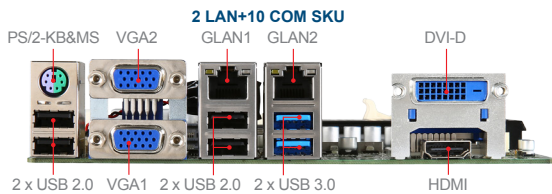
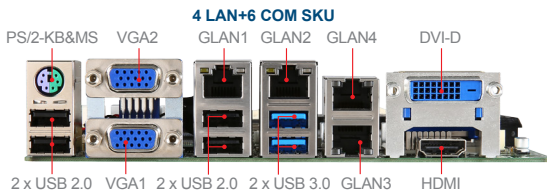
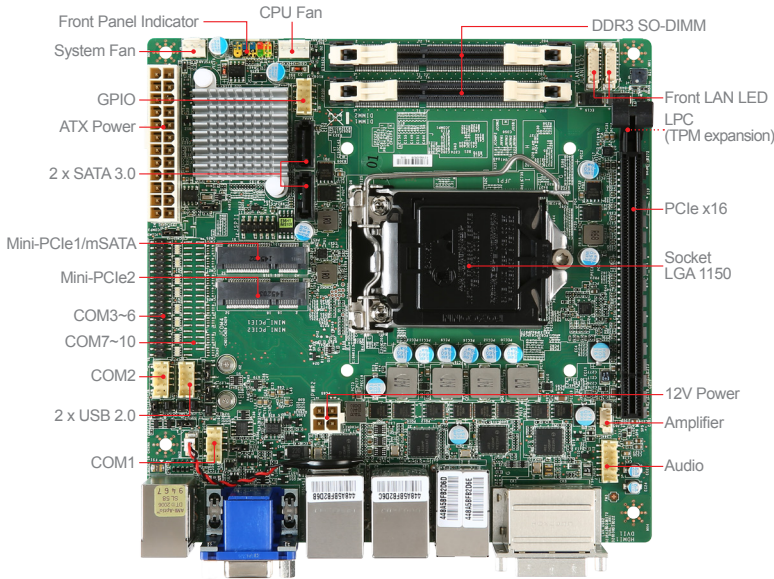


MS-98H1

LGA-1150 Intel® 4th Gen Core™ i7/i5/i3/Pentium/Celeron Processors with 4 GLAN, 10 COM, and 3 Independent Displays

NEW



Features

- Intel® Desktop Haswell & Haswell Refresh Core i7/i5/i3, Pentium, Celeron Processor
- Support 4 x Intel® GbE LAN
- 3 or 2 independent displays with dual VGA, DVI-D, and HDMI outputs
- Support 10 COM ports (all with power)
- 2 x SATA 3.0, 8 x USB ports, 1 x PCIe x16, and dual Mini-PCIe

Ordering Information

| Part Number | Description |
|--------------|---|
| 919-98H1-101 | MS-98H1 V1.0 Mini-ITX, Intel Haswell Processor+Intel H81,2*DDR3/DDR3L SO-DIMM+1*DVI-D+1*HDMI+2*VGA+4*GbE LAN+6*COM+8*USB Port ,ATX power |
| 919-98H1-102 | MS-98H1 V1.0 Mini-ITX, Intel Haswell Processor+Intel H81,2* DDR3/DDR3L SO-DIMM+1*DVI-D+1*HDMI+2*VGA+2*GbE LAN+10*COM+8*USB Port ,ATX power |
| 919-98H1-103 | MS-98H1 V1.0 Mini-ITX, Intel Haswell Processor+Intel Q87,2* DDR3/DDR3L SO-DIMM+1*DVI-D+1*HDMI+2*VGA+2*GbE LAN+10*COM+8x USB Port ,ATX power |

Packing List

| Part Number | Description | Quantity |
|-----------------|---------------|----------|
| E21-98H10X0-C22 | I/O SHEILDING | 1 |

Specifications

| | | | |
|-----------------------|-------------------------------|--|--------------------------------|
| Processor | CPU | 4th Gen Intel® Desktop Haswell/Haswell refresh Core i7/i5/i3/Pentium/Celeron Processor | |
| | Frequency | Depends on CPU | |
| | L2 Cache | Depends on CPU | |
| | CPU Type | Socket (LGA 1150) | |
| | Chipset | Intel® Q87/H81 Express | |
| Memory | BIOS | AMI | |
| | Technology | Dual-channel DDR3/DDR3L 1066/1333/1600MHz | |
| | Max. Capacity | Up to 16 GB | |
| | Socket | 2 x 204-pin SO-DIMMs | |
| | Controller | Intel® HD Graphics | |
| Display | Graphic Memory | Shared system memory up to 1.7 GB SDRAM | |
| | LVDS | N/A | |
| | eDP | N/A | |
| | VGA | 2 | |
| | DVI | 1 (DVI-D) | |
| | HDMI | 1 | |
| | DisplayPort | N/A | |
| | Multiple Display | 3 independent displays (Q87 SKU) 2 independent displays (H81 SKU) | |
| | Display Interface | VGA1 up to 1920 x 1080 | |
| | | VGA2 up to 1920 x 1080 DVI-D up to 1920 x 1200 HDMI up to 1920 x 1200 | |
| Ethernet | Controller | 4 x Intel® I210-AT GbE LAN 2 x Intel® I211-AT GbE LAN (optional by SKU) | |
| | Audio | Controller | Realtek® ALC887 HD Audio Codec |
| Super I/O | Controller | Fintek F81866D | |
| H/W Monitor | Watchdog Timer | 256-level Watchdog Timer | |
| | Smart Fan | Yes | |
| TPM | Controller | Pin header | |
| I/O Interface | USB | 2 x USB 3.0 (rear) 6 x USB 2.0 (4 x rear; 2 x internal) | |
| | Serial | COM1~10: internal | |
| | | COM1: RS-232/422/485, 0V/5V/12V | |
| | | COM2: RS-232/422/485, 0V/5V/12V | |
| | | COM3~6: RS-232, 0V/5V/12V | |
| | | COM7~10: RS-232, 0V/5V/12V (optional by SKU) | |
| | Parallel | N/A | |
| PS/2 | 1 | | |
| GPIO | 8-bits (4 x GPI; 4 x GPO), 5V | | |
| Expansion Slot | PCIe x16 | 1 | |
| | PCIe x4 | N/A | |
| | PCIe x1 | N/A | |
| | PCI | N/A | |
| | Mini-PCIe | 1 x Full-size(W/ mSATA) 1 x Half-size | |
| Storage | SATA | 2 x SATA 3.0 | |
| | IDE | N/A | |
| | eSATA | N/A | |
| | CFast | N/A | |
| | mSATA | 1 | |
| Power Supply | CompactFlash | N/A | |
| | DC | N/A | |
| Environment | ATX | ATX-Power 24P, 12V-4P | |
| | Operating Temperature | -10 ~ 60°C | |
| | Operating Humidity | 10~90%, non-condensing | |
| | Storage Temperature | -20 ~ 80°C | |
| | Storage Humidity | 10~90%, non-condensing | |
| Form Factor | Dimensions | 170mm x 170mm (Mini-ITX) | |
| | Weight | 0.37 Kg | |
| Certification | EMC | FCC Class A, CE, C-Tick, VCCI, BSMI | |