



B650D4U

- Micro-ATX (9.6"x 9.6")
- Support AMD Ryzen 7000 series Processors
- 4 DIMM slots (2DPC), supports DDR5 ECC/non-ECC UDIMM
- 1 PCIe5.0 x16, 1 PCIe5.0 x4, 1 PCIe4.0 x1
- Supports 1 M.2 (PCIe5.0 x4), 1 M.2 (PCIe4.0 x4)
- 2 RJ45 (1GbE) by Intel® i210
- 4 SATA 6Gb/s
- 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" |
| Processor System | |
| CPU | Supports AMD Ryzen 7000 series Processors |
| Socket | Single Socket AM5 (LGA 1718) |
| Thermal Design Power | Up to 170W by proper cooling solution |
| Chipset | AMD B650E |
| 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 | 5200 MHz (1DPC); 3600 MHz (2DPC) |
| Voltage | 1.1V |
| PCIe Expansion Slots (SLOT7 close to CPU) | |
| PCIe x 16 | SLOT6: PCIe5.0 x16 [CPU] |
| PCIe x 4 | SLOT7: PCIe5.0 x4 [CPU] |
| PCIe x 1 | SLOT4: PCIe4.0 x1 [FCH] |
| Other PCIe Expansion Connectors | |
| M.2 slot | 1 M-key (PCIe5.0 x4), supports 2280/2242 form factor [CPU] 1 M-key (PCIe4.0 x4), supports 2280/2242 form factor [FCH] |
| SATA/SAS Storage | |
| PCH Built-in Storage | AMD B650E (4 SATA 6Gb/s): 4 SATA 7-pin |
| Ethernet | |
| Additional GbE Controller | Intel® i210: 2 RJ45 (1GbE) |
| Server Management | |
| BMC Controller | ASPEED AST2600 |
| IPMI Dedicated GLAN | 1 Realtek RTL8211F for dedicated management GLAN |
| Graphics | |
| Controller | ASPEED AST2600: 1 DB15 (VGA), 1 (15-pin) header |

| | |
|-----------------------------------|---|
| | AMD Processors with Graphics: 1 HDMI, 1 DisplayPort |
| Rear I/O | |
| UID Button/LED | 1 UID button w/ LED |
| VGA Port | 1 DB15 (VGA), 1 DisplayPort, 1 HDMI |
| Serial Port | 1 DB9 (COM) |
| USB 3.2 Gen1 Port | 4 Type-A (USB3.2 Gen1) |
| RJ45 | 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, LAN activity LED |
| System Panel | 1 (9-pin): power switch, reset switch, system power LED, HDD activity LED |
| VGA header | 1 |
| Speaker Header | 1 |
| Buzzer | 1 |
| Fan Header | 7 (6-pin) |
| TPM Header | 1 (13-pin, SPI) |
| SMBus header | 1 |
| PMBus header | 1 |
| IPMB Header | 1 |
| Clear CMOS | 1 |
| Others | 1 (3-pin, 80 debug port header) |
| LED Indicators | |
| Standby PWR LED 5vsb | 1 (5VSB) |
| 80 Debug Port LED | 1 |
| Fan Fail LED | 7 |
| BMC heartbeat LED | 1 |
| System BIOS | |
| BIOS Type | AMI UEFI BIOS; 256Mb (32MB) SPI Flash ROM |
| BIOS Features | Plug and Play, ACPI 6.4 compliance wake up events, SMBIOS 3.5 |
| Hardware Monitor | |
| Temperature | CPU, DDR, MB, Card Side, Chipset, M.2 slot |
| Fan | Fan Tachometer, Multi-Speed Control, CPU Quiet Fan (Allow Chassis Fan Speed Auto-Adjust by CPU Temperature) |
| Voltage | VOLT_3VSB, VOLT_5VSB, VOLT_P0_VCORE, VOLT_P0_VSOC, VOLT_VMEMP, VOLT_VMISC, VOLT_1.8V_PT21, VOLT_VSUS10, VOLT_VDD10, VOLT_BAT, VOLT_3V, VOLT_5V, VOLT_12V |
| Supported OS | |
| OS | <p>Microsoft® Windows:</p> <ul style="list-style-type: none"> - Windows® 10 (64 bit) - Windows® 11 (64 bit) <p>Linux:</p> <ul style="list-style-type: none"> - Ubuntu 22.04.1 (64 bit) <p>* On the Windows® system, Raid mode supports UEFI Boot only. * The Linux system doesn't support Raid Mode. * Please refer to our website for the latest OS support list.</p> |
| 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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