



Z490D4U-2L2T

- Support Intel® 10th Gen. Core™ i9/i7/i5/i3, Pentium, Celeron® Series Processors
- Support two channels DDR4 2933*/2666/2400 non-ECC DIMM
- Support 6 SATA3 by Intel® Z490(1x SATA3 support SATA DOM)
- Support 1x PCIe 3.0 x16、 1x PCIe 3.0 x8、 1xPCIe 3.0x1
- Support 2 x GLAN by Intel® i210, 2 x 10G base-T by Intel® X710-AT2

HDMI™ (High-Definition Multimedia Interface)



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.

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Specifications

| | |
|--|--|
| Physical Status | |
| Form Factor | Micro-ATX |
| Dimensions | 9.6" x 9.6" (244 mm x 244 mm) |
| Processor System | |
| CPU | Support Intel® 10th Gen. Core™ i9/i7/i5/i3, Pentium, Celeron® Series Processors |
| Chipset | Intel® Z490 |
| System Memory | |
| Supported DIMM Quantity | 4 x 288-pin DDR4 DIMM slots Support up to 128GB DDR4 non-ECC UDIMM |
| Supported Type | Dual Channel DDR4 memory technology Supports DDR4 non-ECC UDIMM |
| Max. Capacity per DIMM | non-ECC UDIMM : 32GB, 16GB, 8GB, 4GB |
| Max. DIMM Frequency | Non-ECC UDIMM: 2933*/2666/2400 MHz *Core™ (i9/i7) support DDR4 up to 2933; Core™ (i5/i3), Pentium® and Celeron® support DDR4 up to 2666. |
| Voltage | 1.2V |
| PCIe Expansion Slots (SLOT7 close to CPU) | |
| PCIe x 16 | SLOT6: PCIe3.0 x16, auto switch to x8 when SLOT4 is occupied (Physical x16, EE x16/x8 (from CPU), shared with SLOT4) |
| PCIe x 8 | SLOT4: PCIe3.0 x8 (Physical x8, EE x0/x8 (from CPU), shared with SLOT6) |
| PCIe x 1 | SLOT7: PCIe3.0 x1 (Physical x1, EE x1 (from PCH)) |
| Other PCIe Expansion Connectors | |
| M.2 slot | 2 (M2_1: 2260/2280/22110, Supports PCIe3.0(x4); M2_2:2260/2280, Supports PCIe3.0(x4))* *The M.2 slot (M2_2) is shared with the PCIe5 slot (BTO). When M2_2 is populated with a M.2 PCIe module, PCIe5 will be disabled. |
| SATA/SAS Storage | |
| PCH Built-in Storage | 6 x SATA3 6Gb/s (SATA0-5, SATA_0 supports SATA DOM) |
| Ethernet | |
| Interface | 10000/1000 /100 Mbps |
| Additional GbE Controller | 2 x RJ45 GLAN by Intel® i210 |

2 x RJ45 10G base-T by Intel® X710-AT2
 1 x RJ45 Dedicated IPMI LAN port by RTL8211E
 Supports **Wake-On-LAN**
 Supports Energy Efficient Ethernet 802.3az
 Supports Dual LAN with Teaming function
 Supports PXE
 LAN1 supports NCSI

Server Management

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|---------------------|--|
| BMC Controller | ASPEED AST2500 |
| IPMI Dedicated GLAN | 1 x Realtek RTL8211E for dedicated management GLAN |
| Features | Watch Dog NMI |

Graphics

| | |
|------------|----------------|
| Controller | ASPEED AST2500 |
| VRAM | DDR4 256MB |

Rear I/O

| | |
|-------------------|---|
| UID Button/LED | 1 |
| VGA Port | 1 x D-Sub, 1 HDMI |
| Serial Port | 1 |
| USB 3.2 Gen1 Port | 2 Type-A (USB3.2 Gen1) |
| USB 3.2 Gen2 Port | 2 Type-A (USB3.2 Gen2) |
| RJ45 | 4 +1 RJ45 Gigabit Ethernet LAN ports LAN Ports with LED (ACT/LINK LED and SPEED LED) |

Internal Connector/Headers

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|-------------------------|--|
| Power Connector | 1x (24-pin) + 1x (8-pin)+ 1x (4-pin) |
| Auxiliary Panel Header | 1 (includes chassis intrusion, location button & LED, and front LAN LED) |
| System Panel | 1 (RST, PWRBTN, HDDLED, PWRLED) |
| VGA header | 1 |
| Buzzer | 1 |
| Fan Header | 7 (1CPU/4Front/2Rear) |
| 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 (short pin) |
| ME/SPS Recovery | 1 |
| Front Lan LED Connector | 1 |
| USB 3.2 (Gen1) Header | 1 (19-pin, 2 USB3.2 Gen1) |
| USB 2.0 Header | 1 (9-pin, 2 USB 2.0) |
| NMI Header | 1 |

LED Indicators

| | |
|-------------------|------------|
| 80 Debug Port LED | 1 |
| Fan Fail LED | 7 (header) |

System BIOS

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|---------------|--|
| BIOS Type | 256 Mb AMI UEFI Legal BIOS |
| BIOS Features | Plug and Play (PnP) ACPI 2.0 Compliance Wake Up Events SMBIOS 2.8.0 Support ASRock Rack Instant Flash |

Hardware Monitor

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|-------------|---|
| Temperature | CPU Temperature Sensing MB/Card side/TR1 Temperature Sensing |
| Fan | CPU/Rear/Front Fan Tachometer |

| | |
|---------------------|--|
| | CPU Quiet Fan (Allow Chassis Fan Speed Auto-Adjust by CPU Temperature) CPU/Rear/Front Fan Multi-Speed Control |
| Voltage | Voltage Monitoring: +12V, +5V, +3.3V, CPU Vcore, DRAM, V1.0M,+BAT, 3VSB, 5VSB |
| Supported OS | |
| OS | <p>Microsoft® Windows: Windows® 10 (64 bit)</p> <p>Linux: RedHat Enterprise Linux Server 7.7 (64 bit) / 8.1 (64 bit) CentOs 7.7 (64 bit) / 8.1 (64 bit) SUSE Enterprise Linux Server 12 SP5 (64 bit) / 15 SP1 (64 bit) Ubuntu 19.04 (64 bit) / 20.04 (64 bit)</p> <p>Hypervisor: VMWare® ESXi 7.0.0/ vSphere 7.0.0</p> <p>* Z490D4U-2L2T support Legacy and UEFI BOOT. * The Intel® RAID mode is not supported on the Linux system.</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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