

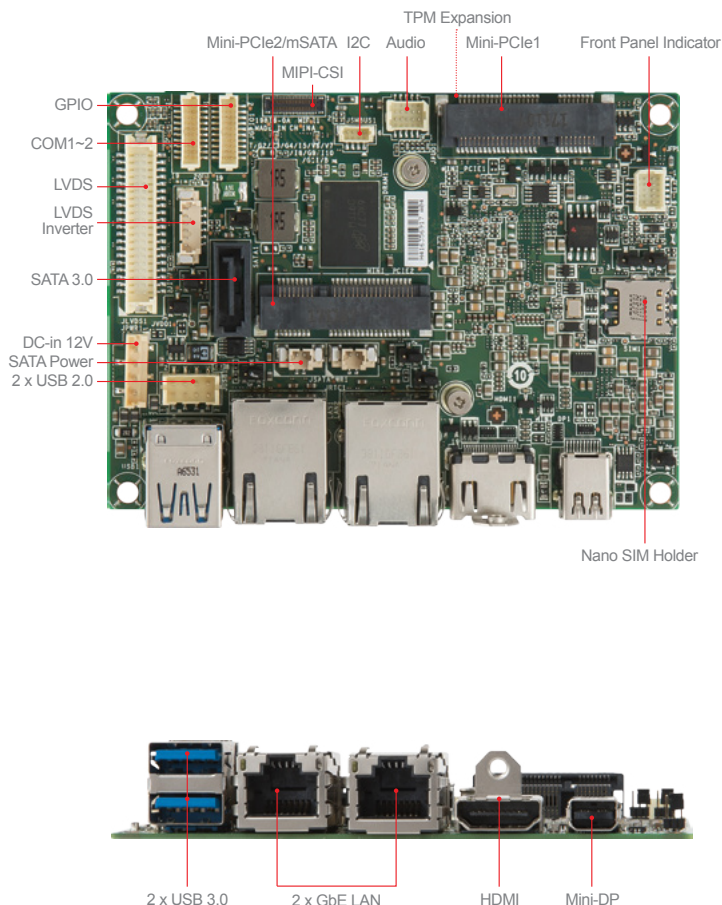
MS-9816

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

NEW

Specifications

		Apollo Lake SKUs	Apollo Lake-I SKUs
Processor	CPU	Intel® Pentium® Processor N4200, QC, 6W Intel® Celeron® Processor N3350, DC, 6W	Intel® Atom™ x5 Processor E3940, QC, 9W Intel® Atom™ x5 Processor E3930, DC, 6W
	Frequency	N4200, 1.5 GHz, up to 2.5 GHz N3350, 1.1 GHz, up to 2.3 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	
	Chipset	Integrated in SoC	
Memory	BIOS	AMI	
	Technology	Single-channel LPDDR4 2400MHz	Single-channel LPDDR4 2133MHz
	Max. Capacity	Up to 4 GB	
	Socket	Onboard	
Display	Controller	Intel® HD Graphics	
	Graphic Memory	Shared system memory up to 1.7 GB SDRAM	
	LVDS	Dual Channel 18/24-bit	
	eDP	N/A	
	VGA	N/A	
	DVI	N/A	
	HDMI	1	
	DisplayPort	1 (Mini-Displayport)	
Ethernet	Multiple Display	3 independent displays	
	Display Interface	LVDS up to 1920 x 1200 @ 60 Hz, HDMI up to 3840 x 2160 @ 30 Hz Mini-DP up to 4096 x 2160 @ 60 Hz	
Ethernet	Controller	2 x Intel® i211-AT GbE LAN	2 x Intel® i210-T GbE LAN
Audio	Controller	Realtek® ALC887-VD2-CG HD Audio Codec	
Super I/O	Controller	Fintek F81866AD-I	
H/W Monitor	Watchdog Timer	256-level Watchdog Timer	
	Smart Fan	N/A	
TPM	Controller	Pin header	
I/O Interface	USB	2 x USB 2.0 (2 x internal) 2 x USB 3.0 (2 x rear)	
	Serial	2 x COM (internal) COM1: RS-232/422/485, 0V/5V/12V COM2: RS-232/422/485, 0V/5V/12V	
	Parallel	N/A	
	PS/2	N/A	
	GPIO	16-bits (8 x GPI; 8 x GPO), 5V	
	PCIe x16	N/A	
	PCI	N/A	
Expansion Slot	M.2	N/A	
	Mini-PCIe	1 x Full-size 1 x Half-size (Mini-PCIe Full-size Slot w/ NANO SIM-Holder) (Mini-PCIe Half-size Slot w/ mSATA)	
Storage	SATA	1 x SATA 3.0	
	mSATA	1 (Shared with Mini-PCIe Half-size)	
Power Supply	DC	DC-in 12V	
	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	101mm x 73mm (Pico-ITX)	
	Weight	0.27 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 2.0	



Features

- Intel® Apollo Lake/Apollo Lake-I Series SoC
- Supports LPDDR4 2133/2400 MHz onboard memory up to 4GB
- 3 independent displays with HDMI, Mini-DP and LVDS outputs
- 2 USB 3.0, 2 USB 2.0, and 2 COM ports
- Dual Mini-PCIe, SATA3.0, mSATA, NANO SIM-Holder
- Apollo Lake-I Series support operating temperature : -40 ~ 85°C
- Supports Dual GbE LAN
- Compact design for size-sensitive & anti-vibration devices in harsh environments

Ordering Information

Part Number	Description
Coming soon	

Packing List

Part Number	Description
Coming soon	