

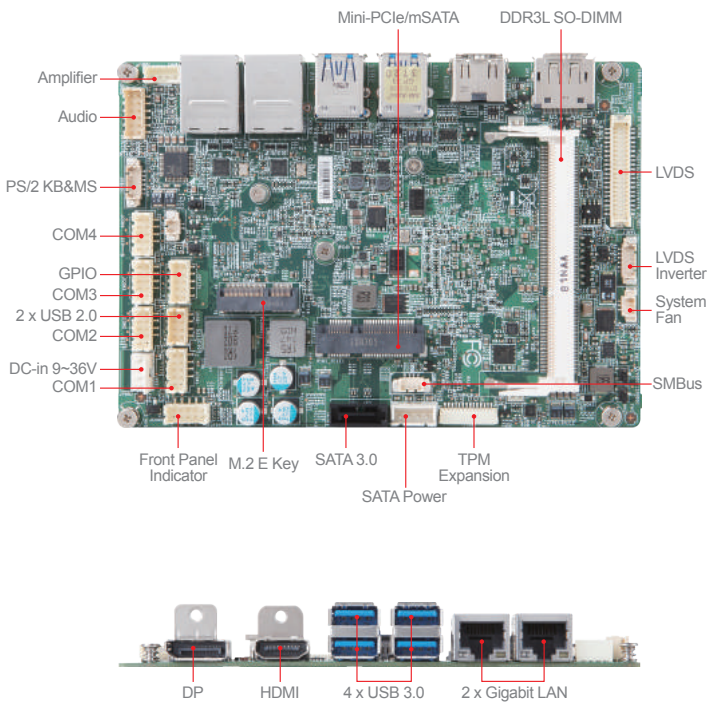
MS-98J8

3.5" SBC with Intel® Apollo Lake/Apollo Lake-I for High-Performance, Low-Power & Fanless Solution

NEW

Specifications

Processor	CPU	Intel® Pentium™ N4200 Processor, QC, 6W Intel® Celeron™ N3350 Processor, DC, 6W Intel® Atom™ X5-E3940 Processor, QC, 9.5W Intel® Atom™ X5-E3930 Processor, DC, 6.5W
	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	2M
	CPU Type	BGA
Memory	Chipset	Integrated in SoC
	BIOS	AMI
	Technology	Single Channel for DDR3L 1866/1600 MHz
	Max. Capacity	Up to 8GB
Display	Socket	1 x 204pin SO-DIMM
	Controller	Intel® HD Graphics
	Graphic Memory	Shared system memory up to 1.7 GB SDRAM
	LVDS	Dual channel 18/24-bit
Display	eDP	N/A
	VGA	N/A
	DVI	N/A
	HDMI	1
Ethernet	DisplayPort	1
	Multiple Display	3 independent displays
	Display Interface	LVDS up to 1920 x 1200 @60Hz HDMI up to 3840 x 2160 @30Hz DP up to 4096 x 2160 @60Hz
	Controller	2 x Realtek® RTL8111H GbE LAN
Audio	Controller	Realtek® ALC887 HD Audio Codec
Super I/O	Controller	Fintek F81867AD-I
H/W Monitor	Watchdog Timer	256-level Watchdog Timer
	Smart Fan	Yes
TPM	Controller	Pin header (Default) Infineon SLB9665TT 2.0 (by BOM option)
I/O Interface	USB	4 x USB 3.0 (4 x rear) 2 x USB 2.0 (2 x internal)
	Serial	4 x COM ports (Internal) COM1: RS-232/422/485, 0V/5V/12V COM2~4: RS-232
	Parallel	N/A
	PS/2	1 (wafer connector)
Expansion Slot	GPIO	8-bit (4 x GPI; 4 x GPO), 5V
	PCIe x 16	N/A
	PCIe x 4	N/A
	PCIe x 1	N/A
Storage	PCI	N/A
	M.2	1 x E Key (PCIe x1, USB2.0), 2230
	Mini-PCIe	1 x Full-size (w/ mSATA)
	SATA	1 x SATA 3.0
Power Supply	IDE	N/A
	eSATA	N/A
	CFast	N/A
	mSATA	1 (Shared with Mini-PCIe)
Environment	CompactFlash	N/A
	DC	DC-in 9~36V
	ATX	N/A
	Operating Temperature	-10 ~ 60°C
Form Factor	Operating Humidity	10 ~ 90%, non-condensing
	Storage Temperature	-20 ~ 80°C
	Storage Humidity	10 ~ 90%, non-condensing
	Dimensions	146 x 102mm (3.5")
Certification	Weight	0.33 kg
	EMC	CE, FCC Class B, BSMI, VCCI, RCM
Software Platform	OS Support	Windows 10 (64-bit) Linux Fedora 25 (by request) Linux Ubuntu 16.04 (by request)



Features

- Intel® Apollo Lake/Apollo Lake-I Series SoC
- Supports DDR3L 1866/1600 MHz SO-DIMM memory up to 8GB
- 3 independent displays: HDMI, DP, and LVDS outputs
- Supports 4 USB 3.0, 2 USB 2.0, and 4 COM ports
- Supports Dual GbE LAN, Mini-PCIe, SATA, mSATA, and M.2 E Key 2230
- Supports Wide-Range DC-in 9~36V

Ordering Information

Part Number	Description
919-98J8-001	MS-98J8 10 OPT:A Intel Apollo Lake N3350,DDR3L,DP+HDMI+LVDS, 1*SATA3.0+2*GbE LAN+1*M.2+1*Mini-PCIe+2*USB2.0+4*USB3.0+4*COM,DC-in 9V~36V, SINGLE
919-98J8-002	MS-98J8 10 OPT:B Intel Apollo Lake-I E3940,DDR3L,DP+HDMI+LVDS, 1*SATA3.0+2*GbE LAN+1*M.2+1*Mini-PCIe+2*USB2.0+4*USB3.0+4*COM,DC-in 9V~36V, SINGLE

Packing List

Part Number	Description	Quantity
K14-1009062-V03	COM PORT Cable, 250mm	1
K1B-3008034-V03	USB Cable, 150mm	1
K1D-1012064-V03	SATA Cable with Power, 200mm	1
K1G-3004069-V03	DC Power Cable, 150mm	1
G71-SEDC182-X03/N56	Driver DVD	1

Optional Item

Part Number	Description
E31-0806191-K08	Heatspreader for Apollo Lake-I
E31-0806190-K08	Heatspreader for Apollo Lake