



W680D4U-2L2T/G5

- Micro-ATX (9.6" x 9.6")
- Supports Intel® Core™ 14th Gen, 13th & 12th Gen Intel® Core™ series processors
- 4 DIMM slots (2DPC), supports DDR5 ECC/non-ECC UDIMM
- 1 PCIe5.0 x16, 1 PCIe4.0 x4, 1 PCIe3.0 x1
- 3 OCuLink (PCIe4.0 x4), 1 OCuLink (PCIe4.0 x4 or 4 SATA 6Gb/s)
- Supports 1 M.2 (PCIe3.0 x4)
- 2 RJ45 (10GbE) by Intel® X710
- 2 RJ45 (1GbE) by Intel® i210
- Up to 8 SATA 6Gb/s
- 1 VGA, 1 HDMI, 1 DisplayPort
- Remote Management (IPMI)



HDMI™ (High-Definition Multimedia Interface)

HDMI This motherboard supports HDMI™ (High-Definition Multimedia Interface) which is an interface standard for transferring uncompressed video data and delivering multi-channel audio through a single cable. Both video and audio data signals transferred through the HDMI™ interface are digital without being converted into analog, therefore it delivers the richest pictures and the most realistic sounds.

SPECIFICATIONS

Physical Status	
Form Factor	Micro-ATX
Dimensions	9.6" x 9.6" (244 mm x 244 mm)
Processor System	
CPU	Supports Intel® Core™ 14th Gen, 13th & 12th Gen Intel® Core™ series processors
Socket	Single Socket LGA 1700
Thermal Design Power	125W
Chipset	Intel® W680
System Memory	
Supported DIMM Quantity	4 DIMM slots (2DPC)
Supported Type	DDR5 288-pin ECC/non-ECC UDIMM
Max. Capacity per DIMM	48GB on Intel® Core™ 14th Gen, 13th Gen Intel® Core™ processors 32GB on 12th Gen Intel® Core™ processors
Max. DIMM Frequency	4400MT/s (2DPC-1DIMM) / 4000MT/s (2DPC-2DIMM 1R) / 3600MT/s (2DPC-2DIMM 2R)
Voltage	1.1V
PCIe Expansion Slots (SLOT7 close to CPU)	
PCIe x 16	SLOT6: PCIe5.0 x16 [CPU]
PCIe x 4	SLOT7: PCIe4.0 x4 [CPU]
PCIe x 1	SLOT4: PCIe3.0 x1 [PCH]
Other PCIe Expansion Connectors	
M.2 slot	1 M-key (PCIe3.0 x4) [PCH]; support 2280/2260/2242/2230 form factor
OCuLink	1 OCuLink (PCIe4.0 x4)* [CPU] 1 OCuLink (PCIe4.0 x4 or 4 SATA 6Gb/s) [PCH] 2 OCuLink (PCIe4.0 x4) [PCH] *OCuLink4 shares lanes with SLOT7 and will be disabled when SLOT7 is populated.
SATA/SAS Storage	
PCH Built-in Storage	Intel W680 (up to 8 SATA 6Gb/s; RAID 0/1/5/10): 4 SATA 7-pin, 1 OCuLink for SATA
Ethernet	
Additional GbE Controller	2 RJ45 (10GbE) by Intel® X710 2 RJ45 (1GbE) by Intel® i210
Server Management	
BMC Controller	ASPEED AST2600: iKVM, vMedia support
IPMI Dedicated GLAN	1 RJ45 Dedicated IPMI LAN port by Realtek RTL8211F
Graphics	

Controller	ASPEED AST2600: 1 DB15 (VGA) Intel® Integrated Processor Graphics: 1 HDMI, 1 DisplayPort
Rear I/O	
UID Button/LED	1 button w/ LED
VGA Port	1 DB15 (VGA), 1 HDMI, 1 DisplayPort
Serial Port	1 DB9 (COM)
USB 3.2 Gen1 Port	2 Type A (USB3.2 Gen1)
RJ45	2 RJ45(10GbE), 2 RJ45(1GbE), 1 dedicated IPMI
Internal Connector/Headers	
Power Connector	1 (24-pin, ATX main power), 2 (8-pin, ATX 12V)
Auxiliary Panel Header	1 (18-pin): chassis intrusion, system fault LED, LAN1/LAN2 activity LED, locate, SMBus
System Panel	1 (9-pin): power switch, reset switch, system power LED, HDD activity LED
VGA header	1
Speaker Header	1 (4-pin)
Buzzer	1
Fan Header	7 (4-pin)
Thermal Sensor Header	1
TPM Header	1 (13-pin, SPI)
SGPIO Header	1
SMBus header	1
PMBus header	1
IPMB Header	1
Clear CMOS	1 (contact pads)
Others	1 (4-pin, LAN3/LAN4 LED)
ME/SPS Recovery	1
USB 3.2 (Gen1) Header	1 (19-pin, 2 USB3.2 Gen1)
USB 2.0 Header	1 (9-pin, 2 USB2.0)
NMI Header	1
LED Indicators	
Standby PWR LED	1
80 Debug Port LED	1
Fan Fail LED	7
BMC heartbeat LED	1
System BIOS	
BIOS Type	AMI 256 Mb SPI Flash ROM
BIOS Features	Plug and Play(PnP), ACPI 6.4 and above compliance wake up events, SMBIOS 3.6.0 and above, ASRock Rack instant flash
Hardware Monitor	
Temperature	CPU, MB, Card side, VR, M.2, X710, TR Temperature sensing
Fan	Fan Tachometer CPU Quiet Fan (Allow Chassis Fan Speed Auto-Adjust by CPU Temperature) Fan Multi-Speed Control
Voltage	3VSB, 5VSB, CPU_VCORE, VCCIN_AUX, VDD2, 1.05V_PCH, 0V82SB_PCH, VCCGT, 1V8SB, VCCSA, BAT, 3V, 5V, 12V
Supported OS	
OS	Windows® 10 (64bit) Windows® 11 (64 bit)
Environment	
Temperature	Operation temperature: 10°C ~ 35°C / Non operation temperature: -40°C ~ 70°C
Humidity	Non operation humidity: 20% ~ 90% (Non condensing)

The specification is subject to change without notice in advance. ASRock Rack is the official trademark for ASRock Rack Inc., all the covers need to remain the original brand name without any modification. All other brands, names and trademarks are the property of their respective owners.

