

MS-9A89

Compact-Size Box PC with Intel® Kaby Lake-U/Skylake-U or Apollo Lake-I Series Processor for Ultra Low-Power Fanless Solution

NEW

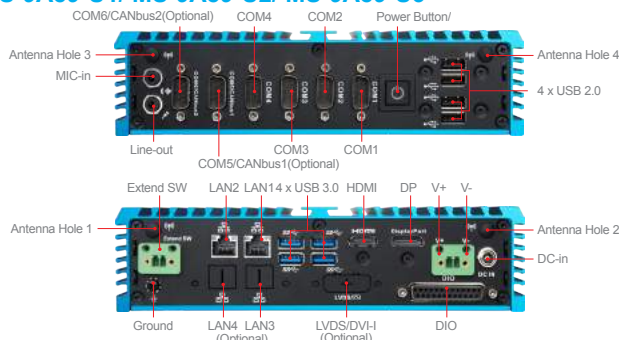


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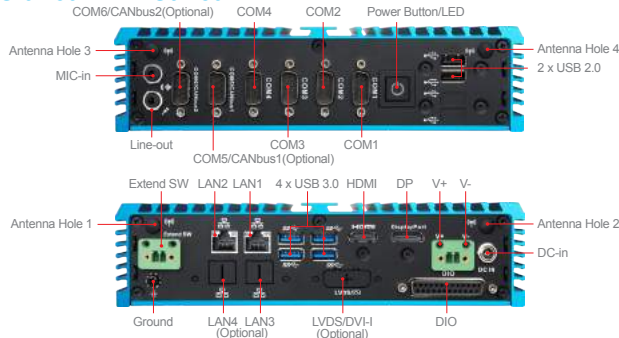
EN50155



MS-9A89-U1/ MS-9A89-U2/ MS-9A89-U3



MS-9A89-A1/ MS-9A89-A2



Features

- Ultra low power with fanless design
- Support DDR4 2133MHz SO-DIMM Memory up to 16GB(For KBL-U Series)
- Support DDR3L 1866/1600MHz SO-DIMM Memory up to 8GB(For APL-I Series)
- Support operating temperature: -20~70°C (w/ WT SSD or mSATA For MS-9A89A1 SKU)
- 3 independent displays: HDMI, DP and LVDS/DVI-I(Optional)
- Supports 16-bit GPIO (8*GPI; 8*GPO)
- Dual GbE LAN and 4*USB 3.0 and 4*USB2.0(APL-I Series support 2*USB2.0) and 6*COM ports
- Dual Mini-PCIe for expansion
- Support DC in 12V~24V
- 4 openings reserved for antennas
- Anti-Vibration & Shockproof Design
- EN50155 Compliance

Ordering Information

Part Number Description

Please check MSI IPC website at <http://ipc.msi.com> for details.

Packing List

Part Number Description

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Specifications

		MS-9A89-U1	MS-9A89-U2	MS-9A89-U3	MS-9A89-A1	MS-9A89- A2
Processor	CPU	Intel® KBL-U Core™ i3-7100U Processor, DC, 15W	Intel® SKL-U Core™ i5-6300U Processor, DC, 15W	Intel® SKL-U Core™ i3-6100U Processor, DC, 15W	Intel® Atom™ x7 Processor E3950, QC, 12W	Intel® Atom™ x5 Processor E3940, QC, 9.5W
	Frequency	2.4GHz			1.6GHz, up to 2.0GHz	1.6GHz, up to 1.8GHz
	L2 Cache	3MB			2MB	
	CPU Type	BGA				
	Chipset	Integrated in Process			Integrated in SoC Process	
	BIOS	AMI				
Memory	Technology	Single channel for DDR4 2133 MHz			Single channel for DDR3L 1866/1600 MHz	
	Max. Capacity	Up to 16GB			Up to 8GB	
	Socket	1 x 260-pin SO-DIMMs			1 x 204-pin SO-DIMMs	
Display	Controller	Intel® HD Graphics				
	Graphic Memory	Shared system memory up to 1.7 GB SDRAM				
	Multiple Display	2 or 3 independent displays				
	Display Interface	HDMI1.4 up to 4096 x 2160 @24Hz DP up to 3840 x 2160 @60Hz (Support DP++) LVDS up to 1920 x 1200 @60Hz (optional by cable) DVI-I up to 1920 x 1200 @60Hz (optional by MS-99C0)			HDMI up to 3840 x 2160 @30Hz DP up to 4096 x 2160 @60Hz LVDS up to 1920 x 1200 @60Hz (optional by cable) DVI-I up to 1920 x 1200 @60Hz (optional by MS-99C0)	
Ethernet	Controller	1 x Intel® I210-AT GbE LAN 1 x Intel® I219-LM GbE LAN PHY			2 x Intel® I210-IT GbE LAN	2 x Intel® I210-AT GbE LAN
Audio	Controller	Realtek® ALC887-VD2-CG HD Audio Codec				
H/W Monitor	Watchdog Timer	256-level Watchdog Timer				
TPM	Controller	N/A				
Expansion Slot	Mini-PCIe	2 x Full-size (Mini-PCIe1 Slot w/ NANO SIM-Holder) (Mini-PCIe2 Slot w/ mSATA)				
Storage	SATA	1 x 2.5" HDD/SSD Bay				
	mSATA	1				
I/O Interface	RJ-45	4 (LAN1/2 Standard, LAN3/4 by Option)				
	PoE	2 x 802.11af (by request)				
	Audio	1 x Line-out / 1 x Mic-in				
	USB	4 x USB 3.0, 4 x USB 2.0			4 x USB 3.0, 2 x USB 2.0	
	Serial	6 x COM ports COM1: RS-232/422/485, 0V/5V/12V COM2-6: RS-232, 0V/5V/12V				
	GPIO	16-bit (8*GPI; 8*GPO), 5V				
	CANbus	2 x CAN 2.0B (optional)				
	HDMI	1				
	LVDS	1 (optional)				
	DVI	1 (DVI-I by option)				
DisplayPort	1					
	Antenna	4 openings reserved for antennas				
Power Supply	DC Input	DC-in 12V~24V				
Environment	Operating Temperature	-10~45°C (HDD) -10~60°C (w/ WT SSD/mSATA)			-10~45°C (HDD) -20~70°C (w/ WT SSD/ mSATA)	-10~45°C (HDD) -10~60°C (w/ WT SSD/ mSATA)
	Operating Humidity	10 ~ 90%, non-condensing				
	Storage Temperature	-20 ~ 80°C				
	Storage Humidity	10 ~ 90%, non-condensing				
	Vibration	IEC61373 Category 1, Class B:				
	Shock	IEC61373 Category 1, Class B				
Form Factor	Dimensions (Wx DxH)	215 x 155 x 55mm				
	Weight	1.55 kg				
	Mounting	Wall mount(STD)/DIN-rail mount(STD)/ VESA mount(by BOM option)				
Certification	EMC	CE, FCC, VCCI, RCM, BSMI, EN50155				
	Safety	BSMI				
Software Platform	OS Support	Windows 7(For Skylake-U SKUs) Window 8.1(For Skylake-U SKUs) Windows 10 (64-bit) Linux Fedora 25 (by request) Linux Ubuntu 16.04 (by request)				

Optional Item

Part Number Description

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