BC680R

12th/13th Gen. Intel® Core™ i9/i7/i5/i3 Processors, LGA 1700 Socket, ATX Motherboard With Intel® R680E

Product Features

- LGA 1700 Socket supports 12/13th Generation Intel® Core™ processors, Intel® R680E Chipset

- 2 x HDMI 2.0b and 2 x DP 1.4a, supporting 4K@60Hz.

- 2 x Intel® I225-LM 2.5G Gigabit Controller

- 1 x M.2 M-Key 2242/2280/22110 NVMe, 1 x M.2 M-Key 2242/2280/22110 NVMe, 1 x M.2 E-Key 2230 with CNVi Support

- ATX Power

- 4 x 288-Pin DDR5 4400MHz Dual Channel U-DIMM Socket, up to 128GB.

- 1 x Gen 5 PCIe x16, 2 x Gen 4 PCIe x4, 1 x Gen 3 PCIe x4, 1 x Gen3 PCIe x1, 2 x Gen 3 PCIe x1 Open End.

- 1 x USB 3.2 Gen 2x2 Type-C, 6 x USB 3.2 Gen 2x, 8x USB 2.0 (Headers), 2 x USB 3.2 Gen 2 (Headers)

- 6 x COM

Specification

System Information	
Processor	LGA 1700 Socket Supports 12/13th Generation Intel® Core™ i9/i7/i5/i3 Processors (Max. TDP at 65W)
Platform Controller Hub	Intel® R680E Chipset
System Memory	4 x 288-Pin DDR5 4400MHz Dual Channel U-DIMM Socket Supports Up to 128GB (ECC Memory Support by CPU)
I/O Chipset	nuvoton NCT6126D
Watchdog Timer	H/W Reset, 5~255 Seconds/5~255 Minutes
BIOS	AMI uEFI BIOS 256Mbit SPI Flash ROM
H/W Status Monitor	CPU Temperature Monitoring Voltage Monitoring CPU Fan Speed Control
TPM	Onboard infineon TPM 2.0 SLB9670VQ2.0
Board	ATX

Expansion

Expansion	1 x Gen5 PCIe x16, 2 x Gen4 PCIe x4, 1 x Gen3 PCIe x4, 1 x Gen3 PCIe x1, 2 x Gen3 PCIe x1, Open End 1 x M.2 Key M 2242/2280/22110 NVMe (PCIe x4 + SATA III) 1 x M.2 Key M 2242/2280/22110 NVMe (PCIe x4 Only) 1 x M.2 Key E 2230 with CNVi Support (PCIe x 1 + USB 2.0)

Storage

Storage	1 x M.2 Key M 2242/2280/22110 NVMe (PCIe x4 + SATA III) 1 x M.2 Key M 2242/2280/22110 NVMe (PCIe x4 Only) 4 x SATA III

Display

Graphic Chipset	Intel® 12th/13th Generation CPU Integrated
Spec. & Resolution	2 x HDMI (2.0b): 4K@60Hz 2 x Dual Mode DisplayPort (1.4a): 4K@60Hz
Multiple Display	Four Diaplay

Audio

Audio Codec	Realtek ALC888S HD Audio Decoding Controller
Audio Interface	Mic-in, Line-out
Audio Amplifier	2 x 6W 8Ω Amplifier

Ethernet

LAN Chipset	2 x Intel® I225LM 2.5G Gigabit Ethernet
LAN Port	2 x RJ-45

Power Requirement

Power Mode	AT/ATX (Default Setting: ATX)

Software Support

OS	Windows 10, Windows 11, Linux

Certification

Certification Information	CE, FCC Class, RoHS Compliant

I/O

USB	6 x USB 3.2 Gen2x1 1 x USB 3.2 Gen2x2 Type-C 8 x USB 2.0 by pin header 2 x USB 3.2 Gen2 by pin header
COM Port	5 x RS-232 1 x RS-232/422/485
SATA	4 x SATA III
RAID	Support RAID 0, 1, 5, 10
DIO	1 x 8-bit GPIO
MIO	1 x PS/2 Header 1 x LPT Header

Mechanical & Environmental

Operating Temp.	0~60°C (32~140°F)
Storage Temp.	-20 ~ 80°C (-4~176°F)
Operating Humidity	5% to 90% non-condensing
Weight	1.85lbs (0.85kg)
Power Requirement	+12V/+5V/5VSB/+3.3V/-12V
Power Mode	AT/ATX (Default Setting: ATX)
Dimension (L x W)	12" x 9.6" (304.8mm x 243.84mm)

Ordering Information

Ordering Information	71832-IA LGA 1700 Socket Supports 12th/13th Gen Intel® Core™ i9/i7/i5/i3 Processor, ATX Motherboard with Intel® R680E PCH