

ICON 3100-SX+

60

CPU

CORES

4.2

GHz

CLOCKSPEED

1

TB

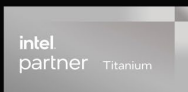
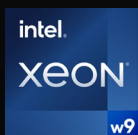
RAM

The Blackcore ICON range is an overclocked, liquid-cooled server platform for Intel CPUs. Generating ultimate performance for low latency use cases.

Featuring the Intel® Xeon-W 3595X - based on the popular "Sapphire Rapids" architecture - this is a refresh to our extreme core-count "SPR-X" system, which gained popularity for replacing dual-socket systems with a single overclocked NUMA. Now boasting 60 cores.



HTS-84715000  

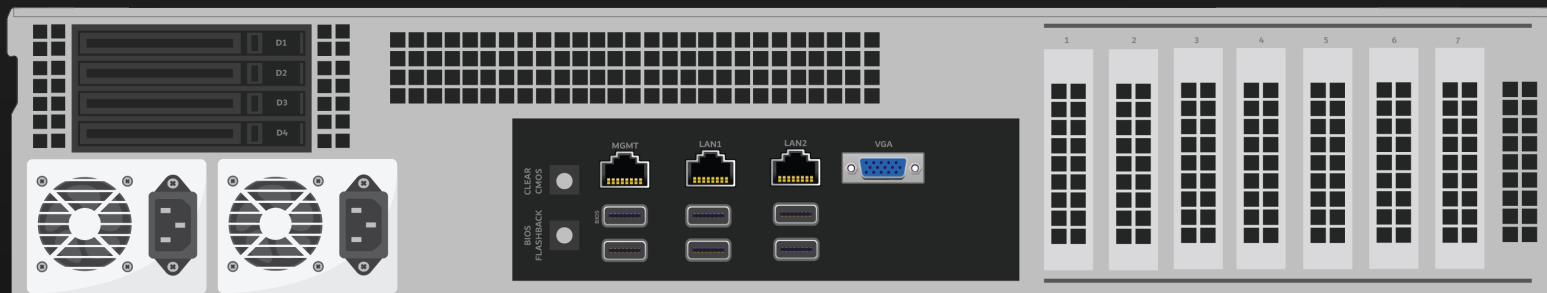


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ICON 3122-SX+

2U Vertical

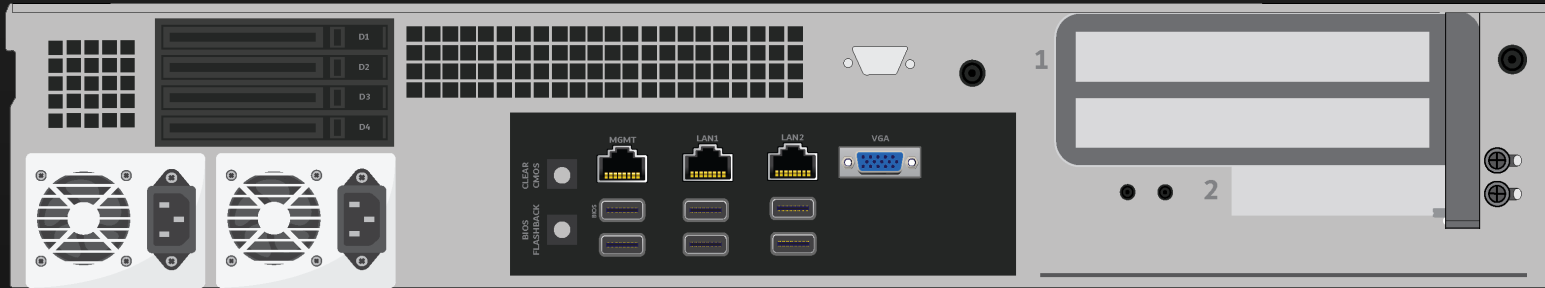


| | |
|----------------------|--|
| CPU | Intel® Xeon® w7-3595X |
| CPU Frequency | Up to 60 Cores @ 4.2GHz (all-core) SSE |
| Cache | 112MB @ up to 2.7GHz |
| Chipset | W790 |
| RAM | Up to 1TB of DDR5 ECC RDIMM Up to 384GB Overclocked ECC RDIMM |
| PCIe | Slot 1 - Physical x16, Electrical x16, HHFL Double Width Slot 2 - Physical x16, Electrical x16, HHFL Double Width Slot 3 - Physical x16, Electrical x16, HHFL Double Width Slot 4 - Physical x16, Electrical x16, HHFL Single Width |
| LAN | 2 x RJ45 Intel® X710 - 10Gb Ethernet 1 x RJ45 Dedicated IPMI LAN (AST 2600) |
| Rear I/O | 1 x VGA 6 x USB Ports |
| RAID | Onboard RAID 0, 1, 5, 10 Optional Hardware RAID 0,00,1,10 - no cache Optional Hardware RAID 0,00,1,10,5,6,60 - 4GB cache |
