P4DKA

Zhaoxin 40000 32-Core Dual-Socket Server Motherboard

The P4DKA is a server motherboard for Zhaoxin 40000 32-core processors, combining high performance, reliability and thermal performance. The platform improves device expandability and performance. ODM customization is available for individual customer requirements, making it a tailored IT platform for industry users.



- Based on Zhaoxin 40000 32-core processors, the P4DKA delivers significantly improved performance.
- 16 DDR4 RDIMM slots (8 channels per CPU); supports ECC DDR4 RDIMM at up to 3200MHz and up to 2TB, with higher density and capacity for virtualization and business processing.
- Four PCIe 3.0 x16 and two PCIe 3.0 x8 expansion slots.
- Two MCIO x8 interfaces and two M.2 PCIe 3.0 x4 sockets (2242/2280).
- Four SATA3 and three Mini-SAS HD interfaces support up to 14 drive bays.
- Four Gigabit Ethernet ports plus a dedicated Gigabit RJ45 IPMI port support network communications and remote management.
- Management features include IPMI 2.0, SOL, KVM over IP, virtual media and device health monitoring.

01 Specifications

System Controller	CPU	2 × Socket P+ (LGA4189); supports Zhaoxin 40000 32-core processors
Memory	Type / Slots	16 DIMM slots (8 channels per CPU); ECC DDR4 RDIMM; 3200/2933/2666MHz
	Capacity	Up to 4TB 3DS RDIMM
	Module Sizes	RDIMM: 16GB, 32GB, 64GB, 128GB
Network	Business LAN	WX1860A4; 2 dual-stacked RJ45 ports; 4 Gigabit Ethernet ports; 10/100/1000Mbps
	IPMI Management	1 × standard RJ45 port; 10/100/1000Mbps
Storage	SATA	4 × SATA3 ports; 3 × Mini-SAS HD ports
	M.2	2 × M.2; supports 2242/2280; PCIe 3.0 x4
Expansion	Expansion Slots	4 × standard PCIe 3.0 x16 (x16 slots); 2 × standard PCIe 3.0 x8 (x8 slots); 2 × MCIO (PCIe 3.0 x8)
I/O Ports	Rear I/O	4 × USB 3.0; 1 × VGA; 1 × COM; 1 × 3-jack audio interface
	Rear I/O	1 × UID switch with LED; 4 × RJ45 Gigabit LAN; 1 × RJ45 Gigabit IPMI management port
	Onboard I/O	1 × TPM header; ATX 24-pin + 3 × 8-pin power; 1 × front VGA header; 1 × front audio header
	Internal USB	2 × USB 3.0 headers; 2 × USB 2.0 headers; 1 × USB 2.0 Type-A
	Other Onboard I/O	8 × 4-pin fan connectors; 1 × serial header; 1 × chassis intrusion header
Display	BMC	ASPEED AST2500 BMC
	Display Interface	1 × VGA
Product Dimensions	Board Size	334.06 × 305mm
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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Product View

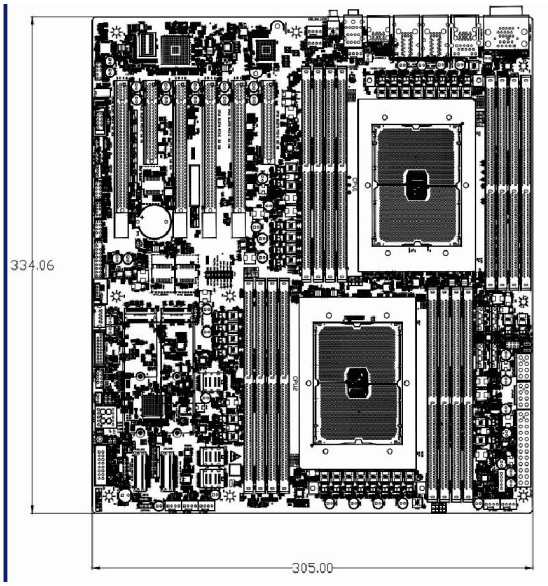




Rear I/O: IPMI RJ45 · 4 × Gigabit LAN · VGA · COM · 4 × USB 3.0 · 3-jack audio · UID + LED

DIMM Count	CPU1 Slot Order
1	A
2	A, E
4	B, A, E, F
6	C, B, A, E, F, G
8	D, C, B, A, E, F, G, H

Dimensions



Single Socket																
Single Socket	Master Socke(CPU0)															
Die	Die0				Die1											
Node	Node0		Node1		Node0		Node1									
Channel (CH)	A1	C1	F1	H1	E1	G1	B1	D1								
1 DIMMs	A1															
2 DIMMs	A1				E1											
4 DIMMs	A1		F1		E1		B1									
6 DIMMs	A1	C1	F1		E1	G1	B1									
8 DIMMs	A1	C1	F1	H1	E1	G1	B1	D1								
Dual Socket																
Dual Socket	Master Socke(CPU0)								Slave Socke(CPU1)							
Die	Die0				Die1				Die0				Die1			
Node	Node0		Node1		Node0		Node1		Node0		Node1		Node0		Node1	
Channel (CH)	A1	C1	F1	H1	E1	G1	B1	D1	A1	C1	F1	H1	E1	G1	B1	D1
2 DIMMs	A1								A1							
4 DIMMs	A1				E1				A1				E1			
6 DIMMs	A1	C1			E1				A1	C1			E1			
8 DIMMs	A1		F1		E1		B1		A1		F1		E1		B1	
12 DIMMs	A1	C1	F1		E1	G1	B1		A1	C1	F1		E1	G1	B1	
14 DIMMs	A1	C1	F1	H1	E1	G1	B1		A1	C1	F1	H1	E1	G1	B1	
16 DIMMs	A1	C1	F1	H1	E1	G1	B1	D1	A1	C1	F1	H1	E1	G1	B1	D1

Product Selection

Model	Configuration
P4DKA	Neutral server motherboard; supports 2 × Zhaoxin 40000 32-core processors; 16 × DIMM; 4 × 1GbE RJ45; IPMI

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