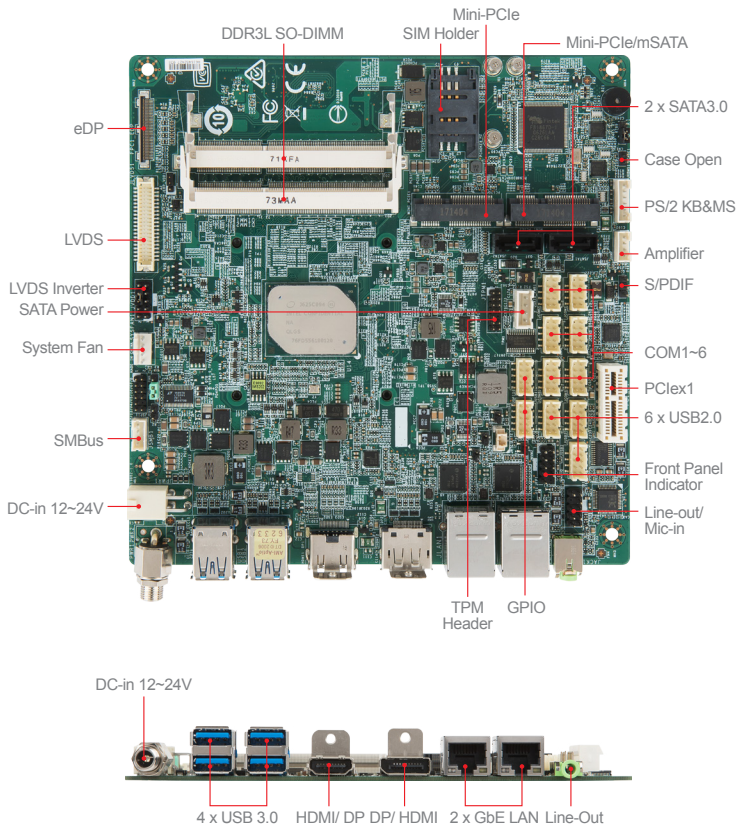


# MS-9892

Mini-ITX with Intel® Apollo Lake/Apollo Lake-I for Fanless, Low-Power, High-Performance & Wide Temperature Solution

NEW



## Features

- Intel® Apollo Lake/Apollo Lake-I Series SoC
- 3 independent displays : 1 x LVDS/eDP, 1 x DP, 1 x HDMI
- Supports Dual DDR3L 1866MHz SO-DIMM memory up to 8GB
- Supports Dual SATA 3.0 ports, mSATA for storage
- Supports Dual Intel® GbE LAN, PCIe x1 and Mini-PCle slot
- Supports 6 COM ports & 10 USB ports for flexible applications
- TPM supported with onboard chip or pin header
- Apollo Lake-I Series support wide operating temperature : -40 ~ 85°C
- Supports DC-in 12~24V

## Ordering Information

Part Number	Description
919-9892-001	MS-9892 10 Intel Apollo Lake-I E3940, 2*DDR3L 4*USB3.0,6*USB2.0,6*COM,1*HDMI,1*DP,1*eD-P,1*LVDS,2*LAN, 1*MiniPCle,1*PClex1,2*SATA,1*mSATA, DC12~24V,WT
919-9892-002	MS-9892 10 OPT: A Intel Apollo Lake-I E3930, 2*DDR3L,4*USB3.0,6*USB2.0,6*COM,1*HDMI, 1*DP,1*eD-P,1*LVDS,2*LAN, 1*MiniPCle,1*PClex1,2*SATA,1*mSATA, DC12~24V,WT
919-9892-003	MS-9892 1.0 OPT: B Intel Apollo Lake N4200, 2*DDR3L,4*USB3.0,6*USB2.0,6*COM,1*HDMI,1*DP,1*eD-P,1*LVDS, 2*LAN, 1*MiniPCle,1*PClex1,2*SATA,1*mSATA,DC12~24V
919-9892-004	MS-9892 1.0 OPT: C Intel Apollo Lake E3940, 2*DDR3L,4*USB3.0,6*USB2.0,6*COM,1*HDMI,1*DP,1*eD-P,1*LVDS, 2*LAN, 1*MiniPCle,1*PClex1,2*SATA,1*mSATA,DC12~24V
919-9892-005	MS-9892 1.0 OPT: D Intel Apollo Lake N3350, 2*DDR3L,4*USB3.0,6*USB2.0,6*COM,1*HDMI,1*DP,1*eD-P,1*LVDS, 2*LAN, 1*MiniPCle,1*PClex1,2*SATA,1*mSATA,DC12~24V

