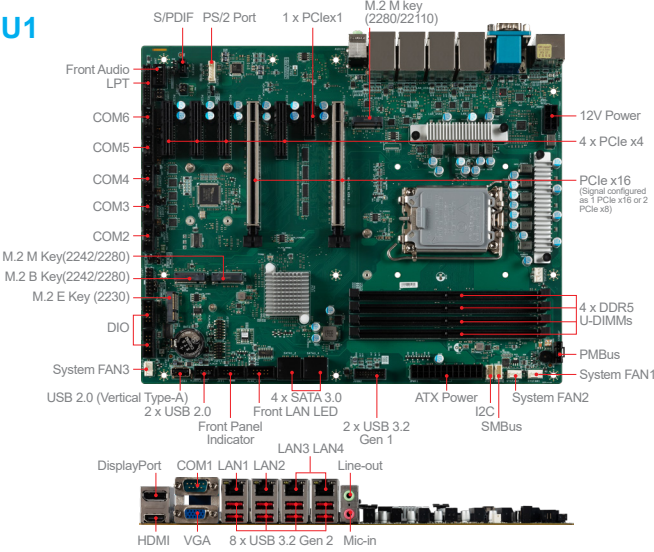


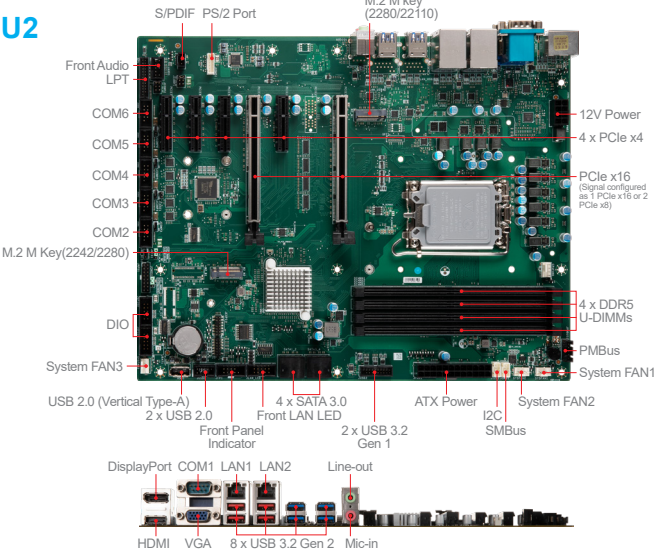
MS-CF05

ATX with 13th/12th Gen Intel® Raptor Lake-S/Alder Lake-S, Core™ i9/i7/i5/i3, Pentium®, Celeron® Processor & Intel® R680E/Q670E for High-Performance Solution

SKU1



SKU2



Features

- Intel® 13th/12th Gen Raptor Lake-S/Alder Lake-S Series with R680E/Q670E
- 4 DDR5 4400 MHz ECC/non-ECC UDIMM slots up to 128GB
- Triple independent displays: VGA, DP, HDMI
- 4 2.5GbE LAN with RJ-45
- 1 PCIe x16 (Gen 5) Slot or 2 PCIe x8 (Gen 5), 1 PCIe x4 (Gen 4), 3 PCIe x4 (Gen 3), 1 M.2 E key, 1 M.2 B key slots
- 2 M.2 M key, 4 SATA 3.0 for storage
- SATA RAID 0/1/5/10
- 8 USB 3.2 Gen 2, 2 USB 3.2 Gen 1, 3 USB 2.0, 6 COM (6 RS-485), GPIO, PS/2, Audio, 3 System FAN
- Onboard TPM 2.0
- SMBus, I2C, PMBus, iAMT 16.x, Chassis Intrusion
- ATX Power

Ordering Information

Part Number	Description
MS-CF05-SKU1	Intel ADL-S, RPL-S, R680E, 4*DDR5, HDMI+DP+VGA, 2*M.2 M key, 1*M.2 B key, 2*M.2 E key, 1*PCIe x16, 1*PCIe x8, 4*PCIe x4, 4*PCIe x1, 4*2.5GbE LAN, 4*SATA 3.0, 10*USB 3.2, 3*USB 2.0, 6*COM, TPM2.0, ATX
MS-CF05-SKU2	Intel ADL-S, RPL-S, Q670E, 4*DDR5, HDMI+DP+VGA, 2*M.2 M key, 1*PCIe x16, 1*PCIe x8, 4*PCIe x4, 2*2.5GbE LAN, 4*SATA 3.0, 10*USB 3.2, 3*USB 2.0, 6*COM, TPM2.0, ATX

Packing List

Part Number	Description	Quantity
K1D-1008261-V03	SATA Cable 500mm	2
K1B-3008012-E06	USB 2.0 Cable, 330mm	1
E21-CF05010-C22	I/O SHIELDING For 4 LANs	1
E21-CF05020-C22	I/O SHIELDING For 2 LANs	

