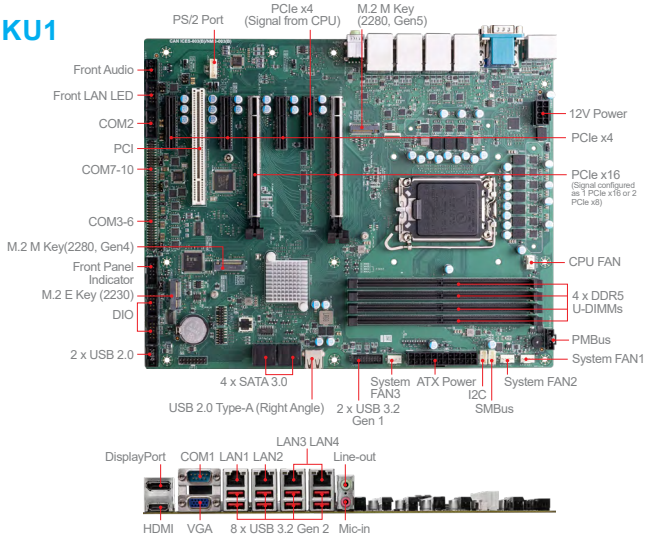
# MS-CF20

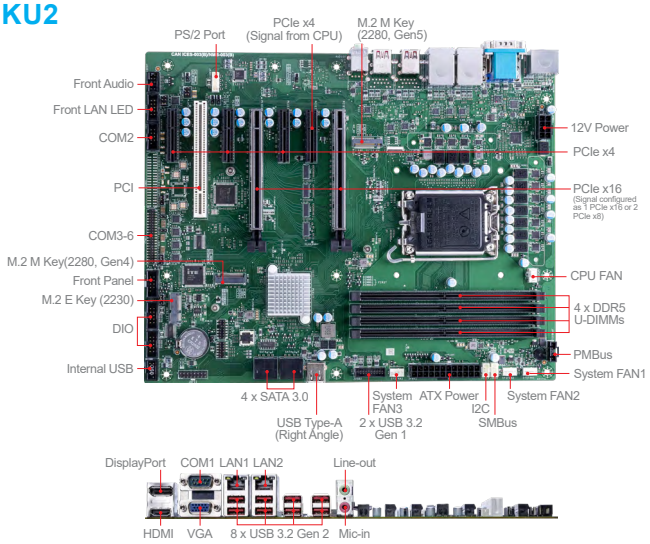
ATX with Intel® Arrow Lake-S , Core™ U9/U7/U5 & Intel® W880 for High-Performance Solution

NEW

## SKU1




## SKU2




## Features

- Intel® Arrow Lake-S Series with W880
- 4 DDR5 5600 MT/s ECC/non-ECC UDIMM slots up to 192GB
- 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), 4 PCIe x4 (Gen 4, 1 signal from CPU, 3 signal from PCH), 1 PCI slot, 1 M.2 E 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, 10 COM (2 RS-485 / 8 RS-232), GPIO, PS/2, Audio, 3 System FAN
- Onboard TPM 2.0
- SMBus, I2C, PMBus, iAMT 19.x, Chassis Intrusion
- ATX Power

## Packing List

| Part Number | Description | Quantity |
|---|---|---|
| K1B-3008012-E06 | USB2.0 cable, 330mm | 1 |
| K1D-1008261-V03 | SATA Cable, 500mm | 2 |
| E21-CF05010-C22 | IO shielding for SKU1 (4 LAN) | 1 |
| E21-CF05020-C22 | IO shielding for SKU2 (2 LAN) | |

