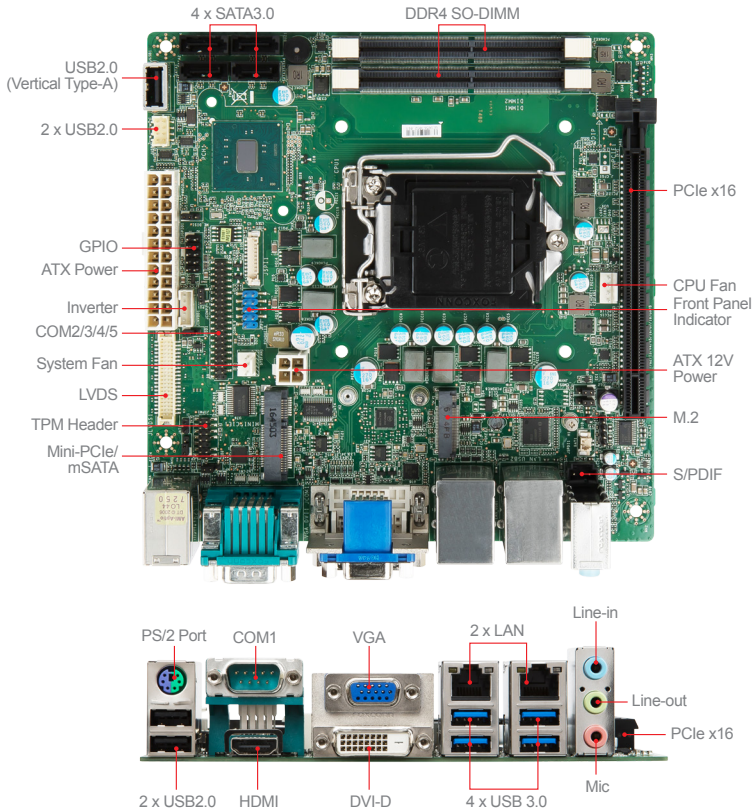


MS-98E1

Mini-ITX with 7th/6th Gen Intel® Kaby Lake/Skylake Processor with Superior I/O & Expansion Capability for High-Performance Solution

NEW



Features

- 3 independent displays with multiple video outputs (LVDS, HDMI, DVI-D, VGA)
- Supports DirectX 11.1 and Intel® Clear Video Technology (up to 1080P)
- 4 SATA 3.0 ports for RAID
- Supports m-SATA function by Mini-PCIe slot
- Plenty USB ports for more peripherals(USB3.0*4, USB2.0*4, Vertical Type USB2.0*1)
- 2 independent displays with multiple video outputs (LVDS, HDMI, DVI-D, VGA)
- Supports DirectX 11.1 and Intel® Clear Video Technology (up to 1080P)
- 3 SATA 3.0 ports for faster and high-capacity storage
- Supports m-SATA function by Mini-PCIe slot
- Plenty USB ports for more peripherals(USB3.0*4, USB2.0*4, Vertical Type USB2.0*1)

Ordering Information

| Part Number | Description |
|--------------|--|
| 919-98E1-001 | V1.1 Intel KabyLake-S/Skylake-S +C236+2*DDR4 LVDS+HDMI+DVI-D+VGA+4*SATAIII+2*GbE LAN+5*COM+1*mini-PCIe +1*M.2+ATX,SINGLE |
| 919-98E1-002 | V1.1 OPT:A Intel KabyLake-S/Skylake-S +H110+2*DDR4 LVDS+HDMI+DVI-D+VGA+3*SATAIII+2*GbE LAN+5*COM+1*mini-PCIe +ATX,SINGLE |

Packing List

| Part Number | Description |
|-----------------|-------------------|
| K1D-1008261-V03 | SATA Cable, 500mm |
| E21-98E1010-C22 | I/O SHIELD |

| Processor | C236 SKU | | H110 SKU | |
|----------------|--|---|---|--|
| | CPU | 7th/6th Gen Intel® Desktop Kaby Lake/Skylake Xeon/i7/i5/i3/Pentium®/Celeron Series Processor, Max 80W | 7th/6th Gen Intel® Desktop Kaby Lake/Skylake Core™ i7/i5/i3/Pentium®/Celeron® Series Processor, Max 65W | |
| Frequency | 2.3GHz-4.0GHz (Depends on CPU) | | | |
| L2 Cache | 2M ~ 8M (Depends on CPU) | | | |
| CPU Type | Socket (LGA 1151) | | | |
| Chipset | Intel® C236 Express | Intel® H110 Express | | |
| BIOS | AMI | | | |
| Memory | Technology | Dual-channel DDR4 (ECC) 2133MHz/2400MHz (7th Gen) | Dual-channel DDR4 (non-ECC) 2133MHz/2400MHz (7th Gen) | |
| | Max. Capacity | Up to 32 GB | | |
| | Socket | 2 x 260-pin SO-DIMMs | | |
| Display | Controller | Intel® HD Graphics | | |
| | Graphic Memory | Shared system memory up to 1.7 GB SDRAM | | |
| | LVDS | 1 | | |
| | eDP | N/A | | |
| | VGA | 1 | | |
| | DVI | 1 (DVI-D) | | |
| | HDMI | 1 | | |
| Ethernet | Controller | 1 x Intel® I219-LM GbE-PHY | 1 x Intel® I211-AT PCIe GbE LAN(Co-lay I210-AT) | |
| | Audio | Controller Realtek® ALC887 HD Audio Codec | | |
| | Super I/O | Controller Fintek F81866AD-I | | |
| H/W Monitor | Watchdog Timer | 256-level Watchdog Timer | | |
| | Smart Fan | Yes | | |
| TPM | Controller | Pin header | | |
| | I/O Interface | USB | 4 x USB 3.0 (4 x rear) | |
| Serial | | 5 x COM (1 x rear; 4 x internal) | | |
| Parallel | | COM1: RS-232/422/485, 0V/5V/12V | | |
| PS/2 | | COM2/3/4/5: RS-232, 0V/5V/12V | | |
| GPIO | | N/A | | |
| PS/2 | | 1 | | |
| Expansion Slot | GPIO | 8-bits (4 x GPI, 4 x GPO), 5V | | |
| | PCIe x 16 | 1 | | |
| | M.2 | 1 x M key (PCIe x4, SATA3.0 ,2242) | N/A | |
| Storage | Mini-PCIe | 1 x Full-size, mSATA | | |
| | SATA | 4 x SATA 3.0 | 3 x SATA 3.0 | |
| mSATA | 1 (shared w/ Mini-PCIe) | | | |
| Power Supply | DC | N/A | | |
| | ATX | ATX-Power 24P, 12V-4P | | |
| Environment | Operating Temperature | 0 ~ 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, CE, RCM, VCCI, BSMI | | |
| | Software Platform | OS Support | | |
| OS Support | Windows 7 (32/64-bit) Windows 8.1 (64-bit) Windows 10 (64-bit) Linux Kernel 4.X, support Fedora 23(64Bit) & Ubuntu 16.04 (64Bit) of Kaby Lake-S & Skylake-S | | | |