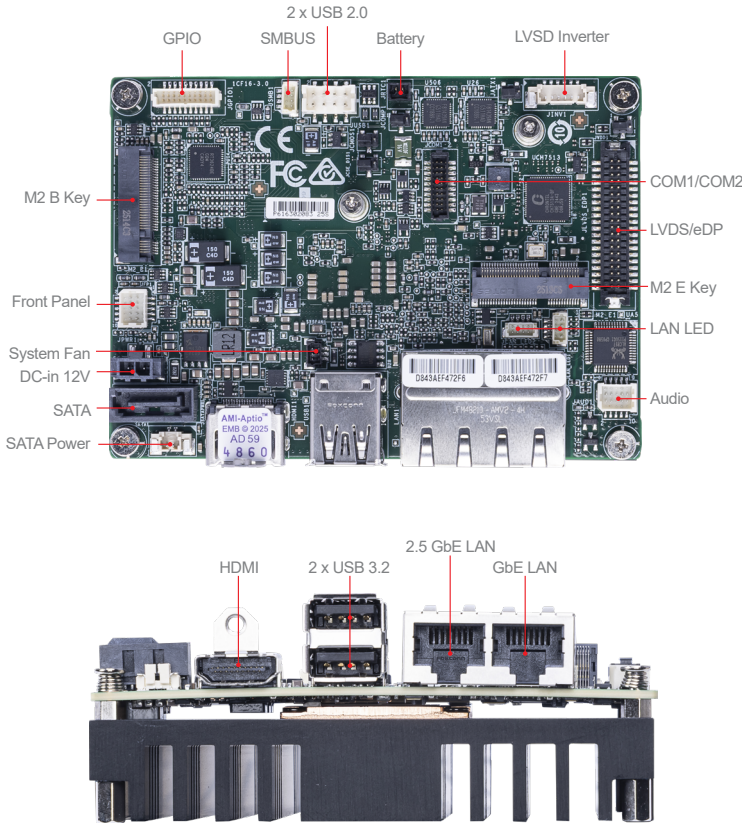


MS-CF16 V3.0

Pico-ITX SBC with Intel® Alder Lake-N/Amston Lake/Twin Lake for Fanless, Low-Power, High-Performance, Wide Temperature & Harsh environment Solution



Features

- Intel® Alder Lake-N/ Amston Lake/Twin Lake Series SoC
- LPDDR5 4800 MHz onboard memory up to 16GB
- Dual independent displays: HDMI, LVDS/eDP
- 1 x 2.5 GbE/1 GbE LAN with RJ-45
- 2 USB 3.2 (Bottom layer USB 3.2 Gen 2 x 1, Top layer USB 3.2 Gen 1), 2 USB 2.0, 2 COM (RS-232/422/485), GPIO, Audio
- 1 M.2 B Key, 1 M.2 E Key Slot
- SATA 3.0 for storage
- Wide operating temperature : -40~70°C
- DC-IN 12V

Ordering Information

Part Number	Description
916-CF16-011	MS-CF16/606-CF16-210/806-CF16-026 30 ADL-N N97,LPDDR5 8GB,1*HDMI,1*LVDS/eDP,1*M.2 E key,1*M.2 B key,1*2.5GbE LAN,1*GbE LAN PHY,1*SATA 3.0,1*USB 3.2 Gen 2 x 1,1*USB 3.2 Gen 1,2*USB2.0,GPIO,2*COM,TPM2.0,DC-in 12V,Non-WT,SINGLE
916-CF16-012	MS-CF16/606-CF16-220/806-CF16-027 30 OPTA ASL X7433RE,LPDDR5 8GB,1*HDMI,1*LVDS/eDP,1*M.2 E key,1*M.2 B key,1*2.5GbE LAN,1*GbE LAN PHY,1*SATA 3.0,1*USB 3.2 Gen 2 x 1,1*USB 3.2 Gen 1,2*USB2.0,GPIO,2*COM,TPM2.0,DC-in 12V,WT,SINGLE
916-CF16-013	MS-CF16/606-CF16-230/806-CF16-026 30 OPTB TWL N150,LPDDR5 8GB,1*HDMI,1*LVDS/eDP,1*M.2 E key,1*M.2 B key,1*2.5GbE LAN,1*GbE LAN PHY,1*SATA 3.0,1*USB 3.2 Gen 2 x 1,1*USB 3.2 Gen 1,2*USB2.0,GPIO,2*COM,TPM2.0,DC-in 12V,Non-WT,SINGLE