## Specifications

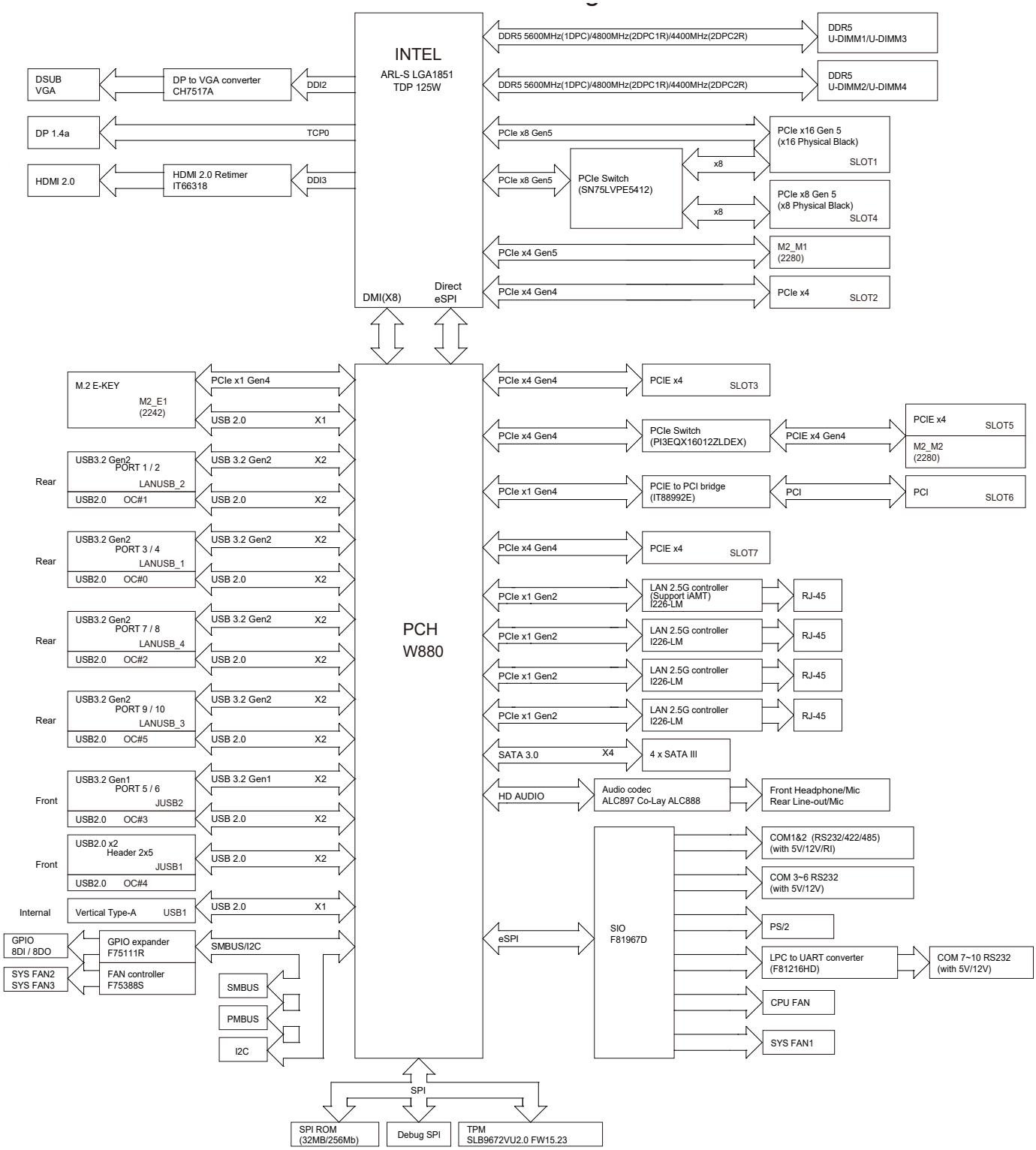
| | | SKU1 | SKU2 |
|---|---|---|---|
| Processor | CPU | Intel® Arrow Lake-S Core™ Ultra 9/7/5, Max 125W | |
| | Frequency | P-Core 1.4GHz~5.6GHz (Depends on CPU)<br>E-Core 1.2GHz~4.6GHz (Depends on CPU) | |
| | L2 Cache | 3MB~36MB (Depends on CPU) | |
| | CPU Type | Socket (LGA1851) | |
| | Chipset | Intel® W880 | |
| | BIOS | AMI UEFI | |
| Memory | Technology | Dual-channel DDR5 (ECC/non-ECC) 5600 MT/s<br>(ECC support will depend on CPU) | |
| | Max. Capacity | Up to 192GB | |
| | Socket | 4 x 288-pin UDIMMs | |
| Display | Controller | Intel® UHD Graphics | |
| | Graphic Memory | Depends on CPU | |
| | VGA | 1 | |
| | HDMI | 1 | |
| | DisplayPort | 1 | |
| | Multiple Display | 3 independent displays | |
| | Display Interface | VGA up to 1920 x 1200 @60Hz<br>HDMI up to 4096 x 2160 @60Hz<br>DP up to 4096 x 2304 @60Hz | |
| Ethernet | Controller | 4 x Intel® I226-LM 2.5GbE LAN | 2 x Intel® I226-LM 2.5GbE LAN |
| Audio | Controller | Realtek® ALC897 Audio Codec | |
| Super I/O | Controller | FINTEK F81967D-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)<br>2 x USB 3.2 Gen 1 (2 x internal)<br>3 x USB 2.0 (3 x internal with one Right Angle Type-A Connector) | |
| | Serial | 10 x COM ports (1 x rear, 9 x internal)<br>COM1~2: RS-232/422/485, Ring/0V/5V/12V, Auto-flow Control (Default set to Ring)<br>COM3~6: RS-232, 0V/5V/12V<br>COM7~10: RS-232, 0V/5V/12V | 6 x COM ports (1 x rear, 5 x internal)<br>COM1~2: RS-232/422/485, Ring/0V/5V/12V, Auto-flow Control (Default set to Ring)<br>COM3~6: RS-232, 0V/5V/12V |
| | 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 | PCIe x16 | 2 (Signal configured as 1 PCIe x16 or 2 PCIe x8) | |
| | PCIe x4 | 4 | |
| | PCI | 1 | |
| | M.2 | 1 x M key (Signal from CPU) 2280, 1 x M key (Signal Shared by PCIe Slot5) 2280<br>1 x E key (PCIe x1), 2230 | |
| Storage | SATA | 4 x SATA 3.0 (RAID 0/1/5/10) | |
| Power Supply | 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 | 0.777 Kg | 0.744 Kg |
| Certification | EMC | CE, FCC Class B, BSMI, RCM, VCCI, UKCA, CN | |
| Software Platform | OS Support | Windows 10 IoT Enterprise 2021 LTSC (64-bit)<br>Windows 11 IoT Enterprise 24H2 LTSC (64-bit)<br>Linux (Support by request)<br>Noted : All driver base on Intel & chip vendor supported | |

