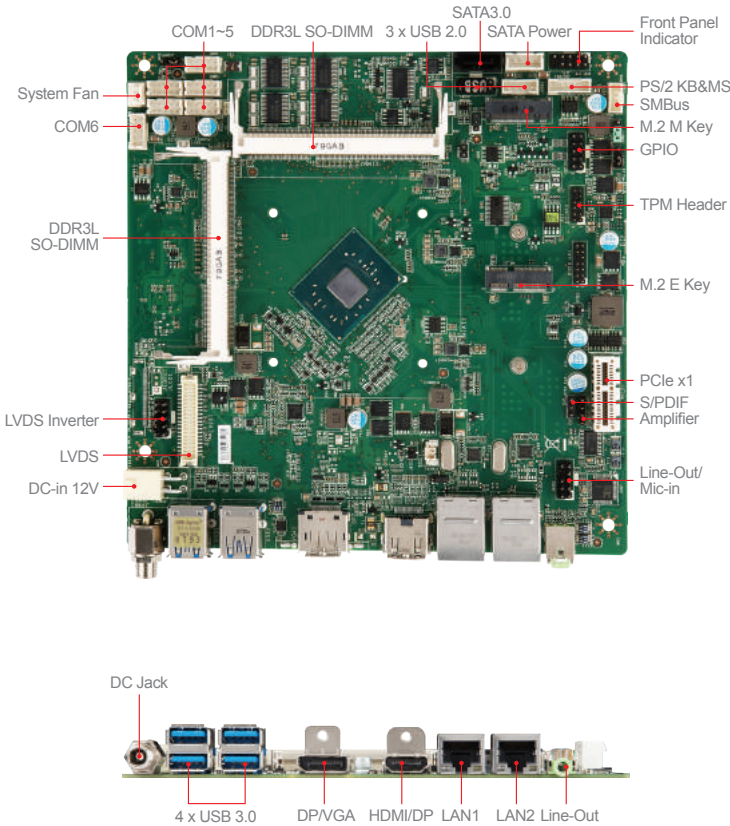


MS-98J0

Mini-ITX with Intel® Apollo Lake SoC Series for Fanless, Low-Profile, Multi-Displays Solution

NEW



Features

- Intel® Apollo Lake/Apollo Lake-I Series SoC
- 3 independent displays : 1 x LVDS/eDP, 1 x DP (Co-lay VGA), 1 x HDMI (Co-lay DP) for flexible display applications
- Supports DDR3L 1866MHz SO-DIMM memory up to 8GB
- Supports SATA 3.0 port, M.2 M Key 2242 for storage
- Supports Dual GbE LAN, PCIe x1 and M.2 E Key 2230
- Supports 6 COM ports & 7 USB ports
- TPM supported with onboard chip or pin header
- Supports DC-in 12V

Ordering Information

Part Number	Description
919-98J0-101	MS-98J0 10 OPT:A Intel E3940, DP+HDMI+LVDS, 2* DDR3L SO-DIMM, 2*LAN, 1*SATA-3.0, Audio, 2*M.2 Slot, 4*USB 3.0, 3*USB 2.0, PCIe x1, DC-in12V, BULK
919-98J0-102	MS-98J0 10 OPT:B Intel N3350, DP+HDMI+LVDS, 2*DDR3L SO-DIMM, 2*LAN, 1*SATA-3.0, Audio, 2*M.2 Slot, 4*USB 3.0, 3*USB 2.0, PCIe x1, DC-in12V, BULK

Packing List

Part Number	Description	Quantity
K1D-1012115-V03	SATA Cable with Power, 230mm	1
E21-98J0010-C22	I/O SHIELDING	1

Optional Item

Part Number	Description
K14-1009062-V03	COM Port Cable, 250mm
K14-1018003-V03	COM port cable, 300mm
K1B-3008012-E06	USB 2.0 Cable, 330mm

Specifications

Processor	CPU	Intel® Celeron® Processor N3350, DC, 6W Intel® Atom™ x5 Processor E3940, QC, 9.5W
	Frequency	N3350, 1.1 GHz, up to 2.4 GHz E3940, 1.6 GHz, up to 1.8 GHz
	L2 Cache	2MB
	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 (by BOM option)
	VGA	1 (by BOM option)
	DVI	N/A
	HDMI	1 (Co-lay DP)
	DisplayPort	1 (Co-lay VGA)
	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 VGA up to 1920 x 1080 @60Hz
	Ethernet	Controller
Audio	Controller	Realtek® ALC887-VD2-CG HD Audio Codec
Super I/O	Controller	Fintek F81867D-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 USB3.0 (rear) 3 x USB2.0 (internal)
	Serial	6 x COM ports (Internal) COM1: RS-232/422/485, 0V/5V/12V COM2~6: RS-232, w/o Power
	Parallel	N/A
	PS/2	1 (pin header)
	GPIO	8-bits (4 x GPI; 4 x GPO), 5V
	PCIe x 16	N/A
Expansion Slot	PCIe x 4	N/A
	PCIe x 1	1
	PCI	N/A
	M.2	1 x M Key (SATA 3.0), 2242 1 x E Key (PCIe x1, USB2.0), 2230
	Mini-PCIe	N/A
	SATA	1 x SATA 3.0
Storage	IDE	N/A
	eSATA	N/A
	CFast	N/A
	mSATA	N/A
Power Supply	DC	DC-in 12V
	ATX	N/A
Environment	Operating Temperature	-10 ~ 60°C
	Operating Humidity	10 ~ 90%, non-condensing
	Storage Temperature	-20 ~ 80°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)

Semi-rugged Terminal
POS System
HMI Panel PC
Embedded System
Embedded Board
COM Express Board
Oseven Board
Pico-ITX Board
3.5" Board
EPIC Board
PICMG 1.0 Board
Mini-ITX Board
Micro-ATX Board
ATX Board
Mini-PCle Module