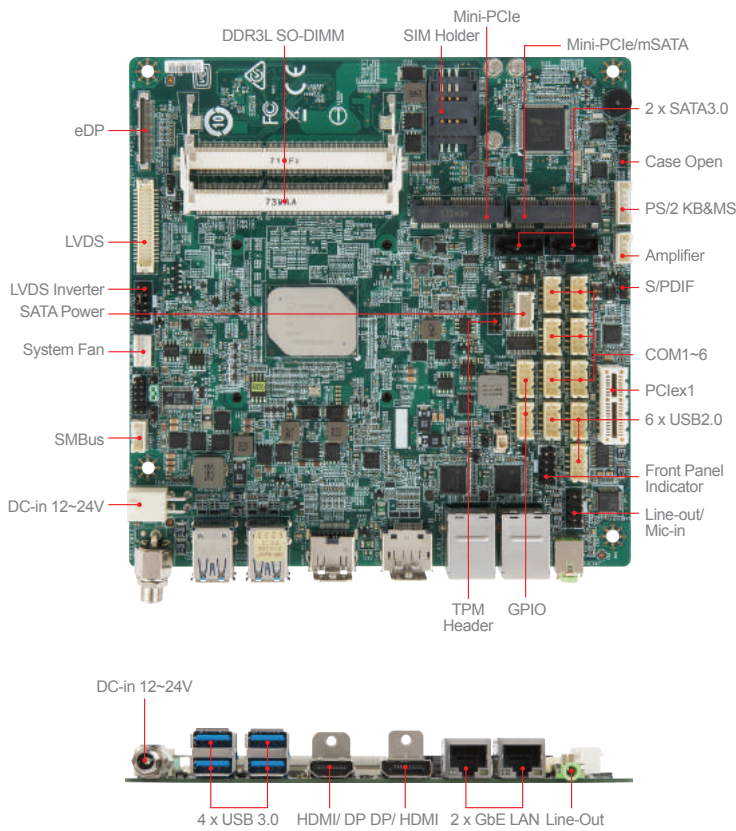


MS-9892

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



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-PCIe 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*MiniPCIe,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*MiniPCIe,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*MiniPCIe,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*MiniPCIe,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*MiniPCIe,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
		Processor	CPU
	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	
Memory	Technology	Dual-channel DDR3L 1866 MHz	
	Max. Capacity	Up to 8GB	
	Socket	2 x 204-pin SO-DIMMs	
	Controller	Intel® HD Graphics	
Display	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)	
Ethernet	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	
Audio	Controller	2 x Intel® I211-AT GbE LAN	2 x Intel® I210-IT GbE LAN
	Controller	Realtek® ALC887-VD2-CG HD Audio Codec	
Super I/O	Controller	Fintek F81867D-I	
	Watchdog Timer	256-level Watchdog Timer	
H/W Monitor	Smart Fan	Yes	
	TPM	Controller	Pin header (Default) Infineon SLB9665TT 2.0 (by BOM option)
I/O Interface	USB	4 x USB3.0 (Rear) 6 x USB2.0 (Internal)	
	Serial	6 x COM ports (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	
	PCIe x 1	1	
Expansion Slot	M.2	N/A	
	Mini-PCIe	1 x Full-size (w/ SIM holder) 1 x Full-size (w/ mSATA)	
Storage	SATA	2 x SATA3.0 (SATA2 share with mSATA)	
	mSATA	1 (shared w/SATA2)	
Power Supply	DC	DC-in 12V~24V	
	ATX	N/A	
Environment	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	
Form Factor	Dimensions	170 x 170mm (Mini-ITX)	
	Weight	0.37 kg	
Certification	EMC	FCC, CE, RCM, VCCI, BSMI	
Software Platform	OS Support	Windows 10 (64-bit) Linux Fedora 25 (by request) Linux Ubuntu 16.04 (by request)	