## Ordering Information

| Part Number | Description |
|---|---|
| 916-CF20-001 | MS-CF20\606-CF20-010,10\806-CF20-001 MS-CF20 10 ARL-S,W880, 4*DDR5,HDMI+DP+VGA,2*M.2 M key,1*M.2 E key,1*PCIe x16,1*PCIe x8,4*PCIe x4, 1*PCI,4*2.5GbE LAN,4*SATA 3.0,8*USB 3.2,10*COM,T-PM2.0,ATX SINGLE,5pcs/box |
| 916-CF20-002 | MS-CF20\606-CF20-010,10\806-CF20-003 MS-CF20 10 ARL-S,W880, 4*DDR5,HDMI+DP+VGA,2*M.2 M key,1*M.2 E key,1*PCIe x16,1*PCIe x8,4*PCIe x4, 1*PCI,4*2.5GbE LAN,4*SATA 3.0,8*USB 3.2,10*COM,T-PM2.0,ATX SINGLE,2pcs/box |
| 916-CF20-003 | MS-CF20\606-CF20-020,10\806-CF20-002 MS-CF20 10 OPT:A ARL-S,W880, 4*DDR5,HDMI+DP+VGA,2*M.2 M key,1*M.2 E key,1*PCIe x16,1*PCIe x8,4*PCIe x4, 1*PCI,2*2.5GbE LAN,4*SATA 3.0,8*USB 3.2,6*COM,TPM2.0,ATX SINGLE, 5pcs/box |
| 916-CF20-004 | MS-CF20\606-CF20-020,10\806-CF20-004 MS-CF20 10 OPT:A ARL-S,W880, 4*DDR5,HDMI+DP+VGA,2*M.2 M key,1*M.2 E key,1*PCIe x16,1*PCIe x8,4*PCIe x4,1*PCI,2*2.5GbE LAN,4*SATA 3.0,8*USB 3.2,6*COM,TPM2,ATX SINGLE,2pcs/box |

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## Block Diagram




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