



ROME2D16-2T

- EEB (12" x 13")
- Dual Socket SP3 (LGA 4094), supports AMD EPYC™ 7003 (with AMD 3D V-Cache™ Technology*)/7002 series processors
- 8+8 DIMM slots (1DPC), supports DDR4 RDIMM, LRDIMM, RDIMM/LRDIMM-3DS, NVDIMM-N
- 5 PCIe4.0 x16, 1 PCIe4.0 x8
- 2 SlimSAS (PCIe4.0 x8 or 8 SATA 6Gb/s)
- 2 OCulink (PCIe4.0 x4 or 4 SATA 6Gb/s)
- Supports 1 M.2 (PCIe4.0 x4 or SATA 6Gb/s), 1 M.2 (PCIe4.0 x4)
- Up to 21 SATA 6Gb/s
- 2 RJ45 (10GbE) by Intel® X550-AT2
- Remote management (IPMI)



Specifications

Physical Status	
Form Factor	EEB
Dimensions	12" x 13" (305mm x 330mm)
Processor System	
CPU	Supports AMD EPYC™ 7003 (with AMD 3D V-Cache™ Technology*)/7002 Series Processors *A BIOS update is required to support AMD EPYC™ 7003 series processors with AMD 3D V-Cache™ Technology
Socket	Dual Socket SP3 (LGA4094)
Thermal Design Power	280 W
Chipset	System on Chip
System Memory	
Supported DIMM Quantity	8+8 DIMM slots (1DPC)
Supported Type	Supports DDR4 288-pin RDIMM, LRDIMM, RDIMM/LRDIMM-3DS, NVDIMM-N
Max. Capacity per DIMM	RDIMM: up to 64GB LRDIMM: up to 128GB RDIMM/LRDIMM-3DS: up to 256GB NVDIMM-N: up to 32GB
Max. DIMM Frequency	RDIMM/ LRDIMM/NVDIMM-N: max. 3200MHz
Voltage	1.2V
PCIe Expansion Slots (SLOT7 close to CPU)	
PCIe x 16	SLOT6: PCIe x16 (PCIe 4.0 x16) [CPU1] SLOT5: PCIe x16 (PCIe 4.0 x16) [CPU0] SLOT4: PCIe x16 (PCIe 4.0 x16) [CPU1] SLOT3: PCIe x16 (PCIe 4.0 x16) [CPU0] SLOT1: PCIe x16 (PCIe 4.0 x16) [CPU0]
PCIe x 8	SLOT2: PCIe x8 (PCIe 4.0 x8) [CPU1]
M.2	1 M-key (PCIe4.0 x4 or SATA 6Gb/s), supports 22110/2280/2242 form factor [CPU0] 1 M-key (PCIe4.0 x4), supports 22110/2280/2242 form factor [CPU0]
Other PCIe Expansion Connectors	
SlimSAS	2 SlimSAS (PCIe4.0 x8 or 8 SATA 6Gb/s) [CPU0, CPU1]* *SlimSAS from CPU0 support PCIe only while installing 2 processors

OCuLink	2 Oculink (PCIe4.0 x4 or 4 SATA 6Gb/s) [CPU0,CPU1]
SATA/SAS Storage	
PCH Built-in Storage	AMD EPYC 7003/7002 (Up to 21 SATA 6Gb/s): CPU0: 1 SlimSAS, 1 OCuLink, 1 M.2 CPU1: 1 SlimSAS, 1 OCuLink, 4 SATA 7-pin
Ethernet	
Additional GbE Controller	1 Intel® X550-AT2: 2 RJ45 (10GbE)
Server Management	
BMC Controller	ASPEED AST2500: IPMI2.0 with iKVM and vMedia support
IPMI Dedicated GLAN	1 x Realtek RTL8211E for dedicated management GLAN
Graphics	
Controller	ASPEED AST2500: 1 DB15
Rear I/O	
UID Button/LED	1 UID button w/ LED
VGA Port	1 DB15 (VGA)
USB 3.2 Gen1 Port	2 Type-A (USB3.2 Gen1)
RJ45	2 RJ45 (10GbE) 1 dedicated IPMI
Internal Connector/Headers	
Power Connector	1 (24-pin, ATX main power), 3 (8-pin, ATX 12V)Install ATX12V1 and ATX12V2 for regular use; Use the ATX12V3 power connector when installing one or more +12V PCIE devices that totally requires more than 12A of current.
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
COM Header	1
VGA header	1
Fan Header	8 (6-pin)
TPM Header	1 (17-pin, LPC), 1 (13-pin, SPI)
SGPIO Header	4
HSBP	1
SMBus header	2
PMBus header	1
IPMB Header	1
Clear CMOS	1 (contact pads)
USB 3.2 (Gen1) Header	1 (19-pin, 2 USB3.2 Gen1)
NMI Header	1
LED Indicators	
Standby PWR LED 5vsb	1
80 Debug Port LED	1
Fan Fail LED	8
System BIOS	
BIOS Type	32MB AMI UEFI Legal BIOS
BIOS Features	Plug and Play (PnP), ACPI 6.3 Compliance Wake Up Events, SMBIOS 3.3.0, ASRock Rack Instant Flash
Hardware Monitor	
Temperature	CPU, MB, Card side, X550 Temperature Sensing
Fan	Fan Tachometer CPU Quiet Fan (Allow Chassis Fan Speed Auto-Adjust by CPU Temperature) Fan Multi-Speed Control
Voltage	Vsoc,Vcpu, VCCM, VPPM, +1.8V, +3V,+5V, +12V, BAT, +1.8VSB, +3VSB, +5VSB
Supported OS	
OS	Microsoft® Windows: Server 2016 (64bit) Server 2019 (64bit) Linux: RedHat Enterprise Linux Server 8.2 (64bit) / 7.9 (64bit)

CentOs 8.2 (64 bit) / 7.9 (64 bit)
SUSE SLES 15.2(64 bit) / 12.5(64bit)
UBuntu 20.04.1 (64 bit) /18.04.5 (64 bit) / 16.04.7 (64 bit)

Hypervisor:
VMWare® ESXi 6.7 u3 / 7.0 u1
vSphere 6.7 u3 / 7.0 u1
CITRIX Hypervisor 8.1.0

Environment	
Temperature	Operation temperature: 10°C ~ 35°C Non operation temperature: -40°C ~ 70°C

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