Full-size Mini PCIe with SIM slot | 1 x 2280 M.2 M-Key (SATA 3Gb/s) 1 x Full-size Mini PCIe with SIM slot |
| Front I/O | 2 x RJ45 LAN ports 4 x USB 3.0 2 x USB 2.0 1 x HDMI 1 x Display Port 1 x COM port (RS-232/422/485 & RI/5V/12V) 2 x COM ports (RS-232) 1 x Power switch with LED 1 x HDD LED 1 x Headphone Jack | 2 x RJ45 LAN ports 4 x USB 3.0 1 x HDMI 1 x VGA 2 x COM ports (RS-232/422/485 & RI/5V/12V) 1 x Power switch with LED 1 x WiFi/HDD LED 1 x Remote control pin 1 x Headphone Jack 1 x External Antenna Hole (Optional) | 2 x RJ45 LAN ports 1 x USB 3.0 2 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) 1 x Power button 1 x HDD LED 1 x Headphone Jack |
| Rear I/O | 1 x Din Rail Mounting Support | 1 x Din Rail Mounting Support | 1 x Din Rail Mounting Support |
| Side I/O | 1 x GPIO (8 bits) 1 x 3-pin Terminal Block 3 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) |
| TPM | — | — | — |
| Power | +9V~36VDC (Full Range) | +9V~36VDC (Full Range) | +9V~36VDC (Full Range) |
| Operating Temp. | 0°C to 50°C | 0°C to 50°C | 0°C to 50°C |
| Mounting | DIN Rail/ Wall mount (Optional) | DIN Rail/ Wall mount (Optional) | DIN Rail/ Wall mount (Optional) |
| Ordering Information | TBD | TBD | TBD |
| Built-in Components | — | — | — |

QBiX-Pro Series/ QBiX-Plus Series

## QBiX-Pro Series




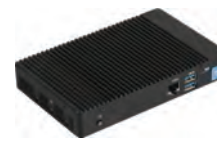| Model Name | QBiX-Pro-AMDA1605H-A1 | QBiX-Pro-AMDA1606H-A1 |
|---|---|---|
| Dimension | 178W x 125D x 52.7H (mm) | 178W x 125D x 52.7H (mm) |
| CPU | AMD® RYZEN™ Embedded V1605B,<br>14nm, 4 cores, 8 threads, 2.0 GHz, up to 3.6 GHz, TDP 25W | AMD® RYZEN™ Embedded R1606G,<br>14nm, 2 cores, 4 threads, 2.6 GHz, up to 3.5 GHz, TDP 25W |
| Chipset | SOC | SOC |
| Memory | 2 x DDR4 SO-DIMM sockets, Max. Capacity 32 GB,<br>Support Dual Channel DDR4 2400 MHz | 2 x DDR4 SO-DIMM sockets, Max. Capacity 32 GB,<br>Support Dual Channel DDR4 2400 MHz |
| Ethernet | 2 x GbE LAN port  (Realtek® RTL8111HS) | 2 x GbE LAN port  (Realtek® RTL8111HS) |
| Graphic | Integrated Graphics Processor-<br>AMD® Radeon™ Vega 8 Graphics:<br>4 x HDMI 2.0<br>4 independent display outputs | Integrated Graphics Processor-<br>AMD® Radeon™ Vega 3 Graphics:<br>3 x HDMI 2.0<br>3 independent display outputs |
| Audio | Realtek® ALC269 | Realtek® ALC269 |
| Storage | 1 x 2.5" HDD/SSD (SATA 6Gb/s) | 1 x 2.5" HDD/SSD (SATA 6Gb/s) |
| Expansion Slots | 1 x 2280 M.2 M-Key (PCIe x4, SATA 6Gb/s)<br>1 x 2230 M.2 E-Key<br>1 x Full-size Mini PCIe with SIM slot | 1 x 2280 M.2 M-Key (PCIe x4, SATA 6Gb/s)<br>1 x 2230 M.2 E-Key<br>1 x Full-size Mini PCIe with SIM slot |
| Front I/O | 2 x RJ45 LAN ports<br>2 x USB 3.0<br>4 x HDMI<br>1 x Power switch<br>1 x Power & HDD LED | 2 x RJ45 LAN ports<br>2 x USB 3.0<br>3 x HDMI<br>1 x Power switch<br>1 x Power & HDD LED |
| Rear I/O | 2 x USB 2.0<br>2 x COM ports (RS-232/422/485 & RI/5V/12V)<br>2 x COM ports (RS-232)<br>1 x Screw type DC Jack | 2 x USB 2.0<br>2 x COM ports (RS-232/422/485 & RI/5V/12V)<br>1 x GPIO (8 bits)<br>1 x Headphone Jack<br>1 x Screw type DC Jack |
| Side I/O | 2 x External Antenna Holes (Optional) | 2 x External Antenna Holes (Optional) |
| TPM | Onboard TPM 2.0 security chip<br>INFINEON SLB9665TT2.0 | Onboard TPM 2.0 security chip<br>INFINEON SLB9665TT2.0 |
| Power | +9V~36VDC (Adapter 19V/65W) | +9V~36VDC (Adapter 19V/65W) |
| Operating Temp. | 0°C to 50°C | 0°C to 50°C |
| Mounting | Wall mount (Optional) | Wall mount (Optional) |
| Ordering Information | 6BQP1605AMR-SI (Box packing) | 6BQP1606AMR-SI (Box packing) |

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# Embedded Computing Systems

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## QBiX-Jumbo Series



| Model Name | QBiX-JMB-CFLA310H-A1 | QBiX-JMB-CFLA310HG-A1 |
|---|---|---|
| Dimension | 224W x 257D x 77H (mm) | 224W x 343D x 146H (mm) (Discrete GFX Max. 250W) |
| CPU | Support for 8th/9th Generation Intel® Core™ i7/ i5/ i3 IOTG processors in the LGA1151 package, TDP under 65W | Support for 8th/9th Generation Intel® Core™ i7/ i5/ i3 IOTG processors in the LGA1151 package, TDP under 65W |
| Chipset | Intel® H310 Chipset | Intel® H310 Chipset |
| Memory | 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 |
| Ethernet | 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) |
| Graphic | Integrated Graphics Processor - Intel® HD Graphics:<br>1 x Display Port<br>1 x DVI-D<br>1 x VGA<br>2 independent display outputs | Integrated Graphics Processor - Intel® HD Graphics:<br>1 x Display Port<br>1 x DVI-D<br>1 x VGA<br>2 independent display outputs |
| Audio | Realtek® ALC269 | Realtek® ALC269 |
| Storage | 3 x 2.5" HDD/SSD (SATA 6Gb/s) | 3 x 2.5" HDD/SSD (SATA 6Gb/s) |
| Expansion Slots | 1 x 2280 M.2 M-Key (SATA 6Gb/s)<br>1 x 2230 M.2 E-Key<br>1 x Full-size Mini PCIe with SIM slot | 1 x 2280 M.2 M-Key (SATA 6Gb/s)<br>1 x 2230 M.2 E-Key<br>1 x Full-size Mini PCIe with SIM slot<br>1 x PCIe x1 (Gen3 x1)<br>1 x PCIe x16 (Gen3 x16) |
| Front I/O | 1 x Power Switch/ Power/ HDD LED<br>3 x Audio Jacks (Line in, Line out, Mic in)<br>1 x Display Port<br>1 x DVI-D<br>1 x VGA<br>2 x COM ports (RS-232/422/485 & RI/5V/12V)<br>2 x COM ports (RS-232)<br>4 x RJ45 LAN ports<br>4 x USB 3.0<br>4 x USB 2.0<br>1 x 4-pin Terminal Block<br>2 x External Antenna Hole (Optional) | 1 x Power Switch/ Power/ HDD LED<br>3 x Audio Jacks (Line in, Line out, Mic in)<br>1 x Display Port<br>1 x DVI-D<br>1 x VGA<br>2 x COM ports (RS-232/422/485 & RI/5V/12V)<br>2 x COM ports (RS-232)<br>4 x RJ45 LAN ports<br>4 x USB 3.0<br>4 x USB 2.0<br>1 x 4-pin Terminal Block<br>2 x External Antenna Hole (Optional) |
| Rear I/O | — | — |
| Power | +12V~48VDC | +12V~48VDC (+24V~48VDC: Discrete GFX Support) |
| Operating Temp. | -20°C to 50°C (CPU TDP 65W)<br>-20°C to 60°C (CPU TDP 35W) | -20°C to 50°C (CPU TDP 65W)<br>-20°C to 60°C (CPU TDP 35W) |
| Ordering Information | TBD | TBD |
| Build in Components | — | — |

