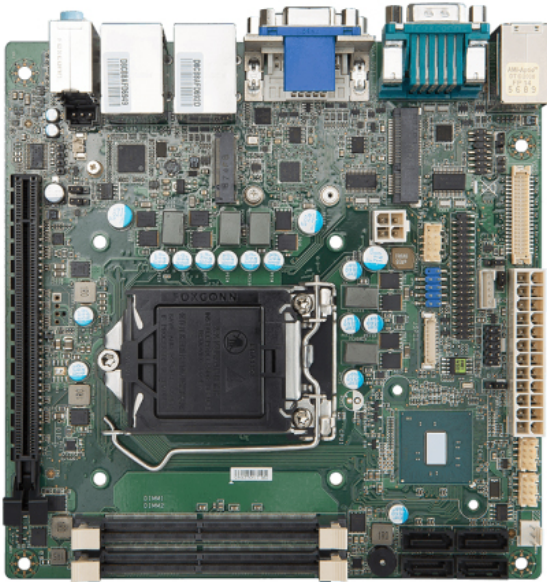


MS-98E1

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

NEW



Features

- 5 COM ports for flexible applications
 - Multiple video outputs: VGA, DVI-D, HDMI (3 independent displays)
 - 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 (USB 2.0*8 USB 3.0*4)
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- Multiple video outputs: VGA, DVI-D, HDMI (2 independent displays)
 - Supports DirectX 11.1 and Intel® Clear Video Technology (up to 1080P)
 - 4 SATA 3.0 ports for faster and high-capacity storage
 - Supports m-SATA function by Mini-PCIe slot
 - Plenty USB ports for more peripherals (USB 2.0*6 USB 3.0*4)

Ordering Information

Part Number	151584 151833
Description	MS-98E1-C236 MS-98E1-H110

Packing List

Part Number	Description
Coming soon	

Processor	CPU	6th Gen Intel® Desktop Kaby Lake/Skylake Core™ i7/i5/i3/Celeron®/Xeon®/Pentium® Processors, 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 2133 MHz		
	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		
	DisplayPort	N/A		
	Multiple Display	3 independent displays	2 independent displays	
	Display Interface	LVDS up to 1920 x 1200 HDMI up to 3840 x 2160 DVI-D up to 1920 x 1200 VGA up to 1920 x 1200		
Ethernet	Controller	1 x Intel® I219-LM GbE-PHY 1 x Intel® I210-AT PCIe GbE LAN(Co-lay I211-AT)		
	Controller	Realtek® ALC887 HD Audio Codec		
Audio	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)	4 x USB 3.0 (4 x rear)	
		6 x USB 2.0 (2 x rear; 4 x internal) 1 x USB2.0 (Vertical, internal)	4 x USB 2.0 (2 x rear; 2 x internal) 1 x USB2.0 (Vertical, internal)	
	Serial	5 x COM (1 x rear; 5 x internal) COM1: RS-232/422/485, 0V/5V/12V COM2: RS-232, 0V/5V/12V COM3-5: RS-232, with power	2 x COM (1 x rear; 5 x internal) COM1: RS-232/422/485, 0V/5V/12V COM2: RS-232, 0V/5V/12V COM3-5: RS-232, with power(Optional)	
		Parallel	N/A	
		PS/2	1	
	Expansion Slot	GPIO	8-bits (4 x GPI, 4 x GPO), 5V	
PCIe x 16		1		
M.2		N/A		
Mini-PCIe		1 x Full-size, mSATA 1 x Half-size		
Storage	SATA	5 x SATA 3.0 (SATA1 share with mSATA)	4 x SATA 3.0 (SATA1 share with mSATA)	
	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	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 Skylake-S & KabyLake-S		

Mini-ITX Board