P12R-E;P12R-E/10G-2T

Exclusive ATX Combat Model
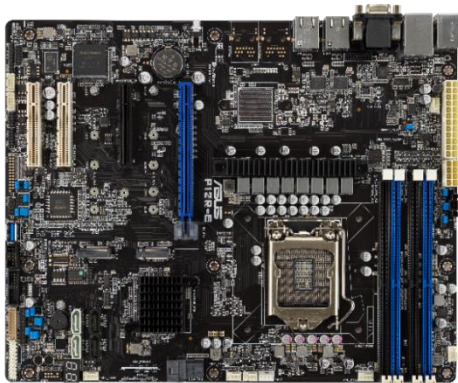
P1R-E
12" x 9.6" (ATX)

P1R-E/10G-2T
12" x 9.6" (ATX)

ASMB10 iKVM / AST2600

DDR4 3200

Dual Ethernet

intel XEON inside

Form Factor / **ATX**

CPU Number / **1**
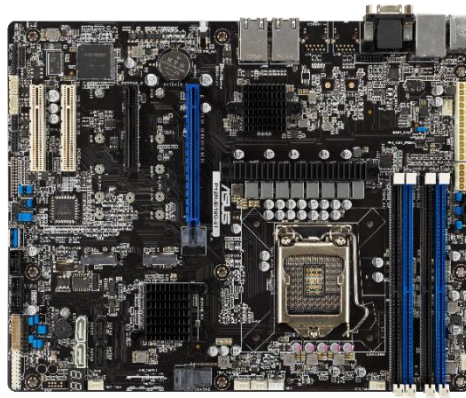
Memory Number / **4**

ASUS P12R-E series is an Intel® Tatlow platform ATX server board based on Intel® C256 chipset. With the CPU and memory configured in a front parallel design that enables efficient airflow for excellent thermal performance, P12R-E series is optimized for rack placement.

Target market

- Data Center Frond End Server
- Firewall, Gateway server
- SMB general purpose

Dual Intel® LAN

- Teaming quadruples the network bandwidth
- Failover ensures uninterrupted network connections
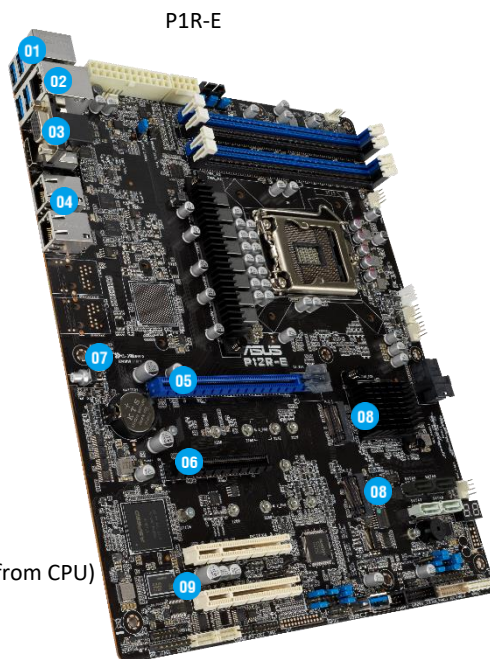- Gigabit Ethernet or 10GbE by SKU

Comprehensive IT infrastructure management solution

- Optional ASMB10-iKVM module available for 24/7 remote monitoring
- ASUS Control Center (ACC Classic)

Feture

- Intel Tatlow platform ATX server board
- Single LGA1200 socket
- PCI-E x16 Gen4 supported for graphic card
- Dual M.2 support
  up to 22110 ,Gen4 x4 Link and Gen3 x2 Link
- 2 x PCIe Gen4 slots
- Rack-optimized Design

1. 2 x USB 3.1 Gen1
2. 2 x USB 3.2 Gen2, 1 x Management LAN
3. 1 x VGA port and HDMI (VGA from BMC, HDMI from CPU)
4. Dual Intel® server LAN (GbE or 10GbE by SKU)
5. 1 x PCI-E x 16 (Gen4 x16 link)
6. 1 x PCI-E x 8 (Gen4 x8 link)
7. Rear power bottom
8. 2 x M.2 (NGFF), 22110/2280/2260/2242
9. Optional ASMB10-iKVM

Versatile expandability with PCIe support

P12R-E series provide versatile expandability with dual Intel® 1210AT server LAN or Intel NIC X710AT, 8 SATA 3.0, dual M.2 sockets, 2 PCIe Gen4 slots, 2 PCIe Gen3 slots which suitable for data center frond-end server, firewall, gateway server, storage server, SMB print/file/mail/exchange server etc.