## QBiX-Jumbo Series

| Model Name | QBiX-JWB-SKYA110H-A1 | QBiX-JWB-SKYB110H-A1 |
|---|---|---|
| Dimension | 273W x 203D x 91H(mm) | 273W x 203D x 91H(mm) |
| CPU | Supports for 6/7th Generation Intel® Core™ i7/ i5/ i3, Pentium® & Celeron® processors, TDP under 35W | Supports for 6/7th Generation Intel® Core™ i7/ i5/ i3, Pentium® & Celeron® processors, TDP under 35W |
| Chipset | Intel® H110 Chipset | Intel® H110 Chipset |
| Memory | 2 x DDR4 SO-DIMM sockets, Max. Capacity 32 GB, Support Dual Channel DDR4 2400/2133 MHz | 2 x DDR4 SO-DIMM sockets, Max. Capacity 32 GB, Support Dual Channel DDR4 2400/2133 MHz |
| Ethernet | 2 x GbE LAN ports (Intel® I219V and Intel® I211AT) | 6 x GbE LAN ports (1 x Intel® I219V and 5 x Intel® I211AT) |
| Graphic | Integrated Graphics Processor - Intel® HD Graphics:<br>1 x HDMI 1.4<br>1 x Display Port<br>1 x VGA<br>1 x LVDS<br>2 independent display outputs | Integrated Graphics Processor - Intel® HD Graphics:<br>1 x HDMI 1.4<br>1 x VGA<br>2 independent display outputs |
| Audio | Realtek® ALC269 | Realtek® ALC269 |
| Storage | 2 x 2.5" HDD/SSD (SATA 6Gb/s) | 2 x 2.5" HDD/SSD (SATA 6Gb/s) |
| Expansion Slots | 1 x 2280 M.2 M-Key (SATA 6Gb/s)<br>1 x Full/Half-size Mini PCIe with SIM slot | 1 x 2280/2242 M.2 M-Key (SATA 6Gb/s)<br>1 x Full-size mSATA |
| Front I/O | 1 x Power Switch<br>1 x Power & HDD LED<br>2 x Remote control header<br>4 x USB 2.0<br>4 x COM ports (RS-232/422/485)<br>1 x COM port (RS-232)<br>1 x GPIO (8 bit)<br>2 x External Antenna Hole (Optional) | 1 x Power Switch<br>1 x Power & HDD LED<br>2 x Remote control header<br>4 x USB 2.0<br>4 x COM ports (RS-232/422/485)<br>2 x COM ports (RS-232/4228/485 & RI/5V/12V)<br>1 x GPIO (8 bit)<br>2 x External Antenna Hole (Optional) |
| Rear I/O | 3 x Audio Jacks (Line in, Line out, Mic in)<br>1 x VGA<br>1 x HDMI<br>1 x Display Port<br>1 x LVDS<br>1 x COM port (RS-232/422/485 & RI/5V/12V)<br>2 x RJ45 LAN ports<br>2 x USB 3.0<br>2 x USB 2.0<br>1 x 3-pin Terminal Block<br>2 x External Antenna Hole (Optional) | 3 x Audio Jacks (Line in, Line out, Mic in)<br>1 x VGA<br>1 x HDMI<br>6 x RJ45 LAN ports<br>4 x USB 3.0<br>1 x 3-pin Terminal Block<br>2 x External Antenna Hole (Optional) |
| Power | +12V/+19V/+24VDC | +12V/+19V/+24VDC |
| Operating Temp. | 0°C to 50°C | 0°C to 50°C |
| Ordering Information | 9BQJH110AMR-SI (Box packing) | 9BQJH110BMR-SI (Box packing) |
| Build in Components | CPU:  Intel® Core™ i3-7100T Processor, 3M Cache, 3.40 GHz<br>Memory: 4GB DDR4 SO-DIMM<br>Storage: 128GB, 2280 M.2 SSD | CPU:  Intel® Core™ i3-7100T Processor, 3M Cache, 3.40 GHz<br>Memory: 4GB DDR4 SO-DIMM<br>Storage: 128GB, 2280 M.2 SSD |

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# Embedded Computing Systems

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## QBiX-Plus Series

*QBiX-Jumbo Series/ Embedded IoT Series*

| Model Name | QBiX-Plus-KBLA7100-A1 | QBiX-Plus-APLA3450-A1 |
|---|---|---|
| Dimension | 180W x 117D x 36H (mm) | 165W x 105D x 27H (mm) |
| CPU | Intel® Core™ i3-7100U Processor, 14nm, 2 cores, 4 threads, up to 2.40 GHz, TDP 15W | Intel® Celeron® Processor N3450, 14nm, 4 cores, 4 threads , up to 2.2 GHz, TDP 6W |
| Chipset | SOC | SOC |
| Memory | 2 x DDR4 SO-DIMM sockets, Max. Capacity 32 GB, Support Dual Channel DDR4 2133 MHz | 2 x DDR3L SO-DIMM sockets, Max. Capacity 8 GB, Support Dual Channel DDR3L 1866 MHz |
| Ethernet | 2 x GbE LAN ports (Intel® I219LM and Intel® I210AT) | 2 x GbE LAN ports (Realtek® RTL8111HS) |
| Graphic | Integrated Graphics Processor - Intel® HD Graphics 620: 2 x HDMI 2.0 2 independent display outputs | Integrated Graphics Processor - Intel® HD Graphics 500: 2 x HDMI 1.4 2 independent display outputs |
| Audio | Realtek® ALC255 | Realtek® ALC255 |
| Storage | — | — |
| Expansion Slots | 1 x 2280 M.2 M-Key (PCIe x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key 1 x Full-size Mini PCIe with SIM slot | 1 x 2280 M.2 M-Key (SATA 6Gb/s) 1 x 2230 M.2 E-Key 1 x Full-size Mini PCIe with SIM slot |
| Front I/O | 1 x USB3.1 Gen2 Type C 1 x USB3.1 Gen2 Type A 2 x USB3.0 1 x COM port (RS-232/422/485) 1 x Micro SD card slot 1 x Power button | 2 x USB 3.0 1 x COM port (RS-232/422/485)(RJ45) 1 x Micro SD card slot 1 x Power button |
| Rear I/O | 1 x Combo Audio Jack (Microphone & Headphone) 2 x RJ45 LAN ports 2 x USB 3.0 2 x HDMI 1 x DC Jack | 1 x Combo Audio Jack (Microphone & Headphone) 2 x RJ45 LAN ports 2 x USB 3.0 2 x HDMI 1 x DC Jack |
| Side I/O | 3 x External Antenna Hole (Optional) | 3 x External Antenna Hole (Optional) |
| TPM | — | — |
| Power | +19VDC (Adapter 19V/90W) | +19VDC (Adapter 19V/65W) |
| Operating Temp. | 0°C to 40°C | 0°C to 50°C |
| Mounting | VESA 75/100 | VESA 75/100 |
| Ordering Information | 9BCKABMR-SI (Box packing) | 9BCBBAMR-SI (Box packing) |
| Built-in Components | Memory: 4GB DDR4 SO-DIMM Storage: 128GB M.2 SSD | Memory: 4GB DDR4 SO-DIMM Storage: 128GB M.2 SSD |

## Embedded IoT Series



| Model Name | EL-30-4200 (rev. 1.0)<br>EL-30-3350 (rev. 1.0) | EL-20-3710-32G (rev. 1.0)<br>EL-20-3060-32G (rev. 1.0) |
|---|---|---|
| Dimension | 140.8W x 107.5D x 29.5H (mm) | 140.8W x 107.5D x 27H (mm) |
| CPU | Intel® Pentium® Processor N4200, 14nm, 4 cores, 4 threads, up to 2.5 GHz, TDP 6W (EL-30-4200)<br>Intel® Celeron® Processor N3350, 14nm, 2 cores, 2 threads, up to 2.4 GHz, TDP 6W (EL-30-3350) | Intel® Pentium® processor N3710, 14nm, 4 cores, 4 threads, up to 2.56 GHz, TDP 6 W (EL-20-3710-32G)<br>Intel® Celeron® processor N3060, 14nm, 2cores, 2 threads, up to 2.48 GHz, TDP 6 W (EL-20-3060-32G) |
| Chipset | FCBGA1296 | FCBGA1296 |
| Memory | 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 1600 MHz |
| Ethernet | 2 x GbE LAN Port (Realtek® RTL8111HS) | 2 x GbE LAN Port (Realtek® RTL8111HS) |
| Graphic | EL-30-4200:<br>Integrated Graphics Processor - Intel® HD Graphics 505:<br>2 x HDMI 1.4<br>EL-30-3350:<br>Integrated Graphics Processor - Intel® HD Graphics 500:<br>2 x HDMI 1.4<br>2 independent display outputs | Integrated Graphics Processor -  Intel® HD Graphics 500:<br>2 x HDMI 1.4<br>2 independent display outputs |
| Audio | Realtek® ALC255 | Realtek® ALC255 |
| Storage | 1 x eMMC 32GB | 1 x eMMC 32GB |
| Expansion Slots | 1 x Full-size Mini PCIe with SIM slot/ mSATA<br>1 x 2230 M.2 E-Key (Wi-Fi preinstalled)<br>1 x Zigbee module (Optional) | 1 x Full-size Mini PCIe/mSATA<br>1 x Half-size Mini PCIe |
| Front I/O | 4 x USB 3.0<br>1 x Micro SD Card Slot<br>1 x Audio Combo Jack (Headphone & Microphone)<br>1 x Power Button with LED<br>1 x HDD LED | 4 x USB 3.0<br>1 x Micro SD Card Slot<br>1 x Audio Combo Jack (Headphone & Microphone)<br>1 x Power Button with LED<br>1 x HDD LED<br>3 x LED reserved for user configuration |
| Rear I/O | 2 x RJ45 LAN ports<br>2 x HDMI<br>1 x COM port (RS-232/485)(RJ45 Type)<br>1 x DC Jack | 2 x RJ45 LAN ports<br>2 x HDMI<br>1 x DC Jack |
| Side I/O | 1 x COM port (RS-232)(Micro-B 5-pin)<br>1 x Kensington Lock<br>4 x External Antenna Hole | 1 x USB 2.0 (Micro-B)<br>1 x COM port (RS-232)(Micro-B 5-pin)<br>1 x Kensington Lock<br>3 x External Antenna Hole |
| TPM | 1 x TPM header | 1 x TPM header |
| Power | +12V~19VDC (Adapter 19V/65W) | +12V~19VDC (Adapter 19V/65W) |
| Operating Temp. | 0°C to 40°C | 0°C to 40°C |
| Ordering Information | 9BTCV9WMR-SI (Box packing) (EL-30-4200)<br>9BTCV8WMR-SI (Box packing) (EL-30-3350) | 9BTCV5MR-SI (Box packing)(EL-20-3710-32G)<br>9BTCV7MR-SI (Box packing)(EL-20-3060-32G) |
| Built-in Components | Memory: 2 x 2GB DDR3L SO-DIMM<br>ZigBee Module MS5168-M03<br>WiFi/BT Combo module: Intel® AC3168 | Memory: 2 x 2GB DDR3L SO-DIMM (EL-20-3710-32G)<br>Memory: 2 x 1GB DDR3L SO-DIMM (EL-20-3060-32G) |

