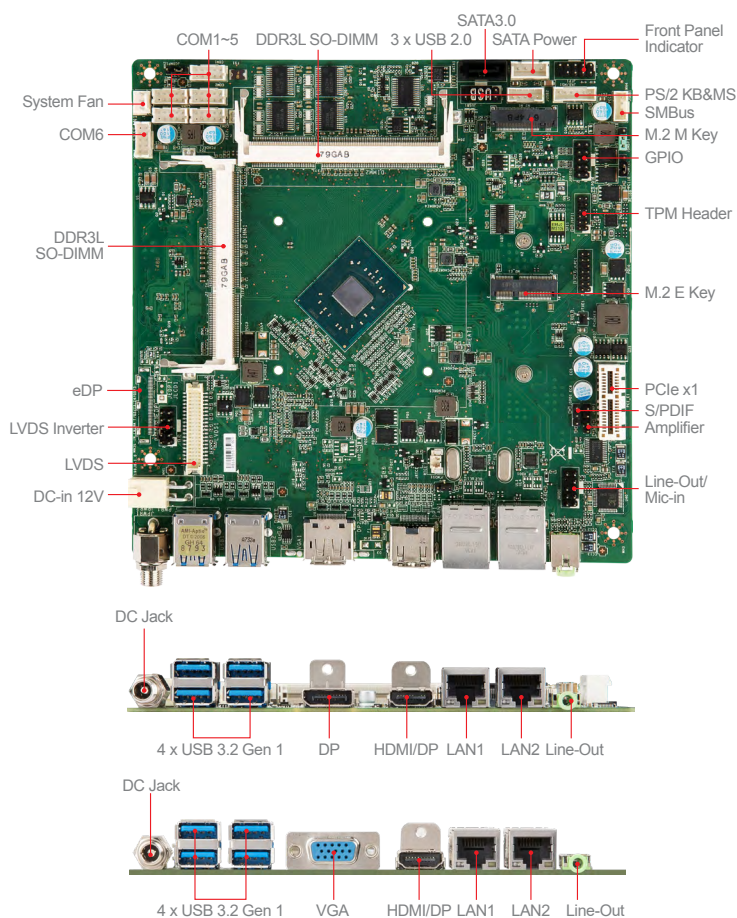




Features

- Intel® Apollo Lake/Apollo Lake-I Series SoC
- 2 DDR3L 1866MHz SODIMM slots up to 8GB
- Triple independent displays : VGA (DP by option), HDMI (DP by option), LVDS (eDP by option)
- 2 GbE LAN with RJ-45
- 1 PCIe x1 (Gen 2), 1 M.2 E Key slots
- M.2 M Key, 1 SATA 3.0 for storage
- 4 USB 3.2 Gen 1, 3 USB 2.0, 6 COM (1 RS485), GPIO, PS/2, Audio, S/PDIF, System FAN
- Onboard TPM 2.0 (by option)
- SMBus, Chassis Intrusion
- DC-IN 12V

Ordering Information

Part Number	Description
919-98J0-103	MS-98J0 10 Intel Apollo Lake-I E3940, F1 stepping, DP2+HDMI+LVDS, 2*DDR3L SO-DIMM, 2*LAN, 1*SATA-3.0, Audio, 2*M.2 Slot, 4*USB 3.2 Gen 1, 3*USB 2.0, DC-in12V
919-98J0-107	MS-98J0 10 Intel Apollo Lake J3455, F1 stepping, VGA+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, DC-in12V
919-98J0-105	MS-98J0 10 Intel Apollo Lake N3350, F1 stepping, DP2+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, DC-in12V

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 J3455, QC, 10W	Intel® Celeron® Processor N3350, DC, 6W	Intel® Atom™ x5 Processor E3940, QC, 9.5W	
	Frequency	J3455, 1.5 GHz, up to 2.3 GHz	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			
Memory	BIOS	AMI			
	Technology	Dual-channel DDR3L 1866 MHz			
	Max. Capacity	Up to 8GB			
Display	Socket	2 x 204-pin SO-DIMMs			
	Controller	Intel® HD Graphics			
	Graphic Memory	Depends on CPU			
	LVDS	1 x Dual channel 18/24-bit			
	eDP	N/A (by option)			
	VGA	1	N/A (by BOM option)		
	DVI	N/A			
	HDMI	1			
	DisplayPort	N/A(by option)	1		
	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	2 x Realtek® RTL8111H-CG GbE LAN		
	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)			
	USB	3 x USB 2.0 (internal) 4 x USB 3.2 Gen 1 (rear)			
I/O Interface	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			
Expansion Slot	PCIe x 16	N/A			
	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			
Storage	Mini-PCIe	N/A			
	SATA	1 x SATA 3.0			
	IDE	N/A			
	eSATA	N/A			
	CFast	N/A			
	mSATA	N/A			
Power Supply	CompactFlash	N/A			
	DC	DC-in 12V			
Environment	ATX	N/A			
	Operating Temperature	-10 ~ 60°C Note: Thermal w/ Airflow:0.7m/s			
	Operating Humidity	10 ~ 90%, non-condensing			
	Storage Temperature	-20 ~ 80°C			
	Storage Humidity	10 ~ 90%, non-condensing			
Form Factor	Dimensions	170 x 170 mm (Mini-ITX)			
	Weight	0.37 kg			
Certification	EMC	FCC, CE, RCM, VCCI, BSMI			
Software Platform	OS Support	Windows 10 IoT Enterprise LTSC/SAC 1809 (64-bit, RS5) Linux (Support by request)			

Packing List

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