## Packing List

Part Number	Description
K14-1018003-V03	COM Port Cable, 300mm
K1D-1012115-V03	SATA Cable with Power, 230mm

## Specifications

		Apollo Lake SKUs	Apollo Lake-I SKUs
<b>Processor</b>	CPU	Intel® Pentium® Processor N4200, QC, 6W Intel® Celeron® Processor N3350, DC, 6W	Intel® Atom™ x5 Processor E3940, QC, 9W Intel® Atom™ x5 Processor E3930, DC, 6W
	Frequency	N4200, 1.1 GHz, up to 2.5 GHz N3350, 1.1 GHz, up to 2.4 GHz	E3940, 1.6 GHz, up to 1.8 GHz E3930, 1.3 GHz, up to 1.8 GHz
	L2 Cache	1M~2M (Depends on CPU)	
	CPU Type	BGA	
	Chipset	Integrated in SoC	
	BIOS	AMI	
<b>Memory</b>	Technology	Dual-channel DDR3L 1866 MHz	
	Max. Capacity	Up to 8 GB	
	Socket	2 x 204-pin SO-DIMMs	
<b>Display</b>	Controller	Intel® HD Graphics	
	Graphic Memory	Shared system memory up to 1.7 GB SDRAM	
	LVDS	1 x Dual channel 18/24-bit	
	eDP	1 (colay with LVDS)	
	HDMI	1 (colay with DP)	
	DisplayPort	1 (colay with HDMI)	
	Multiple Display	3 independent displays	
Display Interface	LVDS up to 1920 x 1200@60 Hz, eDP up to 4096 x 2160@60Hz HDMI up to 3840 x 2160@30Hz DP up to 4096 x 2160@60Hz		
<b>Ethernet</b>	Controller	Intel I211-AT GbE LAN	Intel I210-IT GbE LAN
<b>Audio</b>	Controller	Realtek® ALC887-VD2-CG HD Audio Codec	
<b>Super I/O</b>	Controller	Fintek F81867D-I	
<b>H/W Monitor</b>	Watchdog Timer	256-level Watchdog Timer	
	Smart Fan	Yes	
<b>TPM</b>	Controller	Pin header (Default) Infineon SLB9665TT 2.0 (by BOM option)	Pin header (Default) Infineon SLB9665XT 2.0 (by BOM option)
	<b>I/O Interface</b>	USB	4 x USB3.0 (Rear) 6 x USB2.0 (Internal)
Serial		6 x COM (6 x Internal) COM1/2: RS-232/422/485, 0V/5V/12V COM3-6: RS-232, W/O Power	
Parallel		N/A	
PS/2		1 (pin header)	
GPIO		16-bits (8 x GPI; 8 x GPO), 5V	
<b>Expansion Slot</b>	PCIe x 1	1	
	M.2	N/A	
<b>Storage</b>	SATA	1 x Full/Half size (w/ SIM holder) 1 x Full size (mSATA)	
	mSATA	2 x SATA3.0 (SATA2 share with mSATA) 1 (shared w/SATA2)	
<b>Power Supply</b>	DC	DC-in 12V~24V	
	ATX	N/A	
<b>Environment</b>	Operating Temperature	-10 ~ 60°C	-40 ~ 85°C
	Operating Humidity	10 ~ 90%, non-condensing	
	Storage Temperature	-20 ~ 80°C	-40 ~ 85°C
	Storage Humidity	10 ~ 90%, non-condensing	
<b>Form Factor</b>	Dimensions	170mm x 170mm (Mini-ITX)	
	Weight	0.37 kg	
<b>Certification</b>	EMC	FCC, CE, RCM, VCCI, BSMI	
<b>Software Platform</b>	OS Support	Windows 10 (64-bit) Fedora 25 Ubuntu 16.04	