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## SDM-L Series

| Model Name | SDM-7300L/ SDM-7100L | SDM-4000L | SDM-3350L-QV |
|---|---|---|---|
| Dimensions | SDM-Large, 175W x 100D (mm) | SDM-Large, 175W x 100D (mm) | SDM-Large, 175W x 100D (mm) |
| CPU | Intel® Core™ i5-7300U Processor, 14nm, 2 cores, 4 threads, up to 3.5 GHz, TDP 15W, VPro support (SDM-7300L) Intel® Core™ i3-7100U Processor, 14nm, 2 cores, 4 threads, up to 2.40 GHz, TDP 15W (SDM-7100L) | Intel® Celeron® Processor N4000, 14nm, 2 Cores, 2 threads, up to 2.6 GHz, TDP 6W | Intel® Celeron® Processor N3350, 14nm, 2 cores, 2 threads , up to 2.4 GHz, TDP 6W |
| VPro | Intel® vPro™ Platform Eligibility (SDM-7300L) | — | — |
| Memory | 2 x DDR4 SO-DIMM sockets, Max. Capacity 32 GB, Support Dual Channel DDR4 2133 MHz | 2 x DDR4 SO-DIMM sockets, Max. Capacity 8 GB, Support Dual Channel DDR4 2400 MHz | 2 x DDR3L SO-DIMM sockets, Max. Capacity 8 GB, Support Dual Channel DDR3L 1866 MHz |
| Ethernet | 1 x GbE LAN port (7300L: Intel® I219LM) (7100L: Intel® I219V) | 1 x GbE LAN port (Realtek® RTL8111HS) | 1 x GbE LAN port (Realtek® RTL8111HS) |
| Graphic | 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® UHD Graphics 600: 1 x HDMI 2.0 (SDM), 1 x Display Port (Rear/SDM) 2 independent display outputs | Integrated Graphics Processor - Intel® HD Graphics 500: 1 x HDMI 1.4 (SDM), 2 x Display Port (Rear/SDM) 3 independent display outputs (Full HD) |
| Audio | Intel® Integrated Audio | Intel® Integrated Audio | Intel® Integrated Audio |
| Storage | — | 1 x eMMC 32GB | 1 x eMMC 32GB |
| Expansion Slots | 1 x 2280 M.2 M-Key (PCIe x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key | 1 x 2280 M.2 M-Key (SATA 6Gb/s) 1 x 2230 M.2 E-Key | 1 x 2280 M.2 M-Key (SATA 6Gb/s) 1 x 2230 M.2 E-Key |
| Rear I/O | 1 x Display Port 1 x RJ45 LAN port 4 x USB 3.0 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 3.0 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 3.0 1 x Power/ HDD LED 2 x External Antenna Holes (Optional) 1 x Reset button 1 x Power button |
| TPM | 1 x TPM header | — | — |
| Operating Temp. | 0°C to 55°C | 0°C to 55°C | 0°C to 55°C |
| Ordering Information | 9MFLP3ALMR-SI (Box packing) (SDM-7300L) 9MFLP3ALNR-SI (Bulk packing) (SDM-7100L) 9MFLP3ALMR-SI (Box packing) (SDM-7100L) | 9MZGLKALNR-SI (Bulk packing) 9MZGLKALMR-SI (Box packing) | 9MAPLKALMR-SI (Box packing) |

## SDM-L Series

## EXTERNAL GPU KITS





| Model Name | SDM-3350L-HW |
|---|---|
| Dimensions | SDM-Large, 175W x 100D (mm) |
| CPU | Intel® Celeron® Processor N3350, 14nm, 2 cores, 2 threads , up to 2.4 GHz, TDP 6W |
| VPro | — |
| Memory | 2 x DDR3L SO-DIMM sockets, Max. Capacity 8 GB, Support Dual Channel DDR3L 1866 MHz |
| Ethernet | 1 x GbE LAN port  (Realtek® RTL8111HS) |
| Graphic | Integrated Graphics Processor - Intel® HD Graphics 500: 1 x HDMI 1.4 (SDM), 1 x Display Port (FHD)(SDM) 2 independent display outputs |
| Audio | Intel® Integrated Audio |
| Storage | 1 x eMMC 32GB |
| Expansion Slots | 1 x 2280 M.2 M-Key (SATA 6Gb/s) 1 x 2230 M.2 E-Key |
| Rear I/O | 1 x RJ45 LAN port 4 x USB 3.0 1 x Power/ HDD LED 2 x External Antenna Holes (Optional) 1 x Reset button 1 x Power button |
| TPM | — |
| Operating Temp. | 0°C to 55°C |
| Ordering Information | 9MAPLKBLMR-HW (Box packing) |

| Model Name | External Discrete GPU BOX Kit |
|---|---|
| Dimension | 172W x 370D x 102.5H (mm) |
| GFX Support | Full Length 30mm Max 260W Graphic Card |
| I/O | 4 x Ext. Mini SAS HD Port (PCIe x16) |
| PCIe support | PCIe x16 |
| Power | Flex ATX PSU 400W/500W (Optional) |
| Operating Temp. | 0°C to 35°C |

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# Embedded Boards

**GIGAIPC**

## Micro-ATX Series



| Model Name | uATX-H370A | uATX-H310A | uATX-H110A |
|---|---|---|---|
| CPU | Support for 8th/9th Generation Intel® Core™ i7/i5/i3, Pentium® & Celeron® processors, TDP under 65W | Support for 8th/9th Generation Intel® Core™ i7/i5/i3, Pentium® & Celeron® processors, TDP under 65W | Supports for 6/7th Generation Intel® Core™ i7/i5/i3, Pentium® & Celeron® processors, TDP under 65W |
| Socket | LGA 1151 | LGA 1151 | LGA 1151 |
| Chipset | Intel® H370 Chipset | Intel® H310 Chipset | Intel® H110 Chipset |
| Memory | 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 | 2 x DDR4 DIMM sockets, Max. Capacity 32 GB, Support Dual Channel DDR4 2400/2133 MHz |
| Ethernet | 2 x GbE LAN port (Intel® I219V and Realtek® RTL8111HS) | 2 x GbE LAN port (Intel® I219V and Realtek® RTL8111HS) | 2 x GbE LAN port (Intel® I219LM and Realtek® RTL8111HS) |
| Graphic | Integrated Graphics Processor - Intel® HD Graphics: 1 x HDMI 1.4 1 x DVI-D 1 x VGA 3 independent display outputs | Integrated Graphics Processor - Intel® HD Graphics: 1 x HDMI 1.4 1 x DVI-D 1 x VGA 2 independent display outputs | Integrated Graphics Processor - Intel® HD Graphics: 1 x HDMI 1.4 1 x DVI-D 1 x VGA 2 independent display outputs |
| Audio | Realtek® ALC888S | Realtek® ALC888S | Realtek® ALC888S |
| Storage | 6 x SATA 6Gb/s ports (RAID 0/1/5/10) | 4 x SATA 6Gb/s ports | 4 x SATA 6Gb/s ports |
| Expansion Slots | 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) |
| Internal I/O | 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 3.0 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 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 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 2 x USB 2.0 headers 3 x COM headers (RS-232) 1 x Clear CMOS jumper 1 x Buzzer |
| Rear I/O | 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 3.0 1 x USB 3.1 Gen2 | 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 3.0 | 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 3.0 |
| TPM | Onboard TPM 2.0 security chip INFINEON SLB9665VQ2.0 | Onboard TPM 2.0 security chip INFINEON SLB9665VQ2.0 | 1 x TPM header |
| Operating Temp. | 0°C to 60°C | 0°C to 60°C | 0°C to 60°C |
| Ordering Information | 9MCH37AMNR-SI (Bulk packing) | 9MCH31AMNR-SI (Bulk packing) | 9MDH11BMNR-SI (Bulk packing) |

