



W680D4ID-2T/G5/X550

- Deep mini-ITX (6.7" x 8.2")
- Supports 12th & 13th Gen Intel® Core™ series processors
- 4 DIMM slots (2DPC), supports DDR5 ECC/non-ECC UDIMM Memory
- 1 PCIe5.0 x16
- 1 OCuLink (PCIe4.0 x4), 1 OCuLink (PCIe4.0 x4 or 4 SATA 6Gb/s), 1 OCuLink (PCIe3.0 x4 or 4 SATA 6Gb/s)
- Supports 2 M.2 (PCIe4.0 x4)
- 8 SATA 6Gb/s
- 2 RJ45 (10GbE) by Intel X550
- 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	Deep mini-ITX
Dimensions	6.7" x 8.2"
Processor System	
CPU	Supports 12th & 13th 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	32GB
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	SLOT7: PCIe5.0 x16 [CPU]
Other PCIe Expansion Connectors	
M.2 slot	1 M-key (PCIe4.0 x4); support 2280 form factor [CPU] 1 M-key (PCIe4.0 x4); support 2280 form factor [PCH]
OCuLink	1 OCuLink (PCIe4.0 x4 or 4 SATA 6Gb/s) [PCH] 1 OCuLink (PCIe3.0 x4 or 4 SATA 6Gb/s) [PCH] 1 OCuLink (PCIe4.0 x4) [PCH]
SATA/SAS Storage	
PCH Built-in Storage	Intel W680 (up to 8 SATA 6Gb/s; RAID 0/1/5/10): 2 OCuLink for 8 SATA
Ethernet	
Additional GbE Controller	2 RJ45 (10GbE) by Intel® X550
Server Management	
BMC Controller	ASPEED AST2600: IPMI2.0 with iKVM and 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
Rear I/O	
UID Button/LED	1 UID button, 1 UID LED
VGA Port	1 DB15 (VGA), 1 HDMI
USB 3.2 Gen1 Port	2 Type A (USB3.2 Gen1)
RJ45	2 RJ45(10GbE), 1 dedicated IPMI
Internal Connector/Headers	
Power Connector	1 (4-pin, ATX PSU signal) w/ ATX 24-pin adapter cable, 2 (8-pin, ATX 12V) support 12V DC-in
Other Power Connectors	1 (4-pin) for HDD power when using 12V DC-in power source
Auxiliary Panel Header	1 (9-pin): chassis intrusion, system fault LED, LAN1/LAN2 activity LED, locate
System Panel	1 (9-pin): power switch, reset switch, system power LED, HDD activity LED
COM Header	1
Speaker Header	1
Fan Header	3 (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 (2-pin)
USB 3.2 (Gen1) Header	1 (19-pin, 2 USB3.2 Gen1)
NMI Header	1
LED Indicators	
Standby PWR LED 5vsb	1
Fan Fail LED	3
BMC heartbeat LED	1
System BIOS	
BIOS Type	AMI 256Mb SPI Flash ROM
BIOS Features	Plug and Play(PnP), ACPI 6.4 and above compliance wake up events, SMBIOS 2.8 and above, ASRock Rack instant flash
Hardware Monitor	
Temperature	CPU, MB, VR, M.2, X550 Temperature Sensing
Fan	Fan Tachometer CPU Quiet Fan (Allow Chassis Fan Speed Auto-Adjust by CPU Temperature) Fan Multi-Speed Control
Voltage	5VSB, 3VSB, VCORE, VCCIN_AUX, VDD2, 1.05V_PCH, 0V82SB_PCH, VCCGT, 1V8SB, 3V,5V, 12V, BAT, VCCSA
Supported OS	
OS	Windows® 10 (64 bit) 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)

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