

RX680R

12/13/14th Gen. Intel® Core™ i9/i7/i5/i3 Processor, LGA 1700 Socket, Micro ATX Motherboard With Intel® R680E



Features

- LGA 1700 Socket Supports 12/13/14th Gen. Intel® Core™ i9/i7/i5/i3 Processors, Intel® R680E Chipset
- 4 x 288 Pin DDR5 Dual Channel U-DIMM Socket, Support up to 128GB (ECC Memory Support by CPU)
- 4 x DP++, 1 x LVDS Header
- 1 x Gen 5 PCIe x16, 2 x Gen 4 PCIe x4, 1 x Gen 3 PCIe x4 Open Ended
- 2 x RJ45, Intel® I225-LM/I226-LM 2.5 Gigabit Ethernet Controller
- 1 x USB 3.2 Gen 2x2 Type C , 8 x USB 3.2 Gen 2 ,8 x USB 2.0
- 2 x M.2 M-Key 2242/2280/22110 NVMe, 1 x M.2 E-Key 2230
- 1 x RS-232/422/485, 5 x RS-232
- ATX Power



Specifications

System Information

Processor	LGA 1700 Socket Supports 12/13/14th 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 5600MHz Dual Channel U-DIMM Socket, Support 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 Voltages Monitoring CPU Fan Speed Control
TPM	infineon TPM 2.0
Board	Micro ATX

Expansion

Expansion	1 x Gen 5 PCIe x16 2 x Gen 4 PCIe x4 (x16 Physical Yellow) 1 x Gen 3 PCIe x4 Open Ended 1 x M.2 M-Key 2242/2280/22110 NVMe (Gen 4 PCIe x4 + SATA III) 1 x M.2 M-Key 2242/2280/22110 NVMe (Gen 3 PCIe x4 + SATA III) 1 x M.2 E-Key 2230 with CNVi Support (PCIe x1 + USB 2.0)
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Display

Graphic Chipset	Intel® 12/13/14th Generation CPU Integrated
Spec. & Resolution	4 x DP (DP1.4a): Max: 7680 x 4320 @ 60Hz (2 x DP++:1920 x 1080 @ 60Hz)
Multiple Display	Four Display
LVDS	1 x LVDS Header 1 x eDP Header (Optional)

Audio

Audio Codec	Realtek ALC888S HD Audio Decoding Controller
Audio Interface	Line-out, Mic-in
Audio Amplifier	2 x 3W 8Ω Amplifier

Ethernet

LAN Chipset	2 x Intel® I225LM/I226LM 2.5 Gigabit Ethernet
LAN Port	2 x RJ45

Power Requirement

Power Mode	AT/ATX (Default Setting: ATX)
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Software Support

OS	Windows 10, Windows 11, Linux
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Certification

Certification Information	CE, FCC Class B, RoHS Compliant
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I/O

USB	1 x USB 3.2 Gen2x2 Type C 6 x USB 3.2 Gen2x1 2 x USB 3.2 Gen2x1 by pin header 8 x USB 2.0 by pin header
COM Port	5 x RS-232 by pin header 1 x RS-232/422/485 by pin header
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