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## Micro-ATX Series





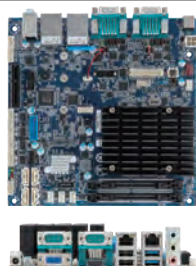| Model Name | uATX-H81A | uATX-RYZEN |
|---|---|---|
| CPU | Supports for 4th Generation Intel® Core™ i7/i5/i3, Pentium® & Celeron® processors, TDP under 85W | Supports AMD 3rd Gen/ 2nd Gen/ 1st Gen Ryzen™ CPU/APU AM4 µPGA (Matisse/ Picasso/ Raven2/ Pinnacle/ Raven/ Summit Ridge), TDP under 95W |
| Socket | LGA 1150 | Socket AM4 |
| Chipset | Intel® H81 Chipset | AMD® B450 |
| Memory | 2 x DDR3 SO-DIMM slots, Max. Capacity 16 GB, Support Dual Channel DDR3 1600/1333 MHz | 4 x DDR4 DIMM sockets, Max. Capacity 64 GB, Support Dual Channel DDR4 2666/2400/2133 MHz |
| Ethernet | 2 x GbE LAN ports (Realtek® RTL8111G) | 2 x GbE LAN ports (Realtek® RTL8111HS) |
| Graphic | Integrated Graphics Processor - Intel® HD Graphics: 1 x DVI-D 1 x VGA 1 x LVDS 2 independent display outputs | Integrated Graphics Processor - Radeon™ Vega 11/ 8/ 3/ Graphics 1 x HDMI 1.4 1 x Disply Port 1 x VGA 3 independent display outputs |
| Audio | Realtek® ALC269 | Realtek® ALC269 |
| Storage | 2 x SATA 3Gb/s ports | 4 x SATA 6Gb/s ports (RAID 0/1/10) |
| Expansion Slots | 1 x PCIe x16 (Gen3 x16) 1 x PCIe x1 (Gen2 x1) 2 x PCI 1 x Half-size Mini PCIe 1 x Full-size Mini PCIe | 1 x PCIe x16 (Gen3 x16) 1 x PCIe x4 (Gen2 x2) 2 x PCIe x1 (Gen2 x1) 1 x 2280/2260/2240 M.2 M-Key (PCIe x4, SATA 6Gb/s) |
| Internal I/O | 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 6 x USB 2.0 headers 6 x COM headers (RS-232) 2 x COM headers (RS-232 & RI/5V/12V) 1 x LPC 1 x LPT 1 x GPIO (8 bits) & SMBUS header 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 3.0 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 |
| Rear I/O | 3 x Audio Jacks (Line in, Line out, Mic in) 2 x COM ports (RS-232/422/485) 1 x VGA 1 x DVI-D 2 x RJ45 LAN ports 4 x USB 3.0 1 x PS2 KB/MS | 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 3.0 1 x USB 3.1 Gen2 1 x USB 3.1 Gen2 Type C |
| TPM | Onboard TPM 1.2 security chip Infineon SLB9635TT1.2 | 1 x TPM header |
| Operating Temp. | 0°C to 60°C | 0°C to 60°C |
| Ordering Information | 9MATMH81NR-SI (Bulk packing) 9MATMH81MR-SI (Box packing) | 9MZRYZBMNR-SI (Bulk packing) |

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## Mini-ITX Series





| Model Name | mITX-Q370A | mITX-H310A | mITX-Q170A |
|---|---|---|---|
| CPU | Support for 8th/9th Generation Intel® Core™ i7/i5/i3, Pentium® & Celeron® processors, TDP under 65W | Support for 8th/9th Generation Intel® Core™ i7/i5/i3, Pentium® & Celeron® processors, TDP under 65W | Supports for 6/7th Generation Intel® Core™ i7/i5/i3, Pentium® & Celeron® processors, TDP under 65W |
| Socket | LGA 1151 | LGA 1151 | LGA 1151 |
| Chipset | Intel® Q370 Chipset | Intel® H310 Chipset | Intel® Q170 Chipset |
| Memory | 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 2400/2133 MHz |
| Ethernet | 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) |
| Graphic | Integrated Graphics Processor - Intel® HD Graphics: 1 x HDMI 1.4 1 x Display Port 1 x VGA 1 x eDP 3 independent display outputs | Integrated Graphics Processor - Intel® HD Graphics: 1 x HDMI 1.4 1 x Display Port 1 x VGA 1 x LVDS or eDP 2 independent display outputs | Integrated Graphics Processor - Intel® HD Graphics: 1 x HDMI 1.4 1 x Display Port 1 x LVDS or eDP 3 independent display outputs |
| Audio | Realtek® ALC269 | Realtek® ALC269 | Realtek® ALC269 |
| Storage | 3 x SATA 6Gb/s ports (RAID 0/1/5/10) | 2 x SATA 6Gb/s ports | 3(2) x SATA 6Gb/s ports (RAID 0/1/5/10) (incl. 1 x SATA supports SATA DOM) |
| Expansion Slots | 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 | 1 x PCIe x16 (Gen3 x16) 1 x 2280/2242 M.2 M-Key (SATA 6Gb/s) 1 x 2230 M.2 E-Key | 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 |
| Internal I/O | 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 3.0 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 | 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 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 3.0 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 |
| Rear I/O | 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 3.0 1 x USB 3.1 Gen2 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 3.0 1 x DC Jack (+12V/+19V/+24VDC) | 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 3.0 1 x DC Jack (+12V/+19V/+24VDC) |
| TPM | 1 x TPM header | 1 x TPM header | 1 x TPM header |
| Operating Temp. | 0°C to 60°C | 0°C to 60°C | 0°C to 60°C |
| Ordering Information | 9MCQ37AINR-SI (Bulk packing) | 9MH310AINR-SI (Bulk packing) 9MH310AIMR-SI (Box packing) | 9MDQ17BIMR-SI (Box packing) |

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## Mini-ITX Series





| Model Name | mITX-H110A | mITX-H110B |
|---|---|---|
| CPU | Supports for 6/7th Generation Intel® Core™ i7/i5/i3, Pentium® & Celeron® processors, TDP under 65W | Supports for 6/7th Generation Intel® Core™ i7/i5/i3, Pentium® & Celeron® processors, TDP under 65W |
| Socket | LGA 1151 | LGA 1151 |
| Chipset | Intel® H110 Chipset | Intel® H110 Chipset |
| Memory | 2 x DDR4 SO-DIMM sockets, Max. Capacity 32 GB, Support Dual Channel DDR4 2400/2133 MHz | 2 x DDR4 SO-DIMM sockets, Max. Capacity 32 GB, Support Dual Channel DDR4 2400/2133 MHz |
| Ethernet | 2 x GbE LAN ports (Intel® I219V and Intel® I211AT) | 6 x GbE LAN ports (1 x Intel® I219V and 5 x Intel® I211AT) |
| Graphic | Integrated Graphics Processor - Intel® HD Graphics: 1 x HDMI 1.4 1 x Display Port 1 x VGA 1 x LVDS or eDP 2 independent display outputs | Integrated Graphics Processor - Intel® HD Graphics: 1 x HDMI 1.4 1 x VGA 2 independent display outputs |
| Audio | Realtek® ALC269 | Realtek® ALC269 |
| Storage | 3 x SATA 6Gb/s ports (incl. 1 x SATA supports SATA DOM) | 2 x SATA 6Gb/s ports |
| Expansion Slots | 1 x PCIe x16 (Gen3 x16) 1 x 2280/2242 M.2 M-Key (SATA 6Gb/s) 1 x Full-size Mini PCIe | 1 x PCIe x16 (Gen3 x16) 1 x 2280/2242 M.2 M-Key (SATA 6Gb/s) 1 x Full-size mSATA |
| Internal I/O | 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 3.0 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 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 2 x COM headers (RS-232/422/485 & RI/5V/12V) 1 x GPIO (8 bits) & SMBUS header 1 x Clear CMOS jumper 1 x Buzzer |
| Rear I/O | 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 2 x USB 2.0 2 x USB 3.0 1 x DC Jack (+12/+19/+24VDC) | 3 x Audio Jacks (Line in, Line out, Mic in) 1 x HDMI 1 x VGA 6 x RJ45 LAN ports 4 x USB 3.0 1 x DC Jack (+12V/+19V/+24VDC) |
| TPM | 1 x TPM header | 1 x TPM header |
| Operating Temp. | 0°C to 60°C | 0°C to 60°C |
| Ordering Information | 9MDH11LINR-SI (Bulk packing) 9MDH11LIMR-SI (Box packing) | 9MH110AINR-SI (Bulk packing) 9MH110AIMR-SI (Box packing) |

