

Z11PA-U12 Series

Scalable server motherboard with 12 DIMM slots



Z11PA-U12



Z11PA-U12/10G-2S



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Z11PA-U12 series offers breakthrough performance with the latest Intel Optane™ DC persistent memory with an over 88% gain in input/output operations per second (IOPS) compared with the same configuration in SSD. Featuring the latest Intel Deep Learning Boost technology to enhance deep learning capabilities, Z11PA-U12 series achieves a 3.1X performance improvement in the ResNet-50 and SSD VGG-16 models, fully demonstrating the inference capability of the new platform.

FEATURE

- Powerful performance with the latest 2nd Gen Intel Xeon Scalable processors and ECC memory
- Unmatched memory expandability with 12 DIMM slots
- Dual OCuLink for efficient connections to NVMe devices
- Connect up to 13 SATA 6Gb/s storage devices

Powered by the latest 2nd Gen Intel Xeon Scalable processors

Z11PA-U12 series is built on the latest 2nd Gen Intel Xeon Scalable processors to deliver higher per-core performance and six memory channels that provide 50% more memory bandwidth and capacity for 1.33X faster average system-level performance compared to previous-generation processors.

Increased performance or data redundancy with M.2 SSDs

With two native PCI Express 3.0 bandwidth, M.2 supports up to 16Gb/s data-transfer speeds and up to 2280 NGFF. It is the perfect choice for an operating system drive, making your whole PC work that much faster.

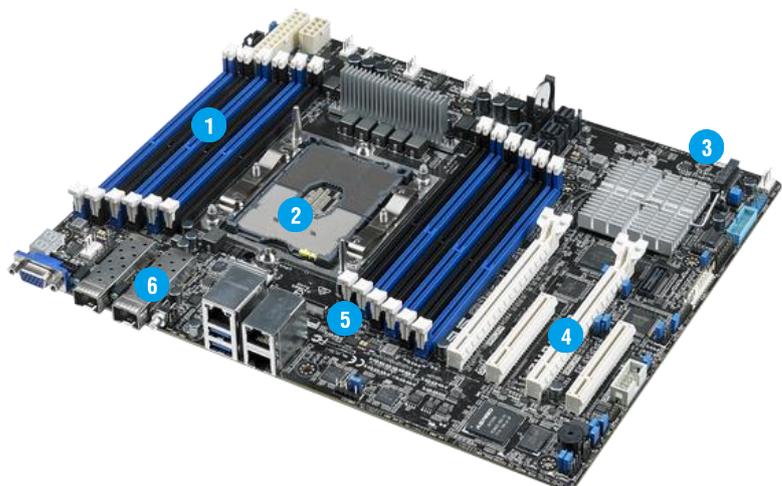
High-speed storage interface support with dual OCuLink for NVMe

Dual OCuLink for efficient connections to NVMe devices

Z11PA-U12 series features dual onboard OCuLink to provide efficient port-to-port connection with most OCuLink-supported NVMe devices, eliminating the need for PCIe transaction cards.

Connect up to 13 SATA 6Gb/s storage devices

Z11PA-U12 series comes with three mini-SAS HD connectors that support up to 13 SATA ports each for high-speed 6Gb/s connectivity with external devices and cleaner cable routing.



1. 12 x DIMM, DDR4-2933/2666/2400/2133, RDIMM, LRDIMM, LRDIMM 3DS, DCPMM
2. Intel® Xeon® Scalable Processor Family
3. M.2 (NGFF), 2280/2260/2242
4. 2 x PCI-E x16 (Gen3 x16 link) / 2 x PCI-E x8 (Gen3 x8 link, Gen3 x4 link)
5. 2 x Oculink support for NVMe
6. Dual 10Gb SFP+

Z11PA-U12 Series

SPECIFICATION

Processor Support.		1 x Socket P (LGA 3647) 1st and 2nd Gen Xeon® Scalable Processor Family (Up to 165W) UPI 10.4 GT/s
Core Logic		U12: Intel® Lewisburg PCH C621 10G-2S: Intel® Lewisburg PCH C622
Memory	Total Slots	12(6 – channel per CPU, 12 DIMM per CPU)
	Capacity	Maximum up to 1536GB
	Memory Type	2933/2666/2400 *Refer to Asus server AVL for the latest update
	Memory Size	32GB, 16GB, 8GB, 4GB (RDIMM) / 64GB, 32GB (LRDIMM) / 128GB, 64GB (LR-DIMM 3DS) *Refer to Asus server AVL for latest update * Actual memory frequency differs from Intel CPU types and memory module. *Please check Intel official site for more detail about the memory types supported by each CPU.
Expansion Slots	Total PCI/PCI-X/PCI-E/PIKE Slots	Total Slot : 4
	Slot Type	Slot Location 1 : PCI-E x8 (Gen3 X4 Link) Slot Location 2 : PCI-E x16 (Gen3 X16 Link) Slot Location 3 : PCI-E x8 (Gen3 X8 Link) Slot Location 4 : PCI-E x16 (Gen3 X16 Link), Auto switch to x8 link if slot 3 is occupied
Disk Controller	SATA Controller	13 x SATA3 6Gb/s ports (12 by 3 mini-SAS Connector) Intel® Rapid Storage Technology Enterprise(RSTe) (For Linux/Windows) (Support Software RAID 0, 1, 5, 10) Intel® VROC (for Windows only; Support software RAID 0, 1, 10 & 5) 2 x OcuLink for U.2
	SAS Controller	ASUS PIKE II 3008-8i 8-port SAS 12G RAID card (Optional) ASUS PIKE II 3108-8i 8-port SAS 12G HW RAID card (Optional)
Networking	LAN	2 x Intel® I210AT + 1 x Mgmt LAN 10G-2S: 1 x Dual 10GbE SFP+with Intel® X722
Graphic	VGA	Aspeed AST2500 with 64MB VRAM
On Board I/O		1 x TPM header 1 x PSU Power Connector (24-pin ATX power connector + 8-pin ATX 12V power connector) 1 x USB 3.0 pin header , Up to 2 Devices 1 x USB 2.0 pin header , Up to 2 Devices 6 x Fan Header , 4pin (3pin/4pin fan dual support) 1 x Serial Port Header 1 x SMBus 1 x Chassis Intruder 2 x Front LAN LED 1 x M.2 Connector , NGFF Type : 2280/2260/2242 1 x VROC Key Header 1 x Q-Code/Port 80 LED
Back I/O Ports		2 x USB 3.0 ports 1 x VGA port 2 x RJ-45 GbE LAN ports 1 x RJ-45 Mgmt LAN port 10G-2S: 2 x 10GbE SFP+ LAN ports Rear Switch/LED: 1 x Power switch 1 x Message LED 1 x HDD LED 1 x Location LED 1 x BMC LED 1 x P5V LED
ASUS Features		ASUS Control Center (ASWM Enterprise 2.0) ASMB9-iKVM for KVM-over-Internet ASUS Fan Speed control technology
Form Factor		ATX (12"x9.6", 305mm x 244mm)
Environment		Operation temperature: 10°C ~ 35°C Non operation temperature: -40°C ~ 70°C Non operation humidity: 20% ~ 90% (Non condensing)