| Storage | 4 x 2.5" SATA OR 2 x 2.5" NVMe hot-swap caddy 4 x M.2 Socket M |

| | |
|------------------------------|--|
| OS Compatibility | Minimum - RHEL 7.8+ Recommended - RHEL 9.1+ |
| Management Tools | AMI SCE Redfish |
| PSU | 2000W Dual Redundant (1+1) 230-240V~10A MAX. 60-50Hz |
| Power Connectors | IEC C15/C16 |
| Avg. Power Usage | 500W (Idle) 1500W (Load) Power draw based on synthetic load, not including add-in cards. |
| Operating Temperature | 10°C - 27°C (50°F - 80°F) |
| Dimensions | System: 88 x 438 x 720mm (H x W x D) Boxed: 270 x 990 x 580mm (H x W x D) |
| Chassis Weight | System: 20KG Boxed: 25KG |
| Rail Kit | Premium or Short |
| Certifications | UKCA, CE |
| Export Code | HTS-84715000 |

ICON 3123-SX+

2U Horizontal

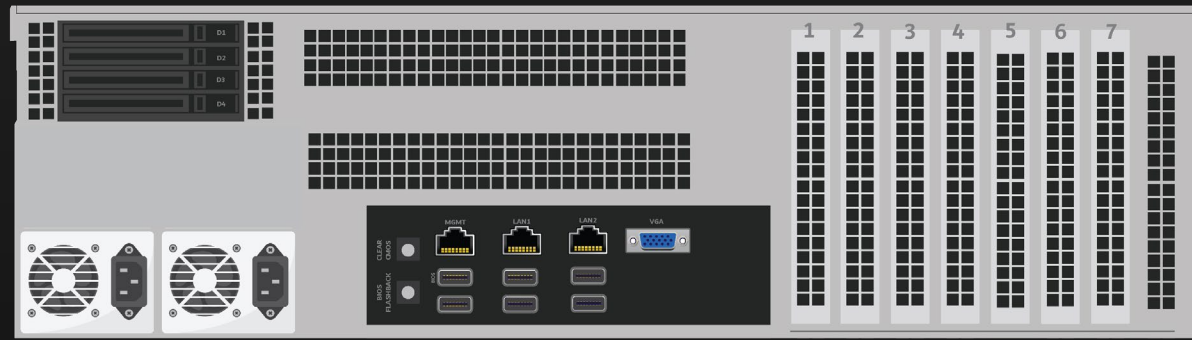


| | |
|----------------------|--|
| CPU | Intel® Xeon® w7-3595X |
| CPU Frequency | Up to 60 Cores @ 4.2GHz (all-core) SSE |
| Cache | 112MB @ up to 2.7GHz |
| Chipset | W790 |
| RAM | Up to 1TB of DDR5 ECC RDIMM Up to 384GB Overclocked ECC RDIMM |
| PCIe | Slot 1 - Physical x16, Electrical x16, FHFL Double Width Slot 2 - Physical x16, Electrical x16, HHFL Double Width |
| LAN | 2 x RJ45 Intel® X710 - 10Gb Ethernet 1 x RJ45 Dedicated IPMI LAN (AST 2600) |
| Rear I/O | 1 x VGA 6 x USB Ports |
| RAID | Onboard RAID 0, 1, 5, 10 Optional Hardware RAID 0,00,1,10 - no cache Optional Hardware RAID 0,00,1,10,5,6,60 - 4GB cache |
| Storage | 4 x 2.5" SATA OR 2 x 2.5" NVMe hot-swap caddy 4 x M.2 Socket M |

