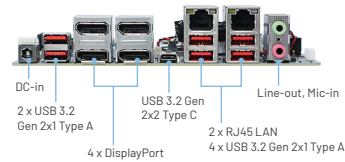


Features

- LGA 1700 socket supports 12th/13th/14th Gen Intel® Core™ i 9/7/5/3 Processor, codenamed Alder Lake/Raptor Lake/Raptor Lake Refresh
- Intel® Integrated UHD Graphic with Xe Architecture (CPU Dependent)
- Intel® R680E PCH, x8 Gen4 DMI
- 2 x SODIMM sockets support DDR5 4800MHz up to 64GB with ECC support
- Gen 5 PCIe x16, M.2 NVMe and CNVi
- TPM 2.0
- Intel® Active Management Technology 16, Intel® ME 16
- 2 x 2.5 GbE LAN
- 4 x DP++ 1.2a 4k support 4 Independent Displays
- 8 x USB 3.2 Gen 1x1, 1 x USB 3.2 Gen 2x2 Type C, 2 x USB 2.0
- 2 x COM, 2 x SATA III, I²C, SMBus, SPI
- 12V-24V Wide Range DC-In



Specifications

System	
CPU	LGA 1700 socket supports 12th Gen Alder Lake/ 13th Gen Raptor Lake/ 14th Gen Raptor Lake Refresh Intel® Core™ i 9/7/5/3, Pentium, Celeron Processors. TDP up to 65W. Up to 16 Cores 24 Threads Hybrid
Chipset	Intel® R680E PCH
DMI	x8 Gen4 DMI
System Memory	2 x SODIMM sockets support Dual Channel DDR5 4800MHz up to 64GB with ECC support
BIOS	AMI uEFI BIOS, 256Mb SPI Flash ROM
Super I/O	Nuvoton® NCT6126D
Ethernet	2 x Intel® I225-LM 2.5 Gigabit Ethernet Controllers
Audio	Realtek HD Audio
Watchdog Timer	1 ~ 255 sec timer
Expansion	1 x Gen 5 PCIe x16 2 x M.2 M-Key 2242/2280 NVMe (PCIe x4 + SATA III) 1 x M.2 E-Key 2230 with CNVi Support (PCIe x 1 + USB 2.0)
TPM	Infineon® TPM 2.0
iAMT	Intel® Active Management Technology 16
Supported OS	Windows 10, Windows 11, Linux
Display	
Chipset	Intel® Integrated UHD Graphic with Xe Architecture (CPU Dependent)
Interface	4 x Dual Mode DisplayPort 1.2a 4K@60Hz 18/24-bits Dual Channel LVDS, optional eDP
Multi-Display	Supports 4 Independent Displays

External I/O	
Display	4 x DP++
USB	6 x USB 3.2 Gen 2x1 Type-A 1 x USB 3.2 Gen 2x2 Type-C
LAN	2 x RJ45
Audio	Line-out, Mic-in
DC-in	1 x DC-In Jack
Internal I/O	
Display	1 x LVDS, optional eDP
USB	1 x USB 3.2 Gen 2x1 Header (2 Ports) 2 x USB 2.0 Headers (4 Ports)
COM	1 x RS-232 Header with Voltage Selection 1 x RS-232/422/485 Headers with Voltage Selection
SATA	2 x SATA III Connectors
GPIO	1 x 8-bits GPIO Header
Other	1 x SPI Header 1 x I ² C Header 1 x SMBus Header 1 x Front Audio Header 1 x Amplifier Header (3W Per Channel Amplifier) 1 x Front Panel Header

Mechanical & Environment

Power Type/ Requirement	12V-24V Wide Range DC-In
Operating Temp.	0°C ~ 60°C (32°F ~ 140°F)
Storage Temp.	-20° C ~ 80° C (-4°F ~ 176°F)
Op. Humidity	5% to 90% non-condensing
Form Factor	Mini-ITX
Dimensions	6.7" x 6.7" (170mm x 170mm)
Weight	0.88 lbs (0.4 kg)
Certification	FCC Class B/CE RoHS Compliant

Ordering Info

MX680RD	P/N: 71876 Intel® R680E Mini-ITX Motherboard, DC Power
Included	1 x I/O Shield 1 x SATA Power Cable (for 2 Devices)
183000000006	2.00mm pitch 12" length serial cable
182437200040	2.54mm pitch 14" length dual port USB 2.0 cable w/ full height bracket
182000000073	2.00mm pitch 19.7" length dual port serial cable w/ full height bracket

* All product specifications and images are subject to change without notice. Last update: 03/18/2024



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