# Embedded Boards

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## Mini-ITX Series

| Model Name | mITX-4105A | mITX-4205A |
|---|---|---|
| **CPU** | Intel® Celeron® J4105 Processor, 14nm, 4 cores, 4 threads, up to 2.5 GHz, TDP 10W, fan-less design | Intel® Pentium® Processor J4205, 14nm, 4 cores, 4 threads, up to 2.6 GHz, TDP 10W, fan-less design |
| **Socket** | FCBGA1090 | FCBGA1296 |
| **Chipset** | — | — |
| **Memory** | 2 x DDR4 SO-DIMM sockets, Max. Capacity 8 GB, Support Dual Channel DDR4 2400 MHz | 2 x DDR3L SO-DIMM sockets, Max. Capacity 8 GB, Support Dual Channel DDR3L 1866 MHz |
| **Ethernet** | 2 x GbE LAN ports (Realtek® RTL8111HS) | 2 x GbE LAN ports (Realtek® RTL8111HS) |
| **Graphic** | Integrated Graphics Processor - Intel® UHD Graphics 600: 1 x HDMI 2.0 1 x VGA 1 x LVDS or eDP 3 independent display outputs | Integrated Graphics Processor - Intel® HD Graphics 505: 1 x HDMI 1.4 1 x VGA 1 x LVDS or eDP 3 independent display outputs |
| **Audio** | Realtek® ALC269 | Realtek ALC269 |
| **Storage** | 5 x SATA 6Gb/s ports (4 x from Marvell 88SE9230, support RAID 0/1/10) (1 x from J4105 supports SATA DOM) | 5 x SATA 6Gb/s ports (4 x from Marvell 88SE9230, support RAID 0/1/10) (1 x from J4205 supports SATA DOM) |
| **Expansion Slots** | 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) | 1 x PCIe x1 (Gen2 x1) 1 x Full-size mSATA |
| **Internal I/O** | 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 3.0 headers 4 x COM headers (RS-232) 1 x GPIO (8 bits) & SMBUS header 1 x Case open header 1 x AT/ATX mode jumper 1 x Backlight Control header 1 x RAID LED header 2 x LAN LED headers 1 x Clear CMOS jumper 1 x Buzzer | 1 x 4-pin ATX power connector 5 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 3.0 headers 4 x COM headers (RS-232) 1 x GPIO (8 bits) & SMBUS header 1 x Case open header 1 x PS/2 KB/MS Connector 1 x Backlight Control header 1 x RAID LED header 2 x LAN LED headers 1 x Clear CMOS jumper 1 x Buzzer |
| **Rear I/O** | 3 x Audio Jacks (Line in, Line out, Mic in) 2 x COM ports (RS-232/422/485 & RI/5V/12V) 1 x HDMI 2.0 1 x VGA 2 x RJ45 LAN ports 2 x USB 2.0 2 x USB 3.0 1 x DC Jack (+12VDC) | 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 3.0 1 x DC Jack (+12VDC) |
| **TPM** | 1 x TPM header | 1 x TPM header |
| **Operating Temp.** | 0°C to 60°C | 0°C to 60°C |
| **Ordering Information** | 9MZGLKAINR-SI (Bulk pakcing) | Fanless version: 9MZAPLAINR-SI (Bulk packing) |

## Mini-ITX Series





| Model Name | mITX-1900A | mITX-1605A |
|---|---|---|
| CPU | Intel® Celeron® Processor J1900, 22nm, 4 cores, 4 threads, up to 2.42 GHz, TDP 10W | AMD® RYZEN™ Embedded V1605B, 14nm, 4 cores, 8 threads, 2.0 GHz, up to 3.6 GHz, TDP 25W |
| Socket | FCBGA1170 | FP5 BGA |
| Chipset | — | — |
| Memory | 2 x DDR3L SO-DIMM sockets, Max. Capacity 8 GB, Support Dual Channel DDR3L 1333MHz | 2 x DDR4 SO-DIMM sockets, Max. Capacity 32 GB, Support Dual Channel DDR4 2400 MHz |
| Ethernet | 2 x GbE LAN ports (Realtek® RTL8111G) | 2 x GbE LAN ports (Realtek® RTL8111HS) |
| Graphic | Integrated Graphics Processor - Intel® HD Graphics: 1 x HDMI 1.4 1 x VGA 1 x LVDS 2 independent display outputs | Integrated Graphics Processor - AMD Radeon™ Vega 8 Graphics: 4 x Display Port 1 x LVDS (Share from DP) 4 independent display outputs |
| Audio | Realtek® ALC269 | Realtek® ALC269 |
| Storage | 1 x SATA 3Gb/s port (incl. 1 x SATA supports SATA DOM) | 1 x SATA 6Gb/s port |
| Expansion Slots | 1 x PCI 1 x Full-size Mini PCIe 1 x Full-size mSATA | 1 x PCIe x16 (Gen3 x8) 1 x 2280 M.2 M-Key (SATA 6Gb/s) 1 x 2230 M.2 E-Key 1 x Full-size Mini PCIe with SIM slot |
| Internal I/O | 1 x 4-pin ATX power connector 1 x SATA power header 1 x CPU fan header 1 x System fan header 1 x Front panel header 1 x Front audio header 1 x 2W Speaker out header 2 x USB 2.0 headers 1 x COM header (RS-232/422/485) 3 x COM headers (RS-232) 1 x COM header (RS-232 & RI/5V/12V) 1 x GPIO (8 bits) & SMBUS header 1 x PS/2 KB/MS Connector 1 x AT/ATX mode jumper 1 x Backlight control header 1 x Clear CMOS jumper 1 x Buzzer | 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 jumper 1 x Clear CMOS jumper |
| Rear I/O | 3 x Audio Jacks (Line in, Line out, Mic in) 1 x COM port (RS-232) 1 x HDMI 1 x VGA 2 x RJ45 LAN ports 4 x USB 2.0 1 x USB 3.0 1 x DC Jack (+12VDC) | 3 x Audio Jacks (Line in, Line out, Mic in) 2 x COM ports (RS-232/422/485 & RI/5V/12V) 4 x Display Port 2 x RJ45 LAN ports 4 x USB 3.0 1 x DC Jack (+12V~24VDC) |
| TPM | 1 x TPM header | 1 x TPM header |
| Operating Temp. | 0°C to 60°C | 0°C to 60°C |
| Ordering Information | Fan version: 9MVBAYAINR-SI (Bulk packing) Fanless version: 9MVBAYAINR-00 (Bulk packing) | Fan version: 9MRZNVMIMR-SI (Box packing) |

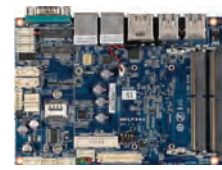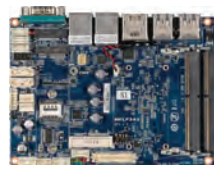GIGAIPC reserves the right to modify or change technical data without prior notice.

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## Thin Mini-ITX Series



| Model Name | iTXL-Q370A | iTXL-Q170A | iTXL-H110C |
|---|---|---|---|
| CPU | Support for 8th/9th Generation Intel® Core™ i7/i5/i3, Pentium® & Celeron® processors, TDP under 65W | Supports for 6/7th Generation Intel® Core™ i7/i5/i3, Pentium® & Celeron® processors, TDP under 65W | Supports for 6/7th Generation Intel® Core™ i7/i5/i3, Pentium® & Celeron® processors, TDP under 65W |
| Socket | LGA 1151 | LGA 1151 | LGA 1151 |
| Chipset | Intel® Q370 Chipset | Intel® Q170 Chipset | Intel® H110 Chipset |
| Memory | 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 | 2 x DDR4 SO-DIMM sockets, Max. Capacity 32 GB, Support Dual Channel DDR4 2400/2133 MHz |
| Ethernet | 1 x GbE LAN port (Intel® I219LM) | 1 x GbE LAN port (Intel® I219LM) | 1 x GbE LAN port (Realtek® RTL8111HS) |
| Graphic | Integrated Graphics Processor - Intel® HD Graphics:<br>1 x HDMI 2.0<br>1 x Display Port<br>1 x LVDS<br>3 independent display outputs | Integrated Graphics Processor - Intel® HD Graphics:<br>1 x HDMI 1.4<br>1 x Display Port<br>1 x LVDS<br>3 independent display outputs | Integrated Graphics Processor - Intel® HD Graphics:<br>1 x HDMI1.4<br>1 x Display Port<br>1 x LVDS<br>2 independent display outputs |
| Audio | Realtek® ALC887 + ALC105 Amplifier | Realtek® ALC887 + ALC105 Amplifier | Realtek® ALC887 + ALC105 Amplifier |
| Storage | 4 x SATA 6Gb/s ports (RAID 0/1/5/10) | 4 x SATA 6Gb/s ports (RAID 0/1/5/10) | 2 x SATA 6Gb/s ports |
| Expansion Slots | 1 x PCIe x4 (Gen3 x4)<br>1 x 2280/2260 M.2 M-Key (PCIe x4, SATA6Gb/s, Optane memory)<br>1 x 2230 M.2 E-Key | 1 x PCIe x4 (Gen3 x4)<br>1 x 2280/2260 M.2 M-Key (PCIe x4, SATA6Gb/s)<br>1 x 2230 M.2 E-Key | 1 x 2280/2260 M.2 M-Key (PCIe x2, SATA 6Gb/s)<br>1 x 2230 M.2 E-Key |
| Internal I/O | 1 x 2-pin ATX main power connector<br>1 x SATA Power connector<br>1 x CPU fan header<br>1 x System fan header<br>1 x Front panel header<br>1 x Front panel audio header<br>1 x 3W Speaker out header<br>1 x DMIC header<br>5 x USB 2.0 headers<br>2 x USB 3.0 headers<br>1 x COM header (RS-232)<br>1 x FPD (For LVDS 19V)<br>1 x FPD_SW 1x3 (For Panel Power SW)<br>1 x LCD_VCC Pin header<br>1 x Backlight Control header | 1 x 2-pin ATX main power connector<br>1 x SATA Power connector<br>1 x CPU fan header<br>1 x System fan header<br>1 x Front panel header<br>1 x Front panel audio header<br>1 x 3W Speaker out header<br>1 x DMIC header<br>5 x USB 2.0 headers<br>2 x USB 3.0 headers<br>1 x COM header (RS-232)<br>1 x FPD (For LVDS 19V)<br>1 x FPD_SW 1x3 (For Panel Power SW)<br>1 x LCD_VCC Pin header<br>1 x Backlight Control header<br>1 x NFC connector | 1 x 2-pin ATX main power connector<br>1 x SATA Power connector<br>1 x CPU fan header<br>1 x System fan header<br>1 x Front panel header<br>1 x Front panel audio header<br>1 x 3W Speaker out header<br>1 x DMIC header<br>5 x USB 2.0 headers<br>1 x COM header (RS-232)<br>1 x FPD (For LVDS 19V)<br>1 x FPD_SW 1x3 (For Panel Power SW)<br>1 x LCD_VCC Pin header<br>1 x Backlight Control header |
| Rear I/O | 2 x Audio Jacks (Line out, Mic in)<br>1 x HDMI<br>1 x Display Port<br>1 x RJ45 LAN port<br>3 x USB 3.0<br>1 x USB 3.0 Type C<br>1 x DC Jack (+12V/+19VDC) | 2 x Audio Jacks (Line out, Mic in)<br>1 x HDMI<br>1 x Display Port<br>1 x RJ45 LAN port<br>4 x USB 3.0<br>1 x DC Jack (+12V/+19VDC) | 2 x Audio Jacks (Line out, Mic in)<br>1 x HDMI<br>1 x Display Port<br>1 x RJ45 LAN port<br>4 x USB 3.0<br>1 x DC Jack (+12V/+19VDC) |
| TPM | 1 x TPM header | Onboard TPM 2.0 security chip INFINEON SLB9665VQ2.0 | 1 x TPM header |
| Operating Temp. | 0°C to 60°C | 0°C to 60°C | 0°C to 60°C |
| Ordering Information | 9MQ37ATMR-SI (Box packing) | 9MDQ17AINR-SI (Bulk packing) | 9MDH11KINR-SI (Bulk pakcing) |

