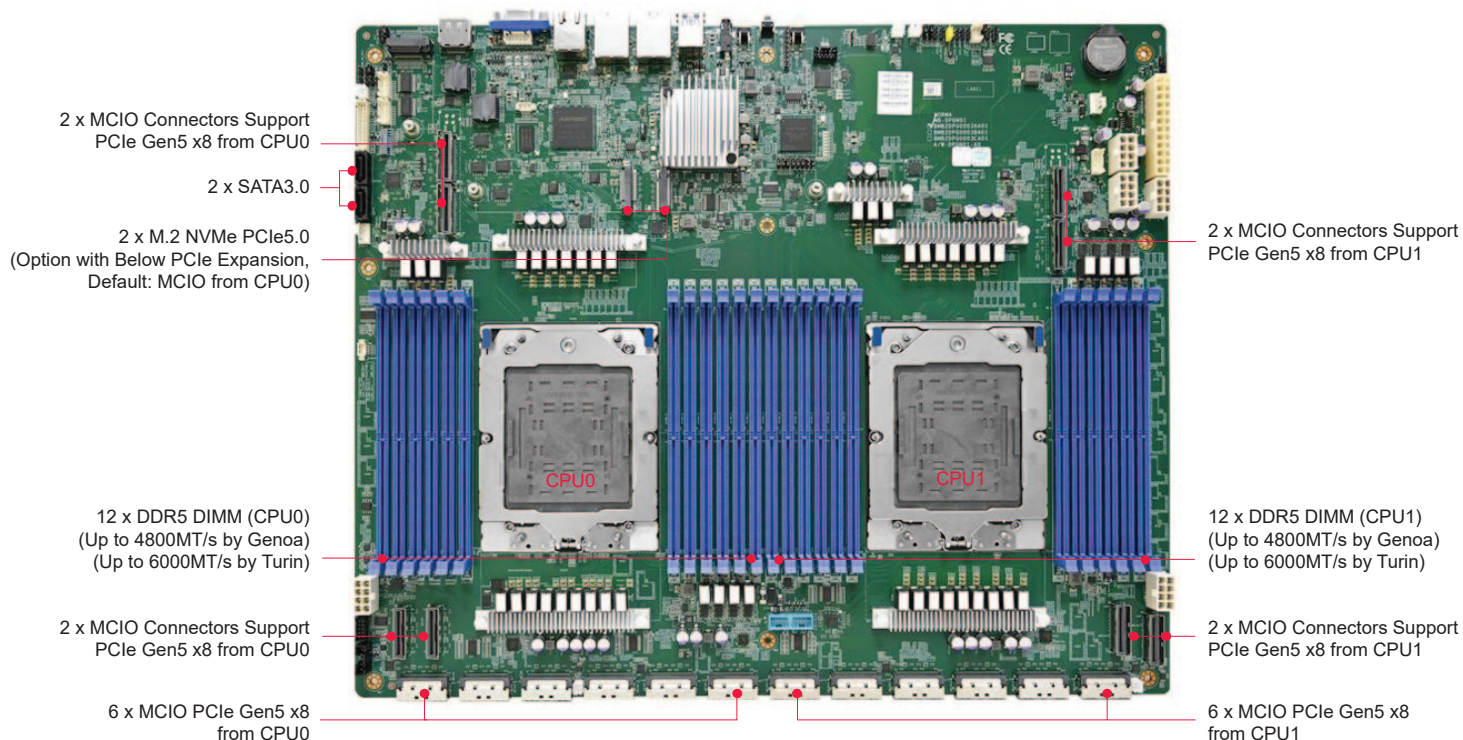
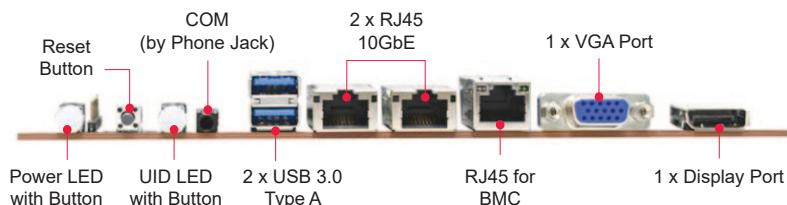




I/O View



Dimensions

mm : 425 x 350.35 / inches : 16.7 x 13.8

Norma supports dual AMD EPYC™ 9005/9004 Series processors with up to 128 CPU cores and TDP up to 400W. It supports up to 6TB DDR5 3DS RDIMMs with 24 memory slots and memory speeds up to 6000MHz(Turin)/4800MHz(Genoa).

