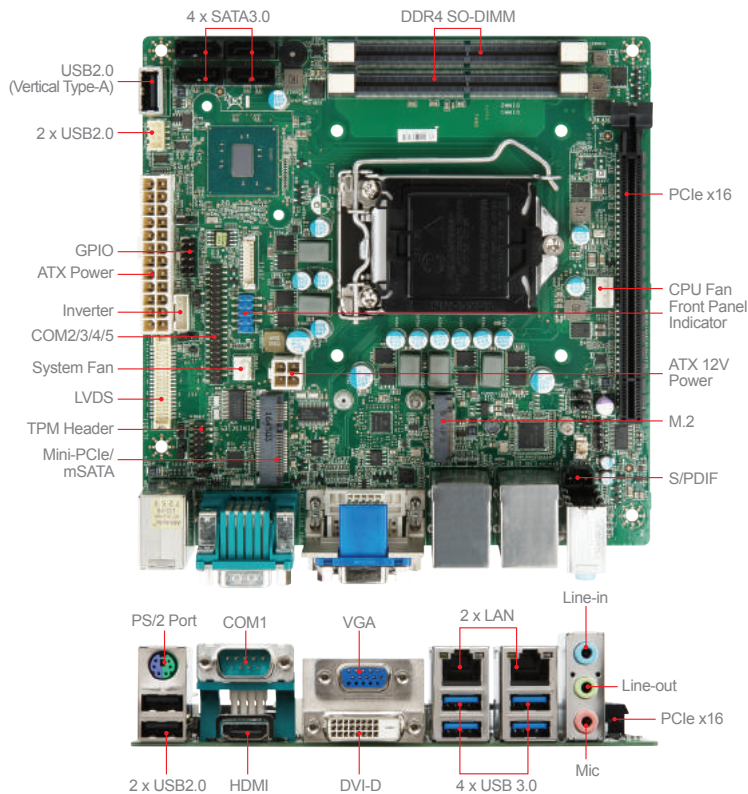


MS-98E1

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

Optional Item

Part Number	Description
K14-1036004-V03	COM Port Cable, 200mm

Processor	CPU	C236 SKU	H110 SKU
		7th/6th Gen Intel® Desktop Kaby Lake/Skylake Xeon/7/5/3/ Pentium®/Celeron® Series Processor, Max. 95W	7th/6th Gen Intel® Desktop Kaby Lake/Skylake Core™ i7/i5/i3/ Pentium®/Celeron® Series Processor, Max. 95W
Memory	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	
Display	Technology	Dual-channel DDR4 (ECC) 2133MHz/2400MHz (7th Gen)	Dual-channel DDR4 (non-ECC) 2133MHz/2400MHz (7th Gen)
	Max. Capacity	Up to 32GB	
	Socket	2 x 260-pin SO-DIMMs	
	Controller	Intel® HD Graphics	
I/O Interface	Graphic Memory	Shared system memory up to 1.7 GB SDRAM	
	LVDS	1	
	eDP	N/A	
	VGA	1	
	DVI	1 (DVI-D)	
	HDMI	1	
	DisplayPort	N/A	
	Multiple Display	3 independent displays	2 independent displays
	Display Interface	LVDS up to 1920 x 1200 @60Hz HDMI up to 4096 x 2160 @24Hz DVI-D up to 1920 x 1200 @60Hz VGA up to 1920 x 1200 @60Hz	
	Ethernet	1 x Intel® I219-LM GbE-PHY 1 x Intel® I211-AT PCIe GbE LAN(Co-layer I210-AT)	
Audio	Controller	Realtek® ALC887 HD Audio Codec	
	Super I/O	Fintek F81866AD-I	
H/W Monitor	Watchdog Timer	256-level Watchdog Timer	
	Smart Fan	Yes	
TPM	Controller	Pin header	
	USB	4 x USB 3.0 (4 x rear) 4 x USB 2.0 (2 x rear; 2 x internal) 1 x USB 2.0 (Vertical, internal)	
Expansion Slot	Serial	5 x COM ports (COM1: rear, COM2~4: internal) COM1: RS-232/422/485, 0V/5V/12V COM2~5: RS-232, 0V/5V/12V	
	Parallel	N/A	
	PS/2	1	
	GPIO	8-bits (4 x GPI, 4 x GPO), 5V	
	PCIe x 16	1	
Storage	M.2	1 x M Key (PCIe x4, SATA3.0), 2242	N/A
	Mini-PCIe	1 x Full-size, mSATA	
Power Supply	SATA	4 x SATA 3.0	3 x SATA 3.0
	mSATA	1 (shared w/ Mini-PCIe)	
Environment	DC	N/A	
	ATX	ATX-Power 24P, 12V-4P	
	Operating Temperature	0 ~ 60°C	
	Operating Humidity	10 ~ 90%, non-condensing	
Form Factor	Storage Temperature	-20 ~ 80°C	
	Storage Humidity	10 ~ 90%, non-condensing	
Certification	Dimensions	170 x 170mm (Mini-ITX)	
	Weight	0.37 kg	
Software Platform	EMC	FCC, CE, RCM, VCCI, BSMI	
	OS Support	Windows 7 (32/64-bit) Windows 8.1 (64-bit) Windows 10 (64-bit) Linux Fedora 23 (by request) Linux Ubuntu 16.04 (by request)	