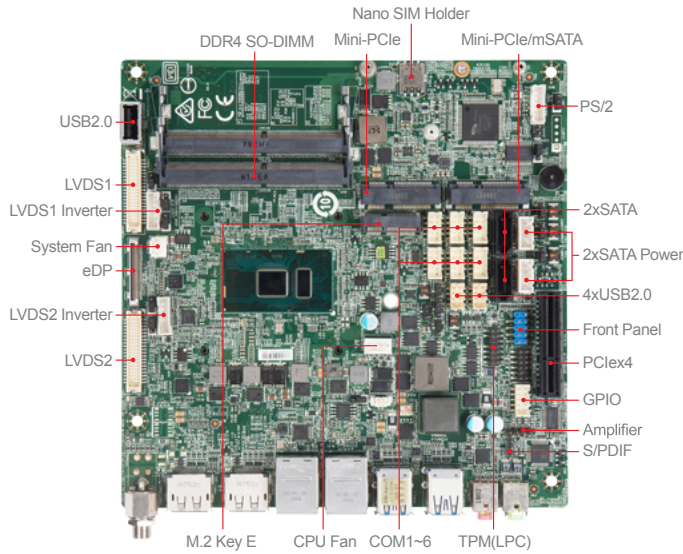


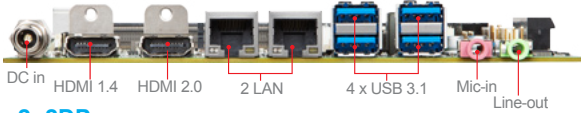
MS-98J4

Mini-ITX with Intel® Kaby Lake/Skylake ULT Platform for Low Power, Low Profile, Multi-Displays & High Performance Solutions

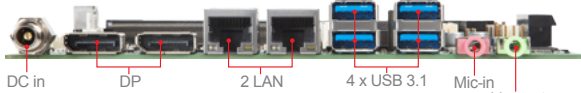
NEW



Option 1: 2HDMI



Option 2: 2DP



Option 3: 1DP



Features

- Intel® 7th/6th Gen Kaby Lake-U/Skylake-U Series
- 2 DDR4 2133 MHz SODIMM Slots up to 32GB
- Triple independent displays: DP 1(HDMI by option), DP 2(HDMI/LVDS 2 by option), LVDS 1(eDP by option)
- HDMI 2.0
- 2 GbE LAN(1 by option) with RJ-45
- 1 PCIe x4 (Gen 3), 1 M.2 E Key, 1 Mini-PCIe (Full size, with SIM Holder), 1 Mini-PCIe (Full size, with mSATA)slots
- mSATA, M.2 M key, 2 SATA 3.0 for storage
- 4 USB 3.2 Gen 1, 5 USB 2.0 (1 by option), 6 COM (2 RS485, 2 ports by option), GPIO, PS/2, Audio, S/PDIF
- Onboard TPM 2.0
- OVP & OCP
- Wide Voltage DC-IN 12~24V

Ordering Information

| Part Number | Description |
|--------------|---|
| 919-98J4-102 | MS-98J4/609-98J4-010/809-98J4-106 VER:10 OPT:A, Mini-ITX, KabyLake Core i5-7300U, 2*DDR4, 1*PCIE x4, 2*DP, 2*LVDS, 1*eDP, 5*USB2, 4*USB3, 4*COM, 2*Mini-PCIe, 1* M.2 E Key, 1*M.2 M Key, 2*LAN, 2*SATA, DC Jack, 1*SATA CABLE, I/O SHIELD, DRIVER CD, BULK, For Channel |
| 919-98J4-103 | MS-98J4/609-98J4-020/809-98J4-107 VER:1.0 OPT:B, Mini-ITX, Skylake Core i3-6100U, 2*DDR4, 1*DP, 2*LVDS, 4*USB2, 4*USB3, 2*COM, 2*Mini-PCIe, 1*M.2 E Key, 1*LAN, 2*SATA, DC CONN, 1*SATA CABLE, 1*POWER CABLE, I/O SHIELD, DRIVER CD, BULK, For Channel |

Packing List

| Part Number | Description |
|---------------------|----------------------------|
| K1D-1012064-V03 | SATA Cable ,200mm |
| K10-3004215-V03 | DC Power Cable, 160mm |
| E21-98J4020-C22 | I/O Shield(Option 2, 2xDP) |
| E21-98J4030-C22 | I/O Shield(Option 3, 1xDP) |
| G71-SEDC188-N56/X03 | Driver CD |

