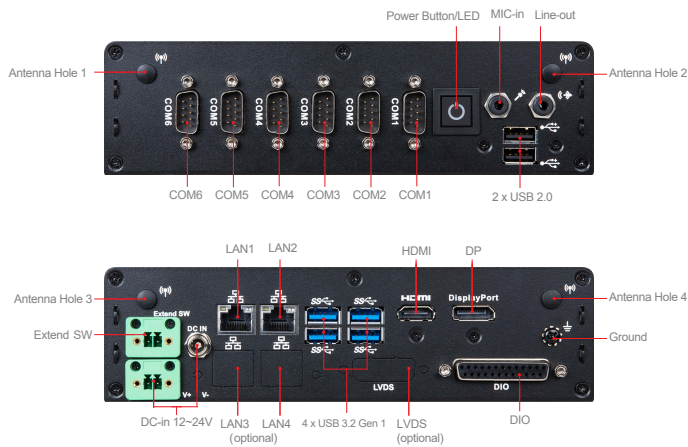


# MS-9A69 V2.0

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

**NEW**



## Features

- Ultra low power with fanless design
- KBL-U Series : SO-DIMM, DDR4 2133MHz, up to 16GB  
APL Series : SO-DIMM, DDR3L 1866/1600MHz, up to 8GB
- 3 independent displays: HDMI, DP and LVDS(Optional)
- Dual Intel® GbE LAN
- Dual Mini-PCIe for expansion, 1x SATA, 1x mSATA
- 6 USB ports (2x USB 2.0, 4x USB 3.2 Gen 1), 6 COM Ports & 16-bit GPIO
- 4 openings reserved for antennas
- Power input DC-in 12~24V

Part Number	Description
Coming soon	

## Packing List

Part Number	Description
Coming soon	

## Optional Item

Part Number	Description
Coming soon	

## Specifications

		MS-9A69-A1	MS-9A69-U2	MS-9A69-U3
<b>System Processor</b>	CPU	Intel® Celeron® Processor J3455, QC, 10W	Intel® Kaby Lake-U Core™ i3-7100U Processor, DC, 15W	Intel® Kaby Lake-U Core™ i5-7300U Processor, DC, 15W
	Frequency	1.5 GHz, up to 2.3 GHz	2.4 GHz	2.6 GHz, up to 3.5 GHz
	L2 Cache	2MB	3MB	
	CPU Type	BGA		
	Chipset	Integrated in SoC Process		
	BIOS	AMI		
<b>Memory</b>	Technology	Single-channel DDR3L 1866/1600 MHz	Single-channel DDR4 2133 MHz	
	Max. Capacity	Up to 8GB	Up to 16GB	
	Socket	1 x 204-pin SO-DIMM	1 x 260-pin SO-DIMM	
<b>Graphic</b>	Controller	Intel® HD Graphics		
	Graphic Memory	Shared system memory up to 1.7 GB SDRAM		
	Multiple Display	3 independent displays		
	Display Interface	HDMI up to 3840 x 2160 @30Hz DP up to 4096 x 2160 @60Hz LVDS up to 1920 x 1200 @60Hz (optional by cable)	HDMI 1.4 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)	
<b>Ethernet</b>	Controller	2 x Intel® I211-AT GbE LAN	1 x Intel® I210-AT GbE LAN 1 x Intel® I219-LM GbE LAN PHY	
	<b>Audio</b>	Controller	Realtek® ALC887-VD2-CG HD Audio Codec	
<b>H/W Monitor</b>	Watchdog Timer	256-level Watchdog Timer		
<b>TPM</b>	Controller	N/A		
	M.2	N/A		
<b>Expansion Slot</b>	Mini-PCIe	2 x Full-size (Mini-PCIe1 Slot w/ NANO SIM-Holder) (Mini-PCIe2 Slot w/ mSATA)		
	<b>Storage</b>	SATA	1 x 2.5" HDD/SSD Bay	
	mSATA	1 x Full-size		
<b>I/O Interface</b>	RJ-45	4 (LAN1/2 Standard, LAN3/4 by Option)		
	PoE	N/A		
	Audio	1 x Line-out, 1 x Mic-in		
	USB	2 x USB 2.0 4 x USB 3.2 Gen 1		
	Serial	6 x COM ports COM1&2: RS-232/422/485, 0V/5V/12V COM3~6: RS-232, 0V/5V/12V		
	GPIO	16-bit (4*GPI; 4*GPO), 5V		
	CANbus	N/A		
	HDMI	1		
	LVDS	1 (optional)		
	VGA	N/A		
Antenna	4 openings reserved for antennas			
<b>Power Supply</b>	DC Input	DC-in 12V~24V		
	AC Input	N/A		
	IP Rating	N/A		
<b>Environment</b>	Operating Temperature	-10 ~ 45°C (HDD) -10 ~ 55°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		
<b>Physical characteristics</b>	Dimensions (WxDxH)	200 x 150 x 55mm		
	Weight	1.39 kg		
	Mounting	Wall mount (STD)/VESA mount(by BOM option)/DIN-rail mount(by BOM option)		
<b>Certification</b>	EMC	CE, FCC, VCCI, RCM, BSMI		
	Safety	BSMI		
<b>Software Platform</b>	OS Support	Windows 10 IoT Enterprise (64-bit)	Windows 10 IoT Enterprise (64-bit)	
		Windows 10 IoT Core (32/64-bit) (by request)	Linux Ubuntu 18.04 LTS (by request)	
		Linux Kernel 4.19 (64-bit) (by request)	Linux Kernel 4.14 (64-bit) (by request)	