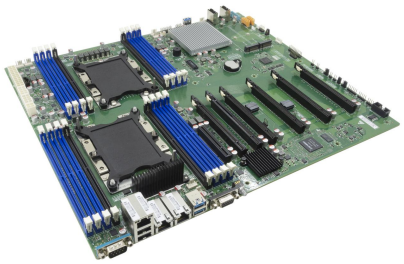
# P10DRG-X2I

## Intel C621 Dual-Socket 4GPU Server Motherboard

The P10DRG-X2I is a high-performance dual-socket 4GPU server motherboard for 1st/2nd Gen Intel Xeon Scalable processors, built on the Intel C621 chipset. Its design and materials reflect JWIPC's commitment to technology, innovation and environmental protection, and its customer-oriented service philosophy. The board improves expandability and performance. ODM customization is available for individual customer requirements, making it a suitable choice for tailored IT platforms for industry users.



- Intel C621 chipset supports two 1st/2nd Gen Intel Xeon Scalable processors (Purley: Skylake/Cascade Lake).
- Sixteen DDR4 ECC RDIMM/LRDIMM/3DS LRDIMM slots support up to 2933MHz and 4TB; up to 2TB Intel Optane PMem 100 Series is supported with 2nd Gen Cascade Lake processors.
- Six PCIe 3.0 x16 and one PCIe 3.0 x8 expansion slots; supports four standard dual-slot GPU cards.
- Two M.2 PCIe 3.0 x4 sockets support 2242/2280; M.2_2 also supports SATA3 and Intel VROC NVMe RAID key.
- Ten SATA3 6Gb/s ports support RAID 0/1/5/10; two DOM power connectors are provided.
- Two Intel X550 10GbE RJ45 ports and one dedicated 1GbE RJ45 IPMI management port.
- Intel Optane PMem addresses data-intensive data-center workloads such as cloud, databases, high-performance computing, in-memory analytics, content delivery networks, high-frequency trading and fast storage.

## 01 Specifications

| | | |
|---|---|---|
| System Controller | CPU | 2 × Socket P (LGA 3647); Intel Xeon Scalable 1st/2nd Gen (Purley: Skylake/Cascade Lake); TDP 205W; UPI 10.4 GT/s |
| | Chipset | Intel C621 |
| Memory | Slots / Type | 16 DIMM slots (6-channel per CPU; 8 DIMMs per CPU); ECC DDR4 RDIMM, LRDIMM and 3DS LRDIMM; 2933/2666/2400/2133MHz |
| | Capacity | Up to 4TB 3DS RDIMM; up to 4TB 3DS LRDIMM; up to 2TB Intel Optane PMem 100 Series (Apache Pass), supported only with 2nd Gen Cascade Lake Scalable processors |
| | Module Sizes | RDIMM: 16GB, 32GB, 64GB, 128GB; LRDIMM: 64GB, 128GB, 256GB |
| Network | 10GbE LAN | 2 × 10GbE RJ45; 10/100/1000/10000Mbps; Intel X550 enterprise 10GbE controller |
| | IPMI Management | 1 × standard RJ45; 10/100/1000Mbps; IPMI 2.0 |
| Storage | SATA | 10 × SATA3 6Gb/s; RAID 0/1/5/10 (2 × Mini-SAS iSATA + 2 × 7-pin SATA sSATA) |
| | DOM | 2 × reserved power connectors for DOM drives |
| | M.2 | 2 × M.2 PCIe 3.0 x4; supports 2242/2280; M.2_2 supports SATA (sSATA2) |
| Expansion | PCIe Slots | 5 × standard PCIe 3.0 x16; 1 × PCIe 3.0 x8 (x16 slot); 1 × PCIe 3.0 x4 (x8 slot) |
| I/O Ports | Onboard I/O | 1 × VROC; 1 × TPM header; standard ATX 24+8+8+4-pin power; 1 × standard PMBus |
| | Internal USB | 2 × USB 3.0 headers; 2 × USB 2.0 headers; 1 × USB 3.0 Type-A |
| | Other Onboard I/O | 8 × 4-pin fan connectors; 1 × serial header; 1 × chassis intrusion header |
| | Rear I/O | 2 × USB 3.0; 2 × USB 2.0; 1 × VGA; 1 × COM |
| | Rear I/O | 1 × UID switch with LED; 2 × RJ-45 LAN; 1 × RJ-45 IPMI management port |
| Display | BMC | ASPEED AST2500 BMC |
| | Display Output | 1 × VGA |
| Product Dimensions | Board Size | 15.12 × 13.2 in (38.4 × 33.53 cm) |
| Temperature / Humidity | Operating Temperature | 10°C to 35°C |
| | Storage Temperature | −40°C to 70°C |
| | Operating Humidity | 8% to 90%, non-condensing |
| | Storage Humidity | 5% to 95%, non-condensing |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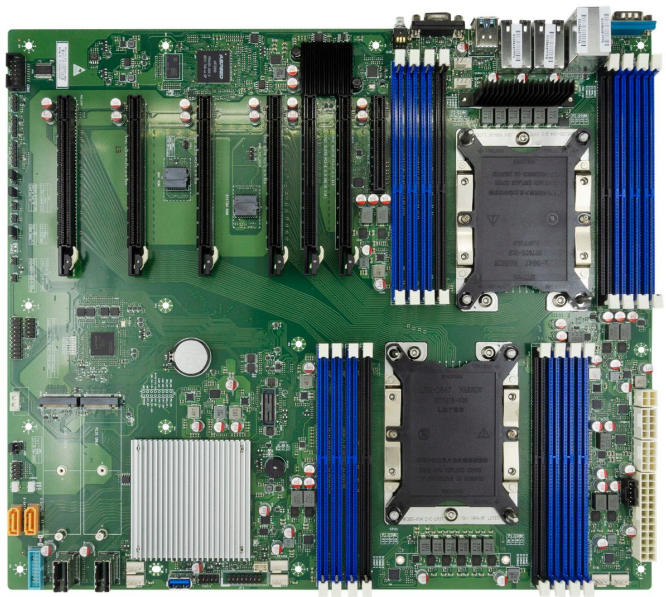
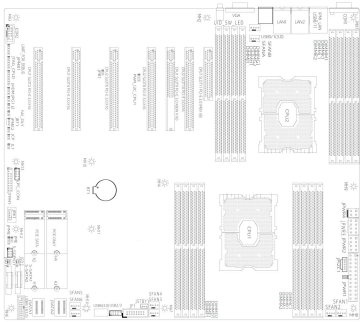
|---|---|---|
| Platform | Chipset | Intel C621 |
| Processor | CPU | 2 × Intel Xeon Scalable 1st/2nd Gen |
| Memory | Type / Capacity | 16 × DDR4 DIMM; up to 4TB 3DS RDIMM/LRDIMM |
| GPU | Expansion | 4 standard dual-slot GPU cards |

## 02 Product View






## 03 Board Layout



## Product Selection

| Model | Configuration |
|---|---|
| P10DRG-X2I | Neutral; 4GPU dual-socket Intel Xeon Scalable 1st/2nd Gen; C621; 16 × DIMM; 2 × 10GbE RJ45; IPMI |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