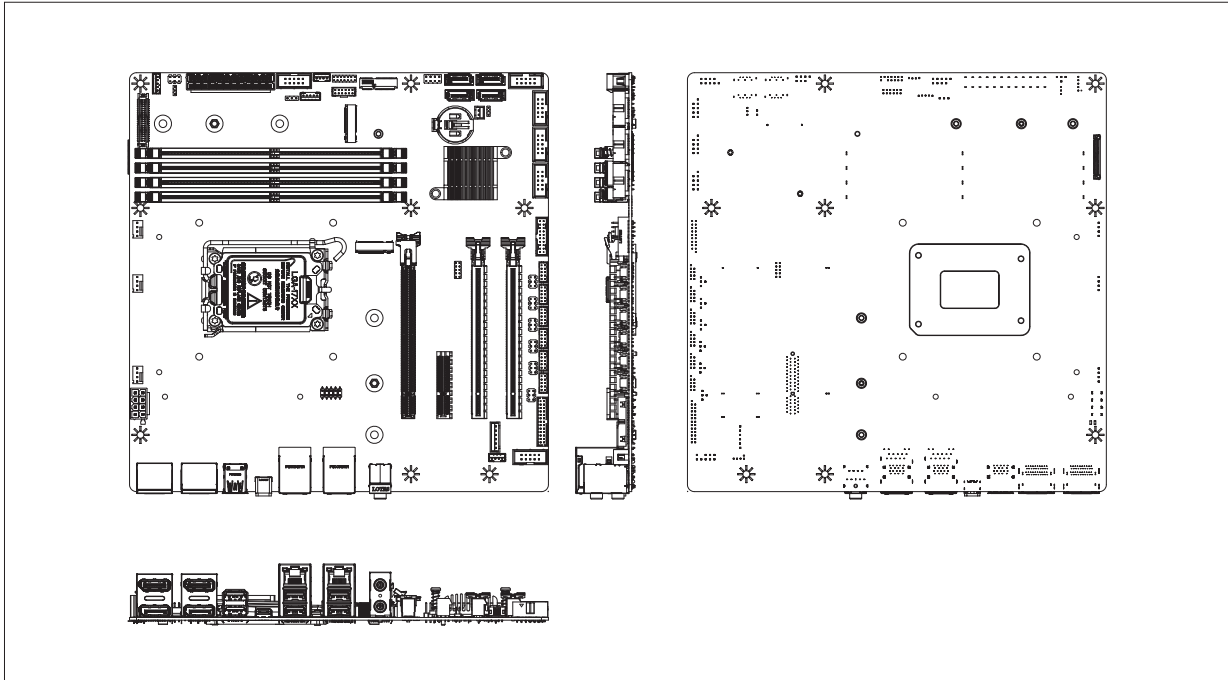
Mechanical & Environmental

Operating Temp.	0°C ~ 60°C (32°F ~ 140°F)
Storage Temp.	-20°C ~ 80°C (-4°F ~ 176°F)
Operating Humidity	5% ~ 90% Relative Humidity, Non-condensing
Weight	1.45lbs (0.65kg)
Power Requirement	+12V/+5V/5VSB/+3.3V/-12V
Power Mode	AT/ATX (Default Setting: ATX)
Dimension (L x W)	9.6" x 9.6" (244mm x 244mm)

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Mechanical Drawing



Ordering Information

P/N	Processor	Chipset	LAN	USB	COM	PCIe Slot	Power Input	Temp.
71882-IA (RX680R)	12th/13th/14th Gen Intel® Core™ i9/i7/i5/i3 Processors, LGA 1700 Socket, 65W TDP	Intel® R680E	2	17	6	4	ATX Power	0°C ~ 60°C (32~140°F)

