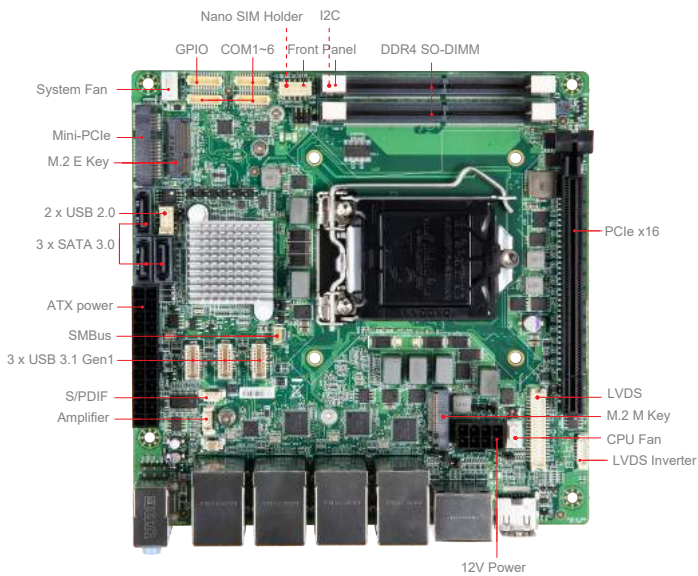


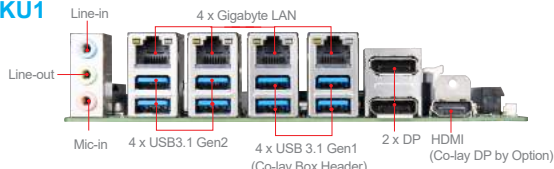
MS-98L1

Mini-ITX with 8th Gen Intel® Coffee Lake-S Xeon®, Core™ i7/i5/i3, Pentium®, Celeron® Processor & Intel® C246/Q370/H310 for High-Performance Solution

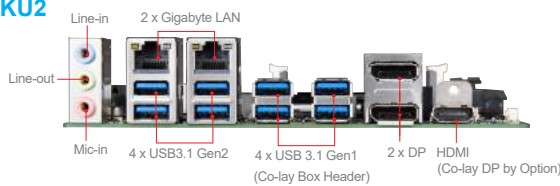
NEW



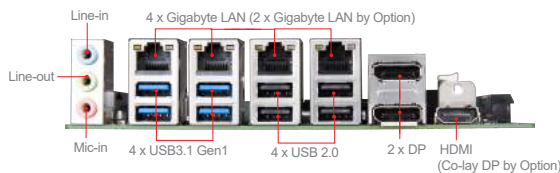
SKU1



SKU2



SKU3/SKU4



Features

- Intel® Coffee Lake-S Series CPU to maximize performance
- 2 DDR4 2666MHz SO-DIMMs slots up to 32GB memory
- Supports Dual DP, HDMI, 4 Intel® GbE LAN and AMT 12.x
- Supports 3 SATA 3.0, 4 USB 3.1 Gen2, 6 USB3.1 Gen1 (4 rear, Signal Share with Internal Box Header; 2 internal), 2 USB 2.0 and 6 COM ports for flexible applications
- Supports 1*PCIe x16 Slot

Ordering Information

Part Number

| | |
|-------------------|----------------|
| MS-98L1-C246 | Art. N° 156318 |
| MS-98L1-H310 | Art. N° 156320 |
| MS-98L1-H310-SKU4 | Art. N° 156321 |
| MS-98L1-Q370 | Art. N° 156319 |

