



B650D4U-2L2T/BCM

- 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)
- 2 RJ45 (10GbE) by Broadcom BCM57416
- 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]
SATA/SAS Storage	
PCH Built-in Storage	AMD B650E (4 SATA 6Gb/s): 4 SATA 7-pin
Ethernet	
Additional GbE Controller	Broadcom BCM57416: 2 RJ45 (10GbE) 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 (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, 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)
Front Lan LED Connector	1
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, 10G LAN, 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_V10_PHY_DIG, VOLT_VDD_1P8, VOLT_MD_VDDO, 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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