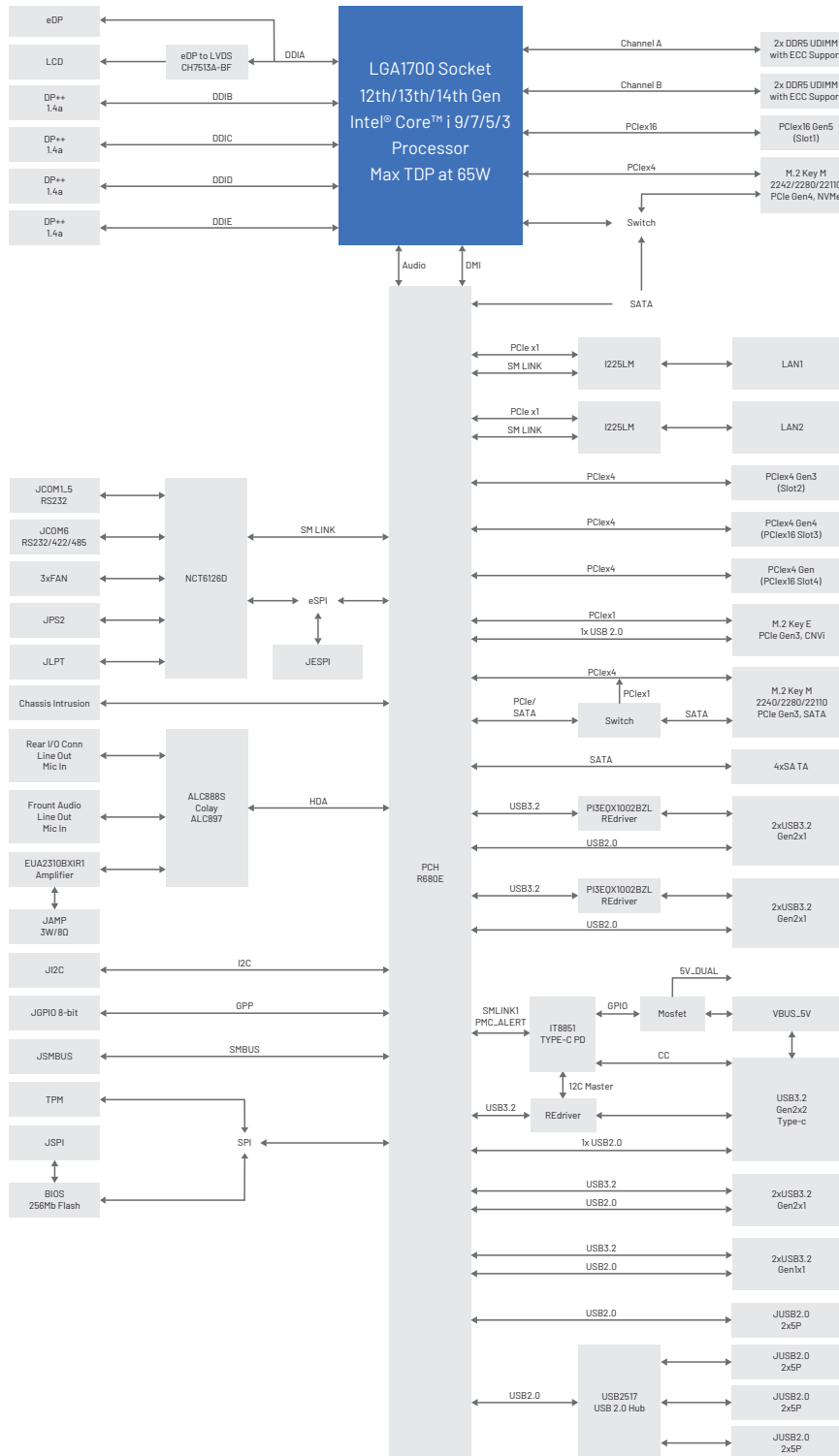
Packing List

Item	P/N	Quantity
IO Shield	-	1

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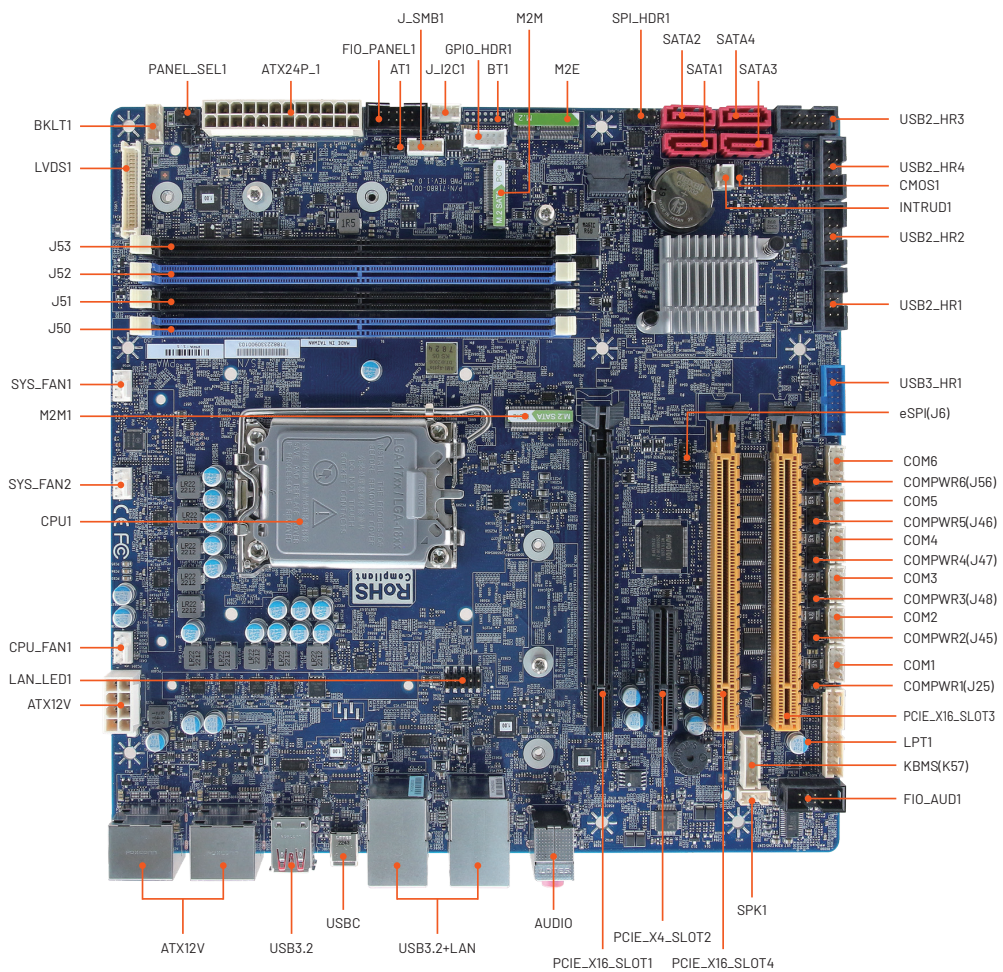
Block Diagram



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I/O Overview



Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

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