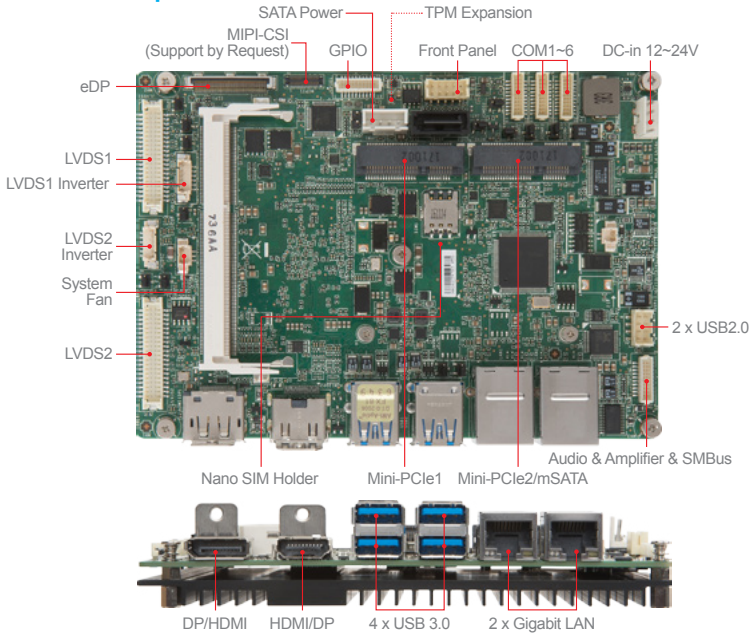


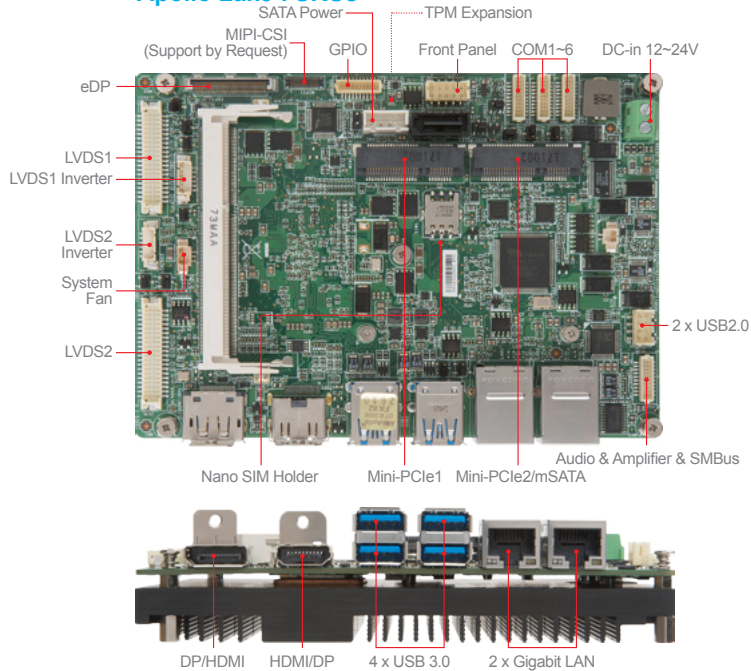
MS-98E6

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

Apollo Lake SKUs



Apollo Lake-I SKUs



Features

- Intel® Apollo Lake/Apollo Lake-I Series SoC
- Supports DDR3L 1866/1600 MHz SO-DIMM memory up to 8GB
- 3 independent displays with HDMI, DP, eDP, and LVDS outputs
- 4 USB 3.0, 2 USB 2.0, and 6 COM ports
- Dual Mini-PCIe, SATA3.0, mSATA, NANO SIM-Holder, and Dual GbE LAN
- Apollo Lake-I Series support operating temperature : -40 ~ 85°C
- Supports DC-in 12~24V

Ordering Information

Part Number	Description
Please check MSI IPC website at http://ipc.msi.com for details.	

Packing List

Part Number	Description
Please check MSI IPC website at http://ipc.msi.com for details.	

Specifications

NEW

		Apollo Lake SKUs	Apollo Lake-I SKUs	
Processor	CPU	Intel® Pentium® Processor N4200, QC, 6W Intel® Celeron® Processor N3350, DC, 6W	Intel® Atom™ x7 Processor E3950, QC, 12W 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	E3950, 1.6 GHz, up to 2.0 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	Single-channel DDR3L 1866/1600 MHz		
	Max. Capacity	Up to 8 GB		
	Socket	1 x 204-pin SO-DIMM		
	Controller	Intel® HD Graphics		
Display	Graphic Memory	Shared system memory up to 1.7 GB SDRAM		
	LVDS	2 x Dual Channel 18/24-bit (LVDS1 Share with eDP Signal, LVDS2 Share with DP1 Signal)		
	eDP	1 (Share with LVDS1 Signal)		
	VGA	N/A		
	DVI	N/A		
	HDMI	1 (HDMI1 Co-lay DP1/LVDS2 by Optional, HDMI2 Co-lay DP2 by Optional)		
	DisplayPort	1 (DP1 Co-lay HDMI1/LVDS2 by Optional, DP2 Co-lay HDMI2 by Optional)		
	Multiple Display	3 independent displays		
	Display Interface	LVDS1/LVDS2 up to 1920 x 1200 @ 60 Hz, eDP up to 3840 x 2160 @ 60 Hz, HDMI1 up to 1920 x 1080 @ 60 Hz HDMI2 up to 3840 x 2160 @ 30 Hz DP1/DP2 up to 4096 x 2160 @ 60 Hz		
		Controller	Intel I211-AT GbE LAN	Intel I210-IT GbE LAN
Ethernet	Controller	Realtek® ALC887-VD2-CG HD Audio Codec		
Audio	Controller	Fintek F81867AD-I		
Super I/O	Watchdog Timer	256-level Watchdog Timer		
	Smart Fan	Yes		
TPM	Controller	Pin header		
	USB	4 x USB 3.0 (4 x Rear) 2 x USB 2.0 (2 x Internal)		
I/O Interface	Serial	6 x COM (Internal) COM1: RS-232/422/485, 0V/5V/12V, support auto flow control COM2~6: RS-232, 0V/5V/12V (RS-422/485 by Optional)		
	Parallel	N/A		
	PS/2	N/A		
	GPIO	16-bits (8 x GPI; 8 x GPO)		
	Expansion Slot	PCIe x16	N/A	
		PCI	N/A	
		M.2	N/A	
		Mini-PCIe	2 x Full-size (Mini-PCIe1 Slot w/ NANO SIM-Holder) (Mini-PCIe2 Slot w/ mSATA)	
	Storage	SATA	1 x SATA 3.0	
		mSATA	1 (Shared with Mini-PCIe2)	
Power Supply	DC	DC-in 12~24V		
	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	146mm x 102mm (3.5")		
	Weight	0.34 kg	0.59 kg	
Certification	EMC	FCC, CE, RCM, VCCI, BSMI		
Software Platform	OS Support	Windows 10 (64-bit) Fedora 25 (By Request) Ubuntu 16.04 (By Request)		

*1 x MIPI-CSI (Support by Request)