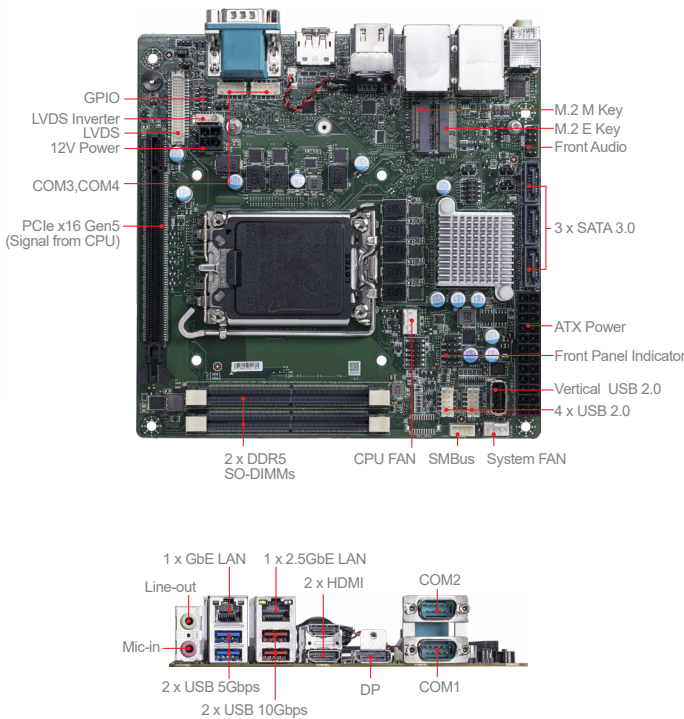


# MS-CF23

Mini-ITX with 15th Gen Intel® Arrow Lake-S Core Ultra 9/7/5 Series Processor, & Intel® H810 for Mainstream Solution

**NEW**



## Features

- Intel® 15th Gen Arrow Lake-S Core Ultra 9/7/5 Series with H810
- 2 DDR5 5600 MT/s non-ECC SODIMM & 6400 MT/s CSODIMM slots up to 128GB
- Triple independent displays: DP, HDMI, LVDS
- 1 2.5GbE LAN with RJ-45, 1 GbE LAN with RJ-45
- 1 PCIe x16 (Gen 5)
- 1 M.2 E Key Slot
- 1 M2 M Key, 3 SATA 3.0 for storage
- 2 USB 3.2 Gen 2, 2 USB 3.2 Gen 1, 5 USB 2.0, 4 COM (1 RS-485), GPIO, Audio, System FAN
- Onboard TPM 2.0
- SMBus
- ATX Power

## Ordering Information

Part Number	Description
916-CF23-001	MS-CF23/606-CF23-010,10/801-CF23-004,RL-S,H810, 2*CSOD-DR5,HDMI*2+DP+LVDS,1*M.2 M key,1*PCIe x16,1*2.5GbE LAN,1*1.0GbE LAN,3*SATA 3.0,2*USB 3.2 Gen2,2*USB3.2 Gen1,5*USB2.0,4*COM,TPM2.0 SINGLE 12PCS/BOX
916-CF23-101	MS-CF23/606-CF23-010,10/801-CF23-102,RL-S,H810, 2*CSOD-DR5,HDMI*2+DP+LVDS,1*M.2 M key,1*PCIe x16,1*2.5GbE LAN,1*1.0GbE LAN,3*SATA 3.0,2*USB 3.2 Gen2,2*USB3.2 Gen1,5*USB2.0,4*COM,TPM2.0 BULK 20PCS

## Packing List

Part Number	Description	Quantity
E21-CF23010-C22	I/O SHIELDING,159,2*44.9mm, FOR HDMI*2+DP	1

## Specifications

<b>Processor</b>	CPU	15th Gen Intel® Arrow Lake-S Core Ultra 9/7/5 Series Processor, Max. TDP-65W	
	Frequency	Depends on CPU	
	L2 Cache	Depends on CPU	
	CPU Type	Socket (LGA 1851)	
	Chipset	Intel® H810	
	BIOS	AMI UEFI	
<b>Memory</b>	Technology	Dual-channel DDR5 (non-ECC) 5600MT/s	Dual-channel DDR5 CSODIMM 6400MT/s
	Max. Capacity	Up to 128GB	
	Socket	2 x 262-pin DDR5 SO-DIMMs	
<b>Display</b>	Controller	Intel® UHD Graphics	
	Graphic Memory	Depends on CPU	
	LVDS	1 x Dual channel 18/24-bit	
	eDP	N/A	
	VGA	N/A	
	DVI	N/A	
	HDMI	2	
	DisplayPort	1	
	Multiple Display	3 independent displays	
	Display Interface	HDMI up to 4096 x 2160 @30Hz DP up to 4096 x 2304 @60Hz LVDS up to 1920 x 1200 @60Hz	
<b>Ethernet</b>	Controller	1 x Intel® I219-LM GbE LAN PHY 1 x Intel® I226-V 2.5GbE LAN	
	Audio	Controller	Realtek® ALC897 Audio Codec (Co-lay ALC888S)
<b>Super I/O</b>	Controller	Fintek F81966D-I	
<b>H/W Monitor</b>	Watchdog Timer	256-level Watchdog Timer	
	Smart Fan	Yes	
<b>TPM</b>	Controller	Infineon® SLB 9672VU2.0	
<b>I/O Interface</b>	USB	2 x USB 10Gbps (rear)	
		2 x USB 5Gbps (rear)	
		5 x USB 2.0 (5 x Internal with one Vertical Type-A)	
		4 x COM ports	
		COM1: RS-232/422/485, Auto-flow Control COM2~4: RS-232	
	Serial	N/A	
	Parallel	N/A	
	PS/2	N/A	
	GPIO	8-bits (4 x GPI; 4 x GPO), 5V	
	PCIe x 16	1 x PCIe x16 (Gen 5)	
<b>Expansion Slot</b>	M.2	1 x M key (PCIe x4 NVMe), 2280/2242 1 x E key (PCIe x1 & USB 2.0), 2230	
	Mini-PCIe	N/A	
<b>Storage</b>	SATA	3 x SATA 3.0 (AHCI Mode Supported)	
	mSATA	N/A	
<b>Power Supply</b>	DC	N/A	
	ATX	ATX-Power 24P, 12V-8P	
<b>Environment</b>	Operating Temperature	0 ~ 60°C Note: Thermal Test w/ Airflow:0.7m/s	
	Operating Humidity	10 ~ 90%, non-condensing	
	Storage Temperature	-20 ~ 80°C	
	Storage Humidity	10 ~ 90%, non-condensing	
<b>Form Factor</b>	Dimensions	170 x 170 mm (Mini-ITX)	
	Weight	0.40 kg	
<b>Certification</b>	EMC	CE, FCC Class B, BSMI, RCM, VCCI, UKCA	
<b>Software Platform</b>	OS Support	Windows 10 IoT Enterprise LTSC (64-bit)	
		Windows 11 IoT Enterprise LTSC (64-bit) Linux (Support by request)	

**Block Diagram**