Specifications

| | | | |
|--------------------------|-----------------------|---|--|
| Processor | CPU | 7th/6th Gen Intel® Mobile Kaby Lake/Skylake-ULT Core™ i7/i5/i3/Celeron® Processor,DC/ QC, Max. 15W | |
| | Frequency | Depends on CPU | |
| | L2 Cache | Depends on CPU | |
| | CPU Type | BGA | |
| | Chipset | Integrated | |
| Memory | BIOS | AMI | |
| | Technology | Dual-channel DDR4 2133 MHz SDRAM | |
| | Max. Capacity | Up to 32GB | |
| | Socket | 2 x 260-pin SO-DIMMs | |
| | Controller | Intel® HD Graphics | |
| Display | Graphic Memory | Depends on CPU | |
| | LVDS | 2 x Dual channel 24-bit (LVDS1 co-design with eDP, LVDS2 co-design with DP2/HDMI2.0) | |
| | eDP | 1 (Co-design with LVDS1) | |
| | VGA | N/A | |
| | DVI | N/A | |
| | HDMI | 2 (1 x HDMI1.4 colay with DP1, 1 x HDMI2.0 colay with DP2) | |
| | DisplayPort | 2 (DP1 colay with HDMI1.4, DP2 colay with HDMI2.0) | |
| | Multiple Display | 3 independent displays | |
| | Display Interface | LVDS up to 1920 x 1200 @60Hz | |
| | | eDP up to 4096 x 2304 @60Hz DP up to 4096 x 2304 @60Hz HDMI up to 4096 x 2160 @60Hz | |
| Ethernet | Controller | 1 x Intel® I219LM GbE LAN PHY 1 x Intel® I211-AT/ I210-AT GbE LAN 1 x Intel® I211-AT GbE LAN | |
| | Controller | Realtek® ALC887/888S HD Audio Codec | |
| Audio Super I/O | Controller | Finitek F81866AD-I | |
| H/W Monitor | Watchdog Timer | 256-level Watchdog Timer | |
| | Smart Fan | Yes | |
| TPM | Controller | Infinion SLB9665TT2.0(default) Pin header (By BOM option) | |
| | I/O Interface | USB | 5 x USB 2.0 (4 x internal, 1 x vertical connector) 4 x USB 3.1 Gen 1 (rear) |
| Serial | | COM1~2: RS-232/422/485, 0V/5V/12V, RI support (RS-232/422/485 by Optional , RS485 support 1000M+) | 4 x USB 2.0 (internal) 4 x USB 3.1 Gen 1 (rear) |
| | | COM3~6: RS-232, 0V/5V/12V (depends on SKU) | 2 x COM Ports (internal) CO1~2: RS-232, 0V/5V/12V |
| Parallel | | N/A | |
| Expansion Slot | PS/2 | 1 (pin header) | |
| | GPIO | 8-bits (4 x GPI; 4 x GPO), 5V | |
| | PCIe x16 | N/A | |
| | PCIe x4 | 1 | N/A |
| | PCIe x1 | N/A | |
| | PCI | N/A | |
| | M.2 | 1 x E key 2230 for Wi-Fi/BT module 1 x M key (PCIe x4 NVMe, SATA 3.0), 2280 for SSD | 1 x E key 2230 for Wi-Fi/BT module |
| Storage | SATA | 1 x Full-size(w/mSATA) | |
| | mSATA | 1 x Full/Half-size(w/ SIM Holder) | |
| Power Supply | DC | 2 x SATA 3.0 | |
| | ATX | 1 (shared w/ Mini-PCIe) | |
| Environment | Operating Temperature | DC-in 12V~24V | |
| | Operating Humidity | N/A | |
| | Storage Temperature | Operating Temperature | |
| | Storage Humidity | 10 ~ 90%, non-condensing | |
| Form Factor | Dimensions | 10 ~ 90%, non-condensing | |
| | Weight | 170 x 170mm (Mini-ITX) | |
| Certification | EMC | 0.34 kg | |
| | OS Support | FCC, CE, RCM, VCCI, BSMI | |
| Software Platform | OS Support | Windows 7 (32/64-bit) (For Skylake-U Only) | |
| | | Windows 8.1 (64-bit) (For Skylake-U Only) Windows 10/ Windows 10 IoT Enterprise (64-bit) Linux Kernel 4.x (Fedora 25 & Ubuntu 16.04) | |