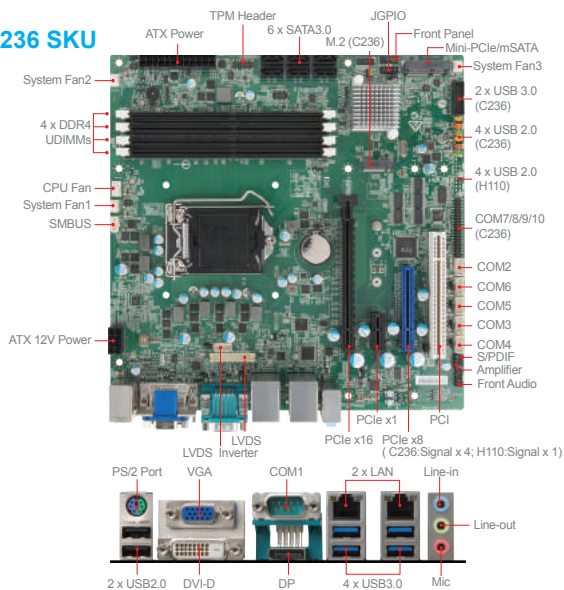


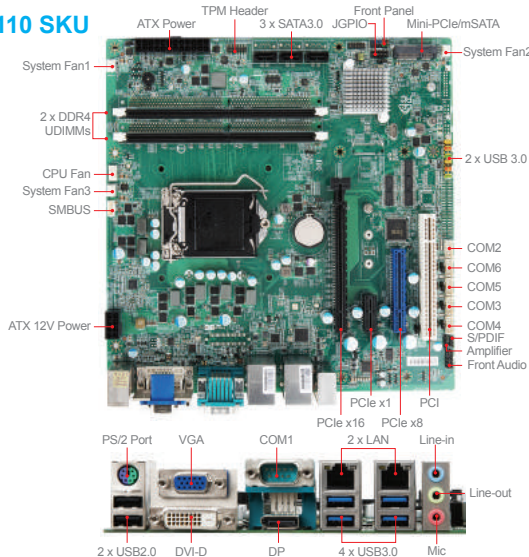
MS-98E2

Micro-ATX with 7th/6th Gen Intel® Kaby Lake/Skylake, Superior I/O & Expansion Capability for High-Performance Solution

C236 SKU



H110 SKU



Features

- 10 COM ports for flexible applications
 - Supports 3 System FANs
 - 3 independent displays: LVDS, DP, DVI-D and VGA
 - Supports DirectX 11.1 and Intel® Clear Video Technology (up to 1080P)
 - Multiple expansion slots: PCIe x16, PCIe x8 (x4 signal), PCIe x1, and PCI
 - 6 SATA 3.0 ports for RAID
 - M.2 supports high speed PCIe NVMe SSD storage
 - Supports m-SATA function by Mini-PCIe slot
 - Plenty USB ports for more peripherals (6 USB 2.0, 6 USB 3.0)
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- 6 COM ports for flexible applications
 - Supports 3 System FANs
 - 2 independent displays: DP, DVI-D and VGA
 - Supports DirectX 11.1 and Intel® Clear Video Technology (up to 1080P)
 - Multiple expansion slots: PCIe x16, PCIe x1, PCIe x8 (x1 signal), and PCI
 - 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 (6 USB 2.0, 4 USB 3.0)

Ordering Information

Part Number	Description
919-98E2-001	VER 1.1 OPTA,9.6-INCH, Intel Skylake-S/KabyLake-S +C236,4*DDR4, DP, VGA, LVDS, DVI, 1*Mini-PCIe, 2*LAN, 6*SATA3.0, 6*USB3.0, 6*USB2.0, 10*COM, ATX Power,single for channel
919-98E2-002	VER 1.1 OPTB,9.6-INCH, Intel Skylake-S/KabyLake-S +H110, 2*DDR4, DP, VGA, DVI, 1*Mini-PCIe, 2*LAN, 3*SATA3.0, 4*USB3.0, 6*USB2.0, 6*COM, ATX Power,single for channel

Specifications

	C236 SKU	H110 SKU
Processor	CPU	7th/6th Gen Intel® Desktop Kaby Lake/ Skylake Xeon/7/5/3/Pentium®/Celeron® Series Processor, Max 95W
	Frequency	2.3GHz~4.0GHz (Depends on CPU)
	L2 Cache	2M ~ 8M (Depends on CPU)
	CPU Type	Socket (LGA 1151)
	Chipset	Intel® C236 Express
BIOS	AMI	Intel® H110 Express
Memory	Technology	Dual-channel DDR4 (ECC) 2133MHz/2400MHz (7th Gen)
	Max. Capacity	Up to 64 GB
	Socket	Up to 32 GB
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)
	DisplayPort	1
Display Interface	Multiple Display	3 independent displays
	Display Interface	2 independent displays
Ethernet	Controller	1 x Intel® I219-LM GbE-PHY 1 x Intel® I210-AT PCIe GbE LAN
	Controller	1 x Intel® I219-LM GbE-PHY 1 x Intel® I211-AT PCIe GbE LAN
Audio	Controller	Realtek® ALC887 HD Audio Codec
Super I/O	Controller	Fintek F81866AD-1 + F81216H
H/W Monitor	Watchdog Timer	256-level Watchdog Timer
TPM	Controller	Yes
I/O Interface	USB	6 x USB 3.0 (4 x rear, 2 x internal) 6 x USB 2.0 (2 x rear, 4 x internal)
	Serial	10 x COM ports (COM1: rear, COM2-5: internal) COM1: RS-232/422/485, 0V/5V/12V COM2-6: RS-232, 0V/5V/12V COM7-10: RS-232, without power
	Parallel	N/A
	PS/2	1
	GPIO	8-bits (4 x GPI, 4 x GPO), 5V
	PCIe x16	1
	PCIe x8	1 (PCIe x4 signal)
	PCIe x4	N/A
	PCIe x1	1
	PCI	1
Storage	M.2	1 x M Key (PCIe x4, SATA3.0), 2242/2280/2280
	Mini-PCIe	1 x Full-size, mSATA
	SATA	6 x SATA 3.0
Power Supply	mSATA	3 x SATA 3.0
	DC	1
Environment	ATX	N/A
	Operating Temperature	ATX-Power 24P, 12V-8P
	Operating Humidity	0 ~ 60°C
	Storage Temperature	10 ~ 90%, non-condensing
Form Factor	Storage Humidity	-20 ~ 80°C
	Dimensions	10 ~ 90%, non-condensing
Certification	Weight	244 x 244 mm (uATX)
	EMC	0.73 kg
Software Platform	OS Support	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)

Packing List

Part Number	Description
K1D-1008261-V03	SATA Cable, 500mm
K14-1018003-V03	COM PORT Cable, 300mm
E21-98E2010-C22	I/O SHIELD

Optional Item

Part Number	Description
K14-1036004-V03	COM Port Cable, 200mm
K1B-3008012-E06	USB 2.0 Cable, 330mm