## Thin Mini-ITX Series



| Model Name | iTXL-6100B | iTXL-3955A | iTXL-3350A | iTXL-1900A |
|---|---|---|---|---|
| CPU | Intel® Core™ i3-6100U Processor, 14nm, 2 cores, 4 threads, 2.3 GHz,TDP 15W | Intel® Celeron® Processor 3955U, 14nm, 2 cores, 4 threads, 2.0 GHz, TDP 15W | Intel® Celeron® Processor N3350, 14nm, 2 cores, 2 threads, up to 2.4 GHz, TDP 6W | Intel® Celeron® Processor J1900, 22nm, 4 cores, 4 threads, up to 2.42 GHz, TDP 10W |
| Socket | FCBGA1356 | FCBGA1356 | FCBGA1296 | FCBGA1170 |
| Chipset | — | — | — | — |
| Memory | 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 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 1333 MHz |
| Ethernet | 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 (Realtek® RTL8111HS) | 1 x GbE LAN ports (Realtek® RTL8111G) |
| Graphic | Integrated Graphics Processor - Intel® HD Graphics 520: 1 x HDMI 1.4, 1 x Display Port, 1 x LVDS or eDP, 3 independent display outputs | Integrated Graphics Processor - Intel® HD Graphics 510: 1 x HDMI 1.4, 1 x Display Port, 1 x LVDS or eDP, 3 independent display outputs | Integrated Graphics Processor - Intel® HD Graphics 500: 1 x HDMI 1.4, 1 x Disply Port, 1 x LVDS or eDP, 3independent display outputs | Integrated Graphics Processor - Intel® HD Graphics: 1 x HDMI 1.4, 1 x VGA, 1 x LVDS, 2 independent display outputs |
| Audio | Realtek® ALC269 | Realtek® ALC269 | Realtek® ALC269 | Realtek® ALC887 + ALC105 Amplifier |
| Storage | 2 x SATA 6Gb/s ports (RAID 0/1/5) (incl. 1 x SATA supports SATA DOM) | 2 x SATA 6Gb/s ports (incl. 1 x SATA supports SATA DOM) | 2 x SATA 6Gb/s ports (1 x switches with mSATA) (incl. 1 x SATA supports SATA DOM) | 1 x SATA 6Gb/s port (switches with mSATA) 2 x SATA 3Gb/s ports eMMC (Optional) |
| Expansion Slots | 1 x 2280/2242 M.2 M-Key (PCIe x2, SATA 6Gb/s) 1 x Full-size Mini PCIe | 1 x 2280/2242 M.2 M-Key (PCIe x2, SATA 6Gb/s) 1 x Full-size Mini PCIe | 1 x Full-size Mini PCIe/mSATA 1 x Half-size Mini PCIe (PCIe Only) | 1 x PCIe x4 (Gen2 x1) 1 x mSATA (SATA 6Gb/s) 1 x Half-size Mini PCIe |
| Internal I/O | 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 2 x USB 2.0 headers 2 x USB 3.0 headers 2 x COM headers (RS-232) 2 x COM headers (RS-232/422/485 & RI/5V/12V) 1 x LCD_VCC Pin header 1 x Backlight Control header 1 x GPIO (8 bits) & SMBUS header 1 x Buzzer | 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 2 x USB 3.0 headers 2 x COM headers (RS-232) 2 x COM headers (RS-232/422/485 & RI/5V/12V) 1 x LCD_VCC Pin header 1 x Backlight Control header 1 x GPIO (8 bits) & SMBUS header 1 x Buzzer | 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 3.0 headers 4 x COM headers (RS-232) 2 x COM headers (RS-232/422/485 & RI/5V/12V) 1 x LCD_VCC Pin header 1 x Backlight Control header 1 x PS/2 KB/MS Connector 1 x GPIO (8 bits) & SMBUS header, 1 x Buzzer | 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 3 x USB 2.0 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 LPT header 1 x Micro SD connector |
| Rear I/O | 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 3.0 1 x DC Jack (+12VDC) | 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 3.0 1 x DC Jack (+12VDC) | 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 3.0 1 x DC Jack (+12VDC) | 2 x Audio Jacks (Line out, Mic in) 1 x HDMI, 1 x VGA 1 x RJ45 LAN port 2 x USB 2.0, 1 x USB 3.0 1 x DC Jack (+12V/+19VDC) |
| TPM | 1 x TPM header | 1 x TPM header | 1 x TPM header | — |
| Operating Temp. | 0℃ to 60℃ | 0℃ to 60℃ | 0℃ to 60℃ | 0℃ to 60℃ |
| Ordering Information | 9MKLP3CIMR-SI (Box packing) | 9MKLPCCIMR-SI (Box packing) | 9MZAPLBINR-SI (Bulk packing) 9MZAPLBIMR-SI (Box packing) | 9MZBAYAINR-SI (Bulk packing) |

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| Model Name | QBiP-8565A/ QBiP-8265A/ QBiP-8145A | QBiP-7600A/ QBiP-7200A/ QBiP-7100A | QBiP-3965A |
|---|---|---|---|
| CPU | Intel® Core™ i7-8565U Processor, 14nm, 4 cores, 8 threads, up to 4.6 GHz, TDP 15W (QBiP-8565A)<br>Intel® Core™ i5-8265U Processor, 14nm, 4 cores, 8 threads, up to 3.9 GHz, TDP 15W (QBiP-8265A)<br>Intel® Core™ i3-8145UE Processor, 14nm, 2 cores, 4 threads, up to 3.9 GHz, TDP 15W (QBiP-8145A) | Intel® Core™ i7-7600U Processor, 14nm, 2 cores, 4 threads, up to 3.9 GHz, TDP 15W (QBiP-7600A)<br>Intel® Core™ i5-7200U Processor, 14nm, 2 cores, 4 threads, up to 3.1GHz, TDP 15W (QBiP-7200A)<br>Intel® Core™ i3-7100U Processor, 14nm, 2 cores, 4 threads, 2.4 GHz, TDP 15W (QBiP-7100A) | Intel® Celeron® Processor 3965U, 14nm, 2 cores, 2 threads, 2.2 GHz, TDP 15W (QBiP-3965A) |
| Socket | FCBGA1528 | FCBGA1356 | FCBGA1356 |
| Chipset | — | — | — |
| Memory | 2 x DDR4 SO-DIMM sockets, Max. Capacity 32 GB, Support Dual Channel DDR4 2400 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 |
| Ethernet | 2 x GbE LAN ports (Intel® I219V and Intel® I211AT) | 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) |
| Graphic | Integrated Graphics Processor - Intel® UHD Graphics 620: 2 x HDMI 1.4, 1 x LVDS 3 independent display outputs | 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 |
| Audio | Realtek® ALC269 | Realtek® ALC269 | |
| Storage | 2 x SATA 6Gb/s ports (RAID 0/1/5) | 2 x SATA 6Gb/s ports (RAID 0/1/5) | 2 x SATA 6Gb/s ports |
| Expansion Slots | 1 x 2280 M.2 M-Key (PCIe x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key 1 x Full-size Mini PCIe with SIM slot | 1 x 2280 M.2 M-Key (PCIe x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key 1 x Full-size Mini PCIe with SIM slot | 1 x 2280 M.2 M-Key (SATA 6Gb/s) 1 x 2230 M.2 E-Key 1 x Full-size Mini PCIe with SIM slot |
| Internal I/O | 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) 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) 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 |
| Rear I/O | 1 x COM port (RS-232/422/485 & RI/5V/12V), 2 x HDMI, 2 x RJ45 LAN ports, 4 x USB 3.1 Gen2 | 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 3.0 | 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 3.0 |
| TPM | 1 x TPM header | 1 x TPM header | |
| Operating Temp. | 0°C to 60°C | 0°C to 60°C | |
| Ordering Information | 9MWHLUASMR-SI (Box packing) (QBiP-8565A) 9MWHLUBSMR-SI (Box packing) (QBiP-8265A) 9MWHLUCSMR-SI (Box packing) (QBiP-8145A) | 9MFLP7BSMR-SI (Box packing) (QBiP-7600A) 9MFLP5ASNR-SI (Bulk packing) (QBiP-7200A) 9MFLP5ASMR-SI (Box packing) (QBiP-7200A) 9MFLP3ASNR-SI (Bulk packing) (QBiP-7100A) 9MFLP3ASMR-SI (Box packing) (QBiP-7100A) | 9MFLPCASMR-SI (Box packing) (QBiP-3965A) |
| Heatsink P/N | 25ST1-153108-A7R | 25ST1-153108-A7R | 25ST1-153108-A7R |
| Fan Module P/N | 12SF2-01A073-00R | 12SF2-01A073-00R | 12SF2-01A073-00R |
| Heat Spreader P/N | 25ST5-8265A0-A8R | 25ST5-CKAC00-A8R | 25ST5-CKAC00-A8R |