Dual M.2 unleash independent and redundant I/O for OS drive

Capacity up to 2TB M.2 is supported for P12R-E series, either SATA and PCIe source can be auto by switch. The design with dual M.2 is capable of RAID 0, 1 and bring up better back-up solution for internal OS drive. Dual M.2 (up to 22110 , Gen4 x4 Link and Gen3 x2 Link, gray SATA port will disable when M.2 is SATA signal)

P1R-E

P1R-E/10G-2T

P12R-E Rear View

P1R-E/10G-2T Rear View

P12R-E;P12R-E/10G-2T

SPECIFICATION

Processor Support		1 x Socket H5 (LGA 1200)
		Intel® Xeon® E processor product family (95W) Intel® Pentium™ processors
Core Logic		Intel® C256 PCH
Memory	**Total Slots**	4 (2-channel per CPU)
	Capacity	Maximum up to 128GB
	Memory Type	DDR4 3200/2933/2666 ECC UDIMM
	Memory Size	32GB, 16GB, 8GB (UDIMM) *Refer to ASUS server AVL for the latest update
Expansion Slots	**Total PCI/PCI-X/PCI-E/PIKE Slots**	4
	Slot Type	1 x PCI-E x16 (Gen4 x16 link) (Auto switch to x8 Link if x8 link is occupied) 1 x PCI-E x8 (Gen4 x8 link) 2 x PCI-E x8 (Gen3 x4 link)
Disk Controller	**SATA Controller**	Intel® C256 8 x SATA 6Gb/s ports (4 by miniSAS HD) 2 x M.2 NGFF 22110/2280/2260/2242 (Gen4 x4 Link and Gen3 x2 Link) (gray SATA port will disable when M.2 is SATA signal)
	SAS Controller	Optional kits: ASUS PIKE II 3008 8-port SAS HBA card ASUS PIKE II 3108 8-port SAS HW RAID card
Networking	**LAN**	2 x Intel® I210 Gigabit LAN Controller, 1 x Management Port* 1 x Intel® LOM X710AT2 10 GBE LAN Controller,1 x Management Port** *P12R-E **P12R-E/10G-2T
Graphic	**VGA**	Aspeed AST2600 64MB VGA output from BMC (need to use VGA must option ASMB10)
Onboard I/O connectors	**TPM header**	1
	PSU connector	24-pin ATX power connector + 8-pin ATX 12V power connector
	Management Header	Onboard header for optional management card
	USB Connector/Header	2 x USB3.2 Gen2 (rear) 2 x USB3.2 Gen1 (rear), 1 x USB3.2 Gen1 (header, 2 ports) 1 x USB2.0 (header, 2 ports) 1 x Internal USB3.2 Gen1 (type-A Vertical)
	Fan Header	6 x 4pin
	SMBus	1
	Chassis Intruder	1
	Serial Port Header	1
	M.2 Connector	2
	VGA Header	1
Rear I/O Ports		2 x USB 3.2 Gen 2, 2 x USB 3.2 Gen 1, 1 x VGA port, 1 x HDMI port, 2 x LAN ports
Switch/LED		Rear Switch/LED: 1 x Q-Code/Port 80 LED, 1 x Power switch
OS Support		Please find the latest OS support from https://www.asus.com/event/Server/OS_support_list/OS.html
Management Solution	**Software**	ASUS Control Center (Classic)
	Out of Band Remote Management	Optional ASMB10-iKVM for KVM-over-IP
Dimension		12" x 9.6" (ATX)
Environment		Operation temperature: 10℃ ~ 50℃* Non operation temperature: -40℃ ~ 70℃ Non operation humidity: 20% ~ 90% (Non condensing) *The boundary condition above is based on 8.3W of PCH TDP spec . If the LFM estimate is higher than acceptable value from customer, ASUS can provide boundary condition with raw power for reference.