NEW

Specifications

		SKU1	SKU2	
Processor	CPU	13th Gen Intel® Raptor Lake-S i9/i7/i5/i3/ Pentium®/Celeron® IOTG Series Processor, Max 125W		
	Frequency	12th Gen Intel® Alder Lake-S i9/i7/i5/i3/ Pentium®/Celeron® IOTG Series Processor, Max 125W		
	L2 Cache	P-Core 1.1GHz~5.0GHz (Depends on CPU) E-Core 0.9GHz~3.8GHz (Depends on CPU)		
	CPU Type	Socket (LGA 1700)		
	Chipset	Intel® R680E Express	Intel® Q670E Express	
Memory	BIOS	AMI UEFI		
	Technology	Dual-channel DDR5 (ECC/non-ECC) 4400 MHz (ECC support will depend on CPU)	Dual-channel DDR5 (non-ECC) 4400 MHz	
	Max. Capacity	Up to 128GB		
	Socket	4 x 288-pin UDIMMs		
Display	Controller	Intel® UHD Graphics		
	Graphic Memory	Depends on CPU		
	LVDS	N/A		
	eDP	N/A		
	VGA	1		
	DVI	N/A		
	HDMI	1		
	DisplayPort	1		
	Multiple Display	3 independent displays		
	Display Interface	VGA up to 1920 x 1200 @60Hz HDMI up to 4096 x 2160 @60Hz DP up to 4096 x 2304 @60Hz		
Ethernet	Controller	4 x Intel® I225-LM 2.5GbE LAN	2 x Intel® I225-LM 2.5GbE LAN	
	Controller	Realtek® ALC897 Audio Codec (Co-lay ALC888S)		
Audio	Controller	Realtek® ALC897 Audio Codec (Co-lay ALC888S)		
Super I/O	Controller	FINTEK F81966D-I		
H/W Monitor	Watchdog Timer	256-level Watchdog Timer		
	Smart Fan	Yes		
TPM	Controller	Infineon® SLB9672VU2.0		
	USB	8 x USB 3.2 Gen 2 x1 Ports (8 x Rear) 2 x USB 3.2 Gen 1 Ports (2 x Internal) 3 x USB 2.0 Ports (3 x Internal with one Vertical Type-A Connector)		
I/O Interface	Serial	6 x COM-Ports for COM1 ~ 6 (1 x Rear, 5 x Internal) COM1/2 RS-232/422/485 with Ring/0V/5V/12V Auto-flow Control Supported (Default set to Ring) COM3/4/5/6 RS-232/422/485 with 0V/5V/12V Auto-flow Control Supported	6 x COM-Ports for COM1 ~ 6 (1 x Rear, 5 x Internal) COM1/2 RS-232/422/485 with Ring/0V/5V/12V Auto-flow Control Supported (Default set to Ring) COM3/4/5/6 RS-232 with 0V/5V/12V	
	Parallel	Yes		
	PS/2	1 x PS/2 port by Y-cable for keyboard and mouse		
	GPIO	16-bits (8 x GPI; 8 x GPO), 5V		
	PCIe x16	2 (Signal configured as 1 PCIe x16 or 2 PCIe x8)		
	PCIe x4	4		
	PCIe x1	1		
	PCI	N/A		
	Expansion Slot	M.2	1 x M key (Signal from CPU) 2280/22110, 1 x M key (Signal Shared by PCIe Slot5) 2242/2280 1 x E key (PCIe x1), 2230 1 x B key (PCIe x2), 2242/2280	1 x M key (Signal from CPU) 2280/22110, 1 x M key (Signal Shared by PCIe Slot5) 2242/2280
		Mini-PCIe	N/A	
Storage	SATA	4 x SATA 3.0 (RAID 0/1/5/10)		
	IDE	N/A		
	eSATA	N/A		
	CFast	N/A		
	mSATA	N/A		
	CompactFlash	N/A		
Power Supply	DC	N/A		
	ATX	ATX-Power 24P, 12V-8P		
Environment	Operating Temperature	0 ~ 60°C		
	Operating Humidity	10 ~ 90%, non-condensing		
	Storage Temperature	-20 ~ 80°C		
	Storage Humidity	10 ~ 90%, non-condensing		
Form Factor	Dimensions	305 x 244 mm (ATX)		
	Weight	0.779 Kg		
Certification	EMC	CE, FCC Class B, BSMI, RCM, VCCI		
	OS Support	Windows 10 IoT Enterprise 2021 LTSC (64-bit) Windows 11 IoT Enterprise 22H2 (64-bit) Linux Kernel 5.xx, Ubuntu 22.04 LTS Pre-scan Note : All driver base on Intel & chip vendor supported		