Specifications

		Alder Lake-N SKU	Twin Lake SKU	Amston Lake SKU
Processor	CPU	Intel® IOTG Alder Lake-N Processor N97, QC, 12W	Intel® IOTG Twin Lake-N Processor N150, QC, 6W	Intel® IOTG Amston Lake Atom, X7433RE, QC, 9W
	Frequency	N97, 2.0GHz, up to 3.6 GHz	N150, 0.8GHz, up to 3.6 GHz	X7433RE, 1.5GHz, up to 3.4 GHz
	L2 Cache	6MB		
	CPU Type	BGA		
	Chipset	Integrated in SoC		
Memory	BIOS	AMI		
	Technology	Single-channel LPDDR5 4800 MHz		
	Max. Capacity	Up to 16GB		
	Socket	Onboard		
Display	Controller	Intel® HD Graphics		
	Graphic Memory	Depends on CPU		
	LVDS	Dual Channel 18/24-bit (Connector shared with eDP)		
	eDP	1 (Connector shared with LVDS)		
	HDMI	1		
Ethernet	Controller	1 x Realtek® RTL8125BG-CG 2.5GbE LAN		1 x Realtek® RTL8111K1-CG 1GbE LAN
		1 x Realtek® RTL8111K1-CG 1GbE LAN		1 x Realtek® RTL8125BI-CG 2.5GbE LAN
Audio	Controller	Realtek® ALC897 High Definition Audio Codec		
Super I/O	Controller	Fintek F81966AB-I		
H/W Monitor	Watchdog Timer	256-level Watchdog Timer		
TPM	Controller	Infineon® SLB 9672VU2.0		Infineon® SLB 9672XU2.0
I/O Interface	USB	2 x USB 2.0 ports (internal) 2 x USB 3.2 ports (rear) (Bottom layer USB 3.2 Gen 2 x 1, Top layer USB 3.2 Gen 1)		
	Serial	2 x COM ports (internal) COM1~2: RS-232/422/485, 0V/5V/12V		
	GPIO	16-bits (8 x GPI; 8 x GPO), 5V		
	M.2	1 x E key 2230 (PCIe x1 + USB 2.0) 1 x B key 2242/3042 (PCIe x1/SATA 3.0 + USB 3.2 Gen 2 + USB 2.0)		
Storage	SATA	1 x SATA 3.0		
Power Supply	DC	DC-in 12V		
	ATX	N/A		
	Operating Temperature	-10 ~ 60°C Note: 1. Thermal w/ Airflow:0.7m/s 2. The standard thermal solution only supports TDP up to 12W.	-10 ~ 60°C Note: 1. Thermal w/ Airflow:0.7m/s 2. The standard thermal solution only supports TDP up to 6W.	-40 ~ 70°C Note: 1. Thermal w/ Airflow:0.7m/s 2. The standard thermal solution only supports TDP up to 9W.
Operating Humidity	10 ~ 90%, non-condensing			
Storage Temperature	-20 ~ 80°C	-20 ~ 80°C	-40 ~ 80°C	
Storage Humidity	10 ~ 90%, non-condensing			
Form Factor	Dimensions	101 x 73 mm (Pico-ITX)		
	Weight	0.30 kg		
Certification	EMC	CE, FCC Class B, BSMI, VCCI, RCM, UKCA, IC		
Software Platform	OS Support	Windows 11 IoT Enterprise 24H2 LTSC (64-bit) Linux (Support by request)		

Packing List

Part Number	Description	Quantity
K10-3004466-V03	LAN LED Cable, 150mm	2
K1B-3008067-V03	USB Cable, 150mm	1
K1D-3010008-V03	SATA Cable with Power, 150mm	1
K1G-3002069-V03	DC Power Cable, 150mm	1
K14-3018001-V03	COM PORT Cable, 150mm	1

Optional Item

Part Number	Description
E31-0807850-K08	Heatspreader