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## QBiP Series (3.5" SBC)



| Model Name | QBiP-4200A | QBiP-4200B/ QBiP-4200C/ QBiP-3350A | QBiP-E3940A |
|---|---|---|---|
| CPU | Intel® Pentium® Processor N4200, 14nm, 4 cores, 4 threads, up to 2.5 GHz, TDP 6W | Intel® Pentium® Processor N4200, 14nm, 4 cores, 4 threads, up to 2.5 GHz, TDP 6W (QBiP-4200B/ 4200C) Intel® Celeron® Processor N3350, 14nm, 2 cores, 2 threads, up to 2.4 GHz, TDP 6W (QBiP-3350A) | Intel® Atom® x5-E3940 Processor, 14nm, 4 cores, 4 threads, up to 1.8 GHz, TDP 9.5W |
| Socket | FCBGA1296 | FCBGA1296 | FCBGA1296 |
| Chipset | — | — | — |
| Memory | 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 | 2 x DDR3L SO-DIMM sockets, Max. Capacity 8 GB, Support Dual Channel DDR3L 1866 MHz |
| Ethernet | 2 x GbE LAN ports (Intel® I211AT) | 2 x GbE LAN ports (Intel® I211AT) | 2 x GbE LAN ports (Intel® I211AT) |
| Graphic | Integrated Graphics Processor - Intel® HD Graphics 505: 1 x HDMI 1.4, 1 x VGA, 1 x LVDS or eDP 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 | Integrated Graphics Processor - Intel® HD Graphics 500: 1 x HDMI 1.4, 1 x VGA, 1 x LVDS 3 independent display outputs |
| Audio | Realtek® ALC269 | Realtek® ALC269 | Realtek® ALC269 |
| Storage | 1 x SATA 6Gb/s port 1 x eMMC 32GB | 1 x SATA 6Gb/s port 1 x eMMC 32GB (4200B only) | 1 x SATA 6Gb/s port |
| Expansion Slots | 1 x 2242 M.2 M-Key (SATA 6Gb/s) 1 x Full-size Mini PCIe with SIM slot | 1 x 2242 M.2 M-Key (SATA 6Gb/s) 1 x Full-size Mini PCIe with SIM slot | 1 x 2242 M.2 M-Key (SATA 6Gb/s) 1 x Full-size Mini PCIe with SIM slot |
| Internal I/O | 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 Front panel audio header 1 x 2W Speaker out header 2 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 Front panel audio 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 Front panel audio 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 |
| Rear I/O | 1 x Headphone Jack 1 x HDMI 1 x VGA 2 x RJ45 LAN ports 2 x USB 3.0 | 1 x Headphone Jack 1 x HDMI 1 x VGA 2 x RJ45 LAN ports 2 x USB 3.0 | 1 x Headphone Jack 1 x HDMI 1 x VGA 2 x RJ45 LAN ports 2 x USB 3.0 |
| TPM | 1 x TPM header | 1 x TPM header | 1 x TPM header |
| Operating Temp. | 0°C to 60°C | 0°C to 60°C | 0°C to 60°C |
| Ordering Information | 9MZAPLASNR-SI (Bulk packing) 9MZAPLASMR-SI (Box packing) | 9MZAPLCSNR-SI (Bulk packing) (QBiP-4200B) 9MZAPLCSMR-SI (Box packing) (QBiP-4200B) 9MZAPLDSMR-SI (Box packing) (QBiP-4200C) 9MZAPLESMR-SI (Box packing) (QBiP-3350A) | 9MAPLKASMR-SI (Box packing) |
| Heatsink P/N | 25ST1-153109-A7R | 25ST1-153109-A7R | 25ST1-113103-A7R |
| Fan Module P/N | — | — | — |
| Heat Spreader P/N | 25ST5-CBAB00-A8R | 25ST5-CBAB00-A8R | — |

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## QBiP Series (3.5" SBC)

| Model Name | QBiP-1900A | QBiP-1605A | QBiP-1606A |
|---|---|---|---|
| CPU | Intel® Celeron® Processor J1900, 22nm, 4 cores, 4 threads, up to 2.42GHz, TDP 10W | AMD® RYZEN™ Embedded V1605B, 14nm, 4 cores, 8 threads, 2.0 GHz, up to 3.6 GHz, TDP 25W | AMD® RYZEN™ Embedded R1606G, 14nm, 2 cores, 4 threads, 2.6 GHz, up to 3.5 GHz, TDP 25W |
| Socket | FCBGA1170 | FP5 type 1 | FP5 type 1 |
| Chipset | — | — | — |
| Memory | 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 | 2 x DDR4 SO-DIMM sockets, Max. Capacity 32 GB, Support Dual Channel DDR4 2400 MHz |
| Ethernet | 2 x GbE LAN ports (Intel® I211AT) | 2 x GbE LAN ports (Realtek® RTL8111HS) | 2 x GbE LAN ports (Realtek® RTL8111HS) |
| Graphic | Integrated Graphics Processor - Intel® HD Graphics: 1 x HDMI 1.4, 1 x VGA, 1 x LVDS 2 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 | Integrated Graphics Processor - AMD® Radeon™ Vega 3 Graphics: 3 x HDMI 2.0, 1 x eDP (share from HDMI) 3 independent display outputs |
| Audio | Realtek® ALC269 | Realtek® ALC269 | Realtek® ALC269 |
| Storage | 1 x SATA 3Gb/s port | 1 x SATA 6Gb/s port | 1 x SATA 6Gb/s port |
| Expansion Slots | 1 x 2280 M.2 M-Key (SATA 3Gb/s) 1 x Full-size Mini PCIe with SIM slot | 1 x 2280 M.2 M-Key (PCIe x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key 1 x Full-size Mini PCIe with SIM slot | 1 x 2280 M.2 M-Key (PCIe x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key 1 x Full-size Mini PCIe with SIM slot |
| Internal I/O | 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 Front panel audio 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 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 | 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 |
| Rear I/O | 1 x Headphone Jack 1 x HDMI 1 x VGA 2 x RJ45 LAN ports 1 x USB 2.0 1 x USB 3.0 | 4 x HDMI 2 x RJ45 LAN ports 2 x USB 3.0 | 3 x HDMI 2 x RJ45 LAN ports 2 x USB 3.0 |
| TPM | 1 x TPM header | Onboard TPM 2.0 security chip INFINEON SLB9665TT2.0 | Onboard TPM 2.0 security chip INFINEON SLB9665TT2.0 |
| Operating Temp. | 0°C to 60°C | 0°C to 60°C | 0°C to 60°C |
| Ordering Information | 9MBAYTASNR-SI (Bulk packing) 9MBAYTASMR-SI (Box packing) | 9MRZNVMSNR-SI (Bulk packing) 9MRZNVMSMR-SI (Box packing) | 9MRZNRMSMR-SI (Box packing) |
| Heatsink P/N | 25ST1-153107-A7R | 25ST1-113104-A7R | TBD |
| Fan Module P/N | — | 12SF2-01A073-00R | TBD |
| Heat Spreader P/N | 25ST5-CBAB00-A8R | 25ST5-QP1600-A8R | TBD |

