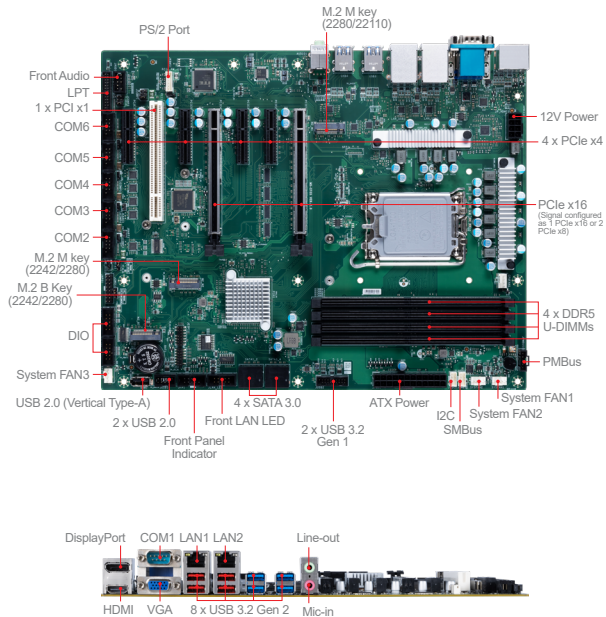


MS-CF05 V2.0

ATX with 14th/13th/12th Gen Intel® Raptor Lake-S Refresh/Raptor Lake-S/Alder Lake-S, Core™ i9/i7/i5/i3, Pentium®, Celeron® Processor & Intel® Q670E for High-Performance Solution

NEW



Specifications

| | | |
|-----------------------------|-----------------------|--|
| Processor | CPU | 12th Gen Intel® Alder Lake-S i9/i7/i5/i3/Pentium®/Celeron® IOTG Series Processor, Max 125W 13th Gen Intel® Raptor Lake-S i9/i7/i5/i3/Pentium®/Celeron® IOTG Series Processor, Max 125W 14th Gen Intel® Raptor Lake-S Refresh i9/i7/i5/i3/Pentium®/Celeron® IOTG Series Processor, Max 125W |
| | Frequency | P-Core 1.1GHz~5.0GHz (Depends on CPU) E-Core 0.9GHz~3.8GHz (Depends on CPU) |
| | L2 Cache | 4MB~30MB (Depends on CPU) |
| | CPU Type | Socket (LGA 1700) |
| | Chipset | Intel® Q670E Express |
| | BIOS | AMI UEFI |
| Memory | Technology | Dual-channel DDR5 (ECC/non-ECC) 4400 MT/s (ECC support will depend on CPU) |
| | Max. Capacity | Up to 128GB |
| | Socket | 4 x 288-pin UDIMMs |
| Display | Controller | Intel® UHD Graphics |
| | Graphic Memory | Depends on CPU |
| | VGA | 1 |
| | HDMI | 1 |
| Display | 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 | 2 x Intel® I226-LM 2.5GbE LAN |
| 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 |
| I/O Interface | USB | 8 x USB 3.2 Gen 2 x1 (8 x rear) 2 x USB 3.2 Gen 1 Ports (2 x internal) 3 x USB 2.0 (3 x internal with one Vertical Type-A Connector) |
| | Serial | 6 x COM ports (1 x rear, 5 x internal) COM1~2: RS-232/422/485, Ring/0V/5V/12V, Auto-flow Control (Default set to Ring) COM3~6: RS-232, 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 |
| | Expansion Slot | |
| Storage Power Supply | SATA | 4 x SATA 3.0 (RAID 0/1/5/10) |
| | 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) |
| Certification | Weight | 0.779 Kg |
| | EMC | CE, FCC Class B, BSMI, RCM, VCCI |
| Software Platform | OS Support | Windows 10 IoT Enterprise 21H2 LTSC (64-bit) Windows 11 IoT Enterprise 24H2 LTSC(64-bit) Linux (Support by request) Noted : All driver base on Intel & chip vendor supported |

Features

- Intel® 14th/13th/12th Gen Raptor Lake-S Refresh/Raptor Lake-S/Alder Lake-S Series with Q670E
- 4 DDR5 4400 MT/s 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 PCI slot, 1 M.2 B key slot
- 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 |
|-------------|-------------|
| Coming Soon | |

Packing List

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

Block Diagram