The high-speed expansion I/O includes 20 x MCIO PCIe Gen5 x8 lanes (total 160 PCIe Gen5 lanes), and 2 x M.2 NVMe PCIe Gen5 (option with forward PCIe expansion, default: MCIO from CPU0). Security features include TPM2.0 onboard, TCM and PFR by optional.

Features

- Supports AMD EPYC™ 9005/9004 Series processors Genoa/ Bergamo/Turin based on the AMD "Zen4/Zen5" microarchitecture for highest server performance
- Supports 24 x DDR5 DIMM slots for maximum memory performance
- Supports 20 x MCIO PCIe Gen5 x8 lanes, total 160 PCIe Gen5 lanes
- Supports 2 x RJ45 10GbE
- Embedded components for 5+ year long life

Specifications

System	Processor Support	Dual AMD EPYC™ 9005/9004 Series Processors	
	CPU TDP	400W	
	Socket Type	Socket SP5 (LGA 6096)	
	System Memory	DDR5 with ECC • 6000MHz (1DPC RDIMM by Turin) • 4800MHz (1DPC RDIMM by Genoa) Total 24 memory slots; 12 slots per CPU (1DPC) Supports up to 6TB (3DS RDIMM)	
Expansion Slots	Expansion Slots	Total support 160 lanes of PCIe5.0 • PCIe expansion - 20 x MCIO PCIe Gen5 x8 lanes • M.2 (option with above PCIe expansion, default: MCIO) - 2 x M.2 NVMe PCIe Gen5 • 1 x USB 3.0 double-stack Type-A connector • 1 x USB pin header supports two USB 3.0 Gen1 • 1 x USB pin header supports two USB 2.0	
System BIOS	BIOS Type	AMI UEFI BIOS (64M ROM size)	
	BIOS Features	• ACPI • PXE • WOL • AC loss recovery • IPMI 2.0 KCS mode interface • SRIOV • SMBIOS • TPM • Serial console redirection • PCIe hot plug	
On-board Devices	SATA	• 1 x ASMedia ASM1062R SATA (6Gbs) RAID controller (Support RAID 0, RAID 1, SPAN) supports 2 SATA ports • 2 x ASMedia ASM1164 SATA (6Gbs) controller supports 8 SATA ports	
	BMC	ASPEED AST2600	

On-board Devices	Network Controller	Intel® I210 GbE ethernet controller	
	Graphics	• Integrated VGA support by ASPEED AST2600 • Resolution up to 1920 x 1200 @60Hz 32bpp	
	Additional Information	• TPM 2.0 - NUVOTON NPCT760AABYX • TCM 2.0 interface for extension • PFR interface for extension (Default: N/A; optional by SKU)	
Input/Output	SATA	• 2 x SATA3.0 7-pin by ASM1062R (supports RAID 0/1) • 1 x Slimline connector (up to 8 SATA ports) by ASM1164	
	LAN	• 2 x RJ45 10GbE connectors • 1 x RJ45 1GbE connector (for BMC management port)	
	USB	• 1 x USB 3.0 double-stack Type-A connector • 1 x USB pin header supports two USB 3.0 Gen1 • 1 x USB pin header supports two USB 2.0	
	VGA	1 x VGA connector	
	Serial Port	1 x COM connector (phone jack)	
	Others	Total support 160 lanes of PCIe5.0 • PCIe expansion - 20 x MCIO PCIe Gen5 x8 lanes • M.2 (option with above PCIe expansion, default: MCIO) - 2 x M.2 NVMe PCIe Gen5	
Additional Information	Additional Information	• Security - 1 x M.2 connector available for PFR extension - TPM 2.0 onboard - TCM 2.0 with 2x8 connector (optional)	