

MS-9B05

Flexible Expansion Box PC with Intel® Whiskey Lake ULT, 3 Display Outputs & Easy Maintenance for Digital Signage & Automation

NEW

MS-9B05-L1



Left IO

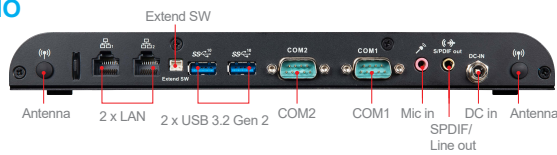
SKU 1



SKU 2



Right IO



Features

- Ultra low power 15W with fanless design
- 2 SO-DIMMs, DDR4 2133MHz/2400MHz, up to 32GB
- 3 independent displays, including 1 x HDMI 2.0 (4K display at 60 FPS)
- Dual Intel® GbE LAN
- Expansion Slot: Mini-PCIe slots for SSD, WiFi/BT & 3G/4G module
M.2 slot for SSD & WiFi/BT module
- 4 openings reserved for antennas
- Wide voltage range DC-in 9~36V
- Easy Maintenance: Only 2 screws to fix/remove bottom cover within 6 secs
- Quick Assembly for 2 x Memory, 2 x Mini-PCIe, 2 x M.2, 1 x 2.5" HDD/SSD, SIM Card Slot (all on bottom side)
- Compliance IEC 61373
- S/PDIF for 5.1 surround sound output
- TPM 2.0 on board by bom option

Ordering Information

Part Number	Description
Coming soon	

Packing List

Part Number	Description
Coming soon	

Specifications

		MS-9B05-L1		
Processor	CPU	SKU1 : 8th Gen Intel® Mobile Whiskey Lake-U Celeron® Processor, DC, 15W	SKU2 : 8th Gen Intel® Mobile Whiskey Lake-U Core™ i5 Processor, QC, 15W	
	Frequency	Depends on CPU		
	L2 Cache	Depends on CPU		
	CPU Type	BGA		
	Chipset	Integrated		
	BIOS	AMI		
Memory	Technology	Dual-channel for DDR4 2133 MHz	Dual-channel for DDR4 2400 MHz	
	Max. Capacity	Up to 32GB		
	Socket	2 x 260-pin SO-DIMMs		
Graphic	Controller	Intel® UHD Graphics 620		
	Graphic Memory	Shared system memory up to 1.7 GB SDRAM		
	Multiple Display	3 independent displays		
	Display Interface	HDMI1.4 up to 4096 x 2160 @24Hz	HDMI2.0 up to 4096 x 2160 @60Hz	
		DP1.2 up to 4096 x 2304 @60Hz	HDMI1.4 up to 4096 x 2160 @24Hz	
DVI-D up to 1920 x 1200 @60Hz				
Ethernet	Controller	1 x Intel® I219LM GbE LAN PHY 1 x Intel® I210-AT GbE LAN*		
Audio	Controller	Realtek® ALC887-VD2-CG HD Audio Codec		
	Watchdog Timer	256-level Watchdog Timer		
H/W Monitor	Smart Fan	N/A		
	TPM	Controller	Infineon SLB9665TT2.0 (by BOM option)	
Expansion Slot	PCIe x4	N/A		
	M.2	1 x E Key (2x PCIe x1, USB 2.0), 2230	1 x E Key (2x PCIe x1, USB 2.0), 2230	
		1 x M Key (PCIe x4), 2242	1 x M Key (PCIe x4, SATA), 2242	
Storage	Mini-PCIe	1 x Half/Full-size (w/ mSATA) 1 x Half/Full-size (w/ Nano-SIM holder)		
	SATA	1 x 2.5" HDD/SSD		
	mSATA	1 x Full-size (shared with mini-PCIe)		
I/O Interface	CFast	N/A		
	RJ-45	2		
	PoE	N/A		
	Audio	1 x SPDIF-out/Line-out		
		1 x Mic-in/Line-in		
	USB	4 x USB 2.0	4 x USB 2.0	
		2 x USB 3.2 Gen1	2 x USB 3.2 Gen2	
	Serial	2 x COM ports COM1/2: RS-232/422/485, 0V/5V/12V		
	GPIO	N/A		
	CANbus	N/A		
HDMI	1	3		
DVI	1 (DVI-D, signal share with HDMI3)	N/A		
DisplayPort	1	N/A		
Power Supply	Antenna	4 openings reserved for antennas		
	DC Input	DC-in 9~36V with Lockable DC Jack		
Environment	IP Rating	Full IP40		
	Operating Temperature	-10 ~ 50°C (SSD) -10 ~ 40°C (HDD)		
	Operating Humidity	10 ~ 90%, non-condensing		
	Storage Temperature	-20 ~ 80°C		
	Storage Humidity	10 ~ 90%, non-condensing		
	Vibration	Operating: IEC 60068-2-64: 2 Grms, 5 ~ 500 Hz, 1hr/axis (w/ SSD)		
Form Factor	Shock	Operating: IEC 60068-2-27: 50G, half sine, 11ms (w/ SSD)		
	Dimensions (W x D x H)	260 x 185 x 27mm		
Certification	Weight	1.77 kg		
	Mounting	VESA/DIN Rail(STD), Wall mount (by BOM option)		
Software Platform	EMC	FCC, CE, RCM, VCCI, BSMI Class A		
	Safety	BSMI		
OS Support	OS Support	Windows 10 IoT Enterprise LTSC/SAC 1809 (64-bit, RS5) Linux Ubuntu/ Linux Fedora (by request)		