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## QBiP Wide Temperature Series





| Model Name | QBiP-7200AT/ QBiP-7100AT | QBiP-E3940AT | QBiP-1900AT |
|---|---|---|---|
| CPU | Intel® Core™ i5-7200U Processor, 14nm, 2 cores, 4 threads up to 3.1 GHz, TDP 15W (QBiP-7200AT) Intel® Core™ i3-7100U Processor, 14nm, 2 cores, 4 threads, up to 2.4 GHz, TDP 15W (QBiP-7100AT) | Intel® Atom® x5-E3940 Processor, 14nm, 4 cores, 4 threads, up to 1.8 GHz, TDP 9.5W | Intel® Celeron® Processor J1900, 22nm, 4 cores, 4 threads, up to 2.42 GHz, TDP 10W |
| Socket | FCBGA1356 | FCBGA1296 | FCBGA1170 |
| Chipset | — | — | — |
| Memory | 2 x DDR4 SO-DIMM sockets, Max. Capacity 32 GB, Support Dual Channel DDR4 2133 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 |
| Ethernet | 2 x GbE LAN ports (Intel® I219V and Intel® I211AT) | 2 x GbE LAN ports (Intel® I211AT) | 2 x GbE LAN ports (Intel® I211AT) |
| Graphic | 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 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 |
| Audio | Realtek® ALC269 | Realtek® ALC269 | Realtek® ALC269 |
| Storage | 2 x SATA 6Gb/s ports (RAID 0/1/5) | 1 x SATA 6Gb/s port | 1 x SATA 3Gb/s port |
| Expansion Slots | 1 x 2280 M.2 M-Key (PCIe x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key 1 x Full-size Mini PCIe with SIM slot | 1 x 2242 M.2 M-Key (SATA 6Gb/s) 1 x Full-size Mini PCIe with SIM slot | 1 x 2280 M.2 M-Key (SATA 3Gb/s) 1 x Full-size Mini PCIe with SIM slot |
| Internal I/O | 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 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) 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 Front panel audio 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 |
| Rear I/O | 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 3.0 | 1 x Headphone Jack 1 x HDMI 1 x VGA 2 x RJ45 LAN ports 2 x USB 3.0 | 1 x Headphone Jack 1 x HDMI 1 x VGA 2 x RJ45 LAN ports 1 x USB 2.0 1 x USB 3.0 |
| TPM | 1 x TPM header | 1 x TPM header | 1 x TPM header |
| Operating Temp. | -20°C to 70°C | -40°C to 85°C | -40°C to 85°C |
| Ordering Information | 9MFLP5ASMR-SI1 (Box packing) (QBiP-7200AT) 9MFLP3ASMR-SI1 (Box packing) (QBiP-7100AT) | 9MAPLKASMR-SI1 (Box packing) | 9MBAYTASMR-SI1 (Box packing) |

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

| Model Name | QBi-8565A/ QBi-8265A/ QBi-8145A | QBi-7100B | QBi-3965B |
|---|---|---|---|
| CPU | Intel® Core™ i7-8565U Processor 14nm, 4 cores, 8 threads, up to 4.6 GHz , TDP 15W (QBi-8565A) Intel® Core™ i5-8265U Processor 14nm, 4 cores, 8 threads, up to 3.9 GHz,  TDP 15W (QBi-8265A) Intel® Core™ i3-8145UE Processor 14nm, 2 cores, 4 threads,  up to 3.9 GHz, TDP 15W (QBi-8145A) | Intel® Core™ i3-7100U Processor, 14nm, 2 cores, 4 threads, 2.4 GHz, TDP 15W | Intel® Celeron® Processor 3965U 14nm, 2 cores, 2 threads, 2.2 GHz, TDP 15W |
| Socket | FCBGA1528 | FCBGA1356 | FCBGA1356 |
| Chipset | — | — | — |
| Memory | 2 x DDR4 SO-DIMM sockets, Max. Capacity 32 GB, Support Dual Channel DDR4 2400 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 |
| Ethernet | 2 x GbE LAN ports (Intel® I219V and Realtek® RTL8111HS) | 1 x GbE LAN port  (Intel® I219V) | 1 x GbE LAN port  (Intel® I219V) |
| Graphic | Integrated Graphics Processor - Intel® UHD Graphics 620: 2 x HDMI 1.4 1 x eDP 3 independent display outputs | Integrated Graphics Processor - Intel® HD Graphics 620: 1 x HDMI 2.0 1 x Mini Display Port 1 x eDP 3 independent display outputs | Integrated Graphics Processor - Intel® HD Graphics 620: 1 x HDMI 2.0 1 x Mini Display Port 1 x eDP 3 independent display outputs |
| Audio | Realtek® ALC269 | Intel® Integrated Audio | Intel® Integrated Audio |
| Storage | 1 x SATA 6Gb/s ports (RAID 0/1) | 1 x SATA 6Gb/s port (RAID 0/1) | 1 x SATA 6Gb/s port |
| Expansion Slots | 1 x 2280 M.2 M-Key (PCIe x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key | 1 x 2280 M.2 M-Key (PCIe x4, SATA 6Gb/s) 1 x 2230 M.2 E-Key | 1 x 2280 M.2 M-Key (SATA 6Gb/s) 1 x 2230 M.2 E-Key |
| Internal I/O | 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/GPIO (8 bits) & SMBUS header 1 x USB 2.0 header 1 x Vertical USB 3.0 (Flexible to PCIe x1) | 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 USB 3.0 header 1 x COM header (RS-232) | 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 USB 3.0 header 1 x COM header (RS-232) |
| Front IO | 2 x USB 3.1 Gen2 1 x Power button 1 x COM port (RS-232/422/485) | 2 x USB 3.0 1 x Power button | 2 x USB 3.0 1 x Power button |
| Rear IO | 2 x HDMI 2 x RJ45 LAN ports 2 x USB 3.1 Gen2 1 x Screw type DC Jack (+9V~36VDC) | 1 x HDMI 2.0 1 x Mini Display Port 1 x RJ45 LAN port 2 x USB 3.0 1 x DC Jack (+12V~24VDC) | 1 x HDMI 2.0 1 x Mini Display Port 1 x RJ45 LAN port 2 x USB 3.0 1 x DC Jack (+12V~24VDC) |
| Side IO | — | — | — |
| TPM | — | — | — |
| Operating Temp. | 0°C to 60°C | 0°C to 60°C | 0°C to 60°C |
| Ordering Information | 9MWHLUAHMR-SI (Box packing) (QBi-8565A) 9MWHLUBHMR-SI (Box packing) (QBi-8265A) 9MWHLUCHMR-SI (Box packing) (QBi-8145A) | 9MFLP3AHNR-SI (Bulk packing) | 9MFLPCAHMR-SI (Box packing) |
| Heatsink P/N | TBD | — | — |
| Fan Module P/N | TBD | 25ST4-343202-C1R | 25ST4-343202-C1R |
| Heat Spreader P/N | TBD | 25ST5-CKAA01-A8R | 25ST5-CKAA01-A8R |

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



| Model Name | QBi-5005A/ QBi-5005B/ QBi-4000B | QBi-4200A/ QBi-4200B |
|---|---|---|
| CPU | Intel® Pentium® Silver J5005 Processor, 4 cores, 4 threads, up to 2.80 GHz, TDP 10W (QBi-5005A/ QBi-5005B) Intel® Celeron® Processor N4000, 2 Cores, 2 threads, up to 2.60 GHz, TDP 6W (QBi-4000B) | Intel® Pentium® Processor N4000 14nm, 4 cores, 4 threads, up to 2.5 GHz, TDP 6W |
| Socket | FCBGA1090 | FCBGA1296 |
| Chipset | — | — |
| Memory | 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 1866 MHz |
| Ethernet | 1 x GbE LAN port (Realtek® RTL8111HS) | 1 x GbE LAN port (Realtek® RTL8111HS) |
| Graphic | QBi-5005A/ 5005B: Integrated Graphics Processor - Intel® UHD Graphics 605: QBi-4000B: Integrated Graphics Processor - Intel® UHD Graphics 600: 1 x HDMI 1.4 1 x VGA 1 x eDP 3 independent display outputs | Integrated Graphics Processor - Intel® HD Graphics 505: 1 x HDMI 1.4 1 x VGA 1 x eDP 3 independent display outputs |
| Audio | Realtek® ALC891 | Realtek® ALC255 |
| Storage | 1 x SATA 6Gb/s port (7-pin) 1 x SATA 6Gb/s port (FFC) 1 x eMMC 32GB (5005A only) | 1 x SATA 6Gb/s port 1 x eMMC 32GB (4200A only) |
| Expansion Slots | 1 x 2230 M.2 E-Key | 1 x 2230 M.2 E-Key |
| Internal I/O | 1 x 2-pin power connector (Optional) 1 x SATA power header 1 x CPU fan header 1 x Front panel header 2 x USB 2.0 headers | 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 USB 3.0 header 1 x COM header (RS-232) |
| Front IO | 2 x USB 3.0 1 x Power button 1 x COM port (RS-232) 1 x Headphone Jack 1 x Microphone Jack | 2 x USB 3.0 1 x Power button 1 x Audio Combo Jack (Headphone & Microphone) |
| Rear IO | 1 x HDMI 1 x VGA 1 x RJ45 LAN port 2 x USB 3.0 | 1 x HDMI 1 x VGA 1 x RJ45 LAN port 2 x USB 3.0 |
| Side IO | 1 x DC Jack (+12V~19VDC) | 1 x DC Jack (+12V~24VDC) |
| TPM | — | — |
| Operating Temp. | 0°C to 60°C | 0°C to 60°C |
| Ordering Information | 9MZGLKAHNR-SI (Bulk packing) (QBi-5005A) 9MZGLKCHMR-SI (Box packing) (QBi-5005B) 9MZGLKBHMR-SI (Box packing) (QBi-4000B) | 9MZAPLAHNR-SI (Bulk packing) (QBi-4200A) 9MZAPLBHMR-SI (Box packing) (QBi-4200B) |
| Heatsink P/N | 12SP2-090019-00R | 12SP2-090018-00R |
| Fan Module P/N | — | — |
| Heat Spreader P/N | 25ST5-CGAA00-A8R | 25ST5-CGAA00-A8R |

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