Specifications

| | | SKU1 | SKU2 | SKU3 | SKU4 |
|--------------------------|-----------------------|---|---|--|--|
| Processor | CPU | 8th Gen Intel® Desktop Coffee Lake-S Xeon®/i7/i5/i3/Pentium®/Celeron® Series Processor, Max 95W | | | |
| | Frequency | 2.1GHz~4.7GHz (Depends on CPU) | | | |
| | L2 Cache | 2MB~12MB (Depends on CPU) | | | |
| | CPU Type | Socket (LGA 1151) | | | |
| | Chipset | Intel® C246 Express | Intel® Q370 Express | Intel® H310 Express | |
| Memory | BIOS | AMI UEFI | | | |
| | Technology | Dual-channel DDR4 (ECC/ non-ECC) 2666MHz | | Dual-channel DDR4 (non-ECC) 2666MHz | |
| | Max. Capacity | Up to 32GB | | | |
| | Socket | 2 x 260-pin DDR4 SO-DIMMs | | | |
| Display | Controller | Intel® HD Graphics | | | |
| | Graphic Memory | Shared system memory up to 1.7 GB SDRAM | | | |
| | LVDS | Dual channel 18/24-bit | | N/A | |
| | VGA | N/A | | N/A | |
| | HDMI | 1 (Co-lay with DP by Optional) | | | |
| | DisplayPort | 2 | | | |
| Ethernet | Multiple Display | 3 independent displays | | 2 independent displays | |
| | Display Interface | LVDS up to 1920 x 1200 @60Hz HDMI up to 4096 x 2160 @24Hz DP up to 4096 x 2304 @60Hz | | HDMI up to 4096 x 2160 @24Hz DP up to 4096 x 2304 @60Hz | |
| Audio | Controller | 1 x Intel® I219-LM GbE LAN PHY 3 x Intel® I210-AT GbE LAN | 1 x Intel® I219-LM GbE LAN PHY 1 x Intel® I210-AT GbE LAN | 1 x Intel® I219-LM GbE LAN PHY 3 x Intel® I211-AT GbE LAN | 1 x Intel® I219-LM GbE LAN PHY 1 x Intel® I211-AT GbE LAN |
| | Controller | Realtek® ALC887 Audio Codec (Co-lay ALC888S) | | | |
| Super I/O | Controller | Fintek F81866AD-I | | | |
| | Watchdog Timer | 256-level Watchdog Timer | | | |
| H/W Monitor | Smart Fan | Yes | | | |
| | TPM | Controller | Infineon SLB 9665TT2.0 | Box header (Default) Infineon SLB9665TT2.0 (by BOM option) | |
| I/O Interface | USB | 4 x USB 3.1 Gen2 (4 x rear) 6 x USB 3.1 Gen1 (4 rear, Signal Share with Internal Box Header; 2 internal) 2 x USB 2.0 (2 x internal) | | 4 x USB3.1 Gen1 (4 rear) 4 x USB 2.0 (4 rear) | |
| | Serial | 6 x COM ports COM1: RS-232/422/485, RI/5V/12V, Auto-flow Control COM2 RS-232/422/485, 0V/5V/12V, Auto-flow Control COM3~6 RS-232, 0V/5V/12V, Auto-flow Control | | 6 x COM ports COM1: RS-232/422/485, RI/5V/12V, Auto-flow Control COM2~6 RS-232, 0V/5V/12V, Auto-flow Control | |
| Expansion Slot | GPIO | 16-bits (8 x GPI; 8 x GPO), 5V | | | |
| | PCIe x16 | 1 | | | |
| | M.2 | 1 x M Key (PCIe x4 NVMe, SATA), 2242/2280 1 x E Key (PCIe x1, USB 2.0, CNVi), 2230 | 1 x M Key (SATA), 2242/2280 1 x E Key (PCIe x1, USB 2.0, CNVi), 2230 | | |
| Storage | Mini-PCIe | 1 x Full-size (w/SIM holder) | | | |
| | SATA | 3 x SATA 3.0 (Support RAID 0/1/5/10, AHCI Mode, RAID 10 Configured with M.2 M Key) | | 3 x SATA 3.0 (Support AHCI Mode) | |
| Power Supply | ATX | ATX-Power 24P, 12V-8P | | | |
| | Operating Temperature | -10 ~ 60°C | | | |
| Environment | Operating Humidity | 10 ~ 90%, non-condensing | | | |
| | Storage Temperature | -20 ~ 80°C | | | |
| | Storage Humidity | 10 ~ 90%, non-condensing | | | |
| Form Factor | Dimensions | 170 x 170mm (Mini-ITX) | | | |
| | Weight | 0.405 kg | 0.375 kg | 0.39 kg | 0.375 kg |
| Certification | EMC | CE, FCC Class B, BSMI, RCM, VCCI | | | |
| Software Platform | OS Support | Windows 10 (64-bit) Linux Kernel 4.x (by request) | | | |