| | |
|------------------------------|--|
| OS Compatibility | Minimum - RHEL 7.8+ Recommended - RHEL 9.1+ |
| Management Tools | AMI SCE Redfish |
| PSU | 2000W Dual Redundant (1+1) 230-240V~10A MAX. 60-50Hz |
| Power Connectors | IEC C15/C16 |
| Avg. Power Usage | 500W (Idle) 1500W (Load) Power draw based on synthetic load, not including add-in cards. |
| Operating Temperature | 10°C - 27°C (50°F - 80°F) |
| Dimensions | System: 88 x 438 x 720mm (H x W x D) Boxed: 270 x 990 x 580mm (H x W x D) |
| Chassis Weight | System: 20KG Boxed: 25KG |
| Rail Kit | Premium or Short |
| Certifications | UKCA, CE |
| Export Code | HTS-84715000 |

ICON 3132-SX+

3U Vertical



| | |
|----------------------|---|
| CPU | Intel® Xeon® w7-3595X |
| CPU Frequency | Up to 60 Cores @ 4.2GHz (all-core) SSE |
| Cache | 112MB @ up to 2.7GHz |
| Chipset | W790 |
| RAM | Up to 1TB of DDR5 ECC RDIMM Up to 384GB Overclocked ECC RDIMM |
| PCIe | Slot 1 - Physical x16, Electrical x16, FHFL Single Width Slot 2 - Physical x16, Electrical x16, FHFL Single Width Slot 3 - Physical x16, Electrical x16, FHFL Single Width Slot 4 - Physical x16, Electrical x16, FHFL Single Width Slot 5 - Physical x16, Electrical x16, FHFL Single Width Slot 6 - Physical x16, Electrical x8, FHFL Single Width Slot 7 - Physical x16, Electrical x16, FHFL Single Width |
| LAN | 2 x RJ45 Intel® X710 - 10Gb Ethernet 1 x RJ45 Dedicated IPMI LAN (AST 2600) |
| Rear I/O | 1 x VGA 6 x USB Ports |
| RAID | Onboard RAID 0, 1, 5, 10 Optional Hardware RAID 0,00,1,10 - no cache Optional Hardware RAID 0,00,1,10,5,6,60 - 4GB cache |

| | |
|------------------------------|--|
| Storage | 4 x 2.5" SATA OR 2 x 2.5" NVMe hot-swap caddy 4 x M.2 Socket M |
| OS Compatibility | Minimum - RHEL 7.8+ Recommended - RHEL 9.1+ |
| Management Tools | AMI SCE Redfish |
| PSU | 2000W Dual Redundant (1+1) 230-240V~10A MAX. 60-50Hz |
| Power Connectors | IEC C15/C16 |
| Avg. Power Usage | 500W (Idle) 1500W (Load) Power draw based on synthetic load, not including add-in cards. |
| Operating Temperature | 10°C - 27°C (50°F - 80°F) |
| Dimensions | System: 132 x 438 x 720mm (H x W x D) Boxed: 270 x 990 x 580mm (H x W x D) |
| Chassis Weight | System: 25KG Boxed: 30KG |
| Rail Kit | Premium or Short |
| Certifications | UKCA, CE |
| Export Code | HTS-84715000 |

Specification Comparison

| | ICON 3122-SX+ | ICON 3123-SX+ | ICON 3132-SX+ |
|----------------------------------|-------------------------------|--|-------------------------------|
| Form Factor | 2U | 2U | 3U |
| Dimensions (H x W x D) | 88 x 438 x 720mm | 88 x 438 x 720mm | 132 x 438 x 720mm |
| PCIe Compatibility | 7* x16 (Physical) HHFL | 1* x16 (Physical) FHFL 1* x16 (Physical) HHFL | 7* x16 (Physical) FHFL |
| PCIe Orientation | Vertical | Horizontal | Vertical |
| PSU | 2000W | 2000W | 2000W |
| Clock Speed | Up to 60 Cores @ 4.2GHz (SSE) | Up to 60 Cores @ 4.2GHz (SSE) | Up to 60 Cores @ 4.2GHz (SSE) |

Benchmarks

| | 128GB, 4.18 Kernel | 3595X Stock | 3595X Blackcore |
|---|--------------------|----------------|--------------------|
| mlc -r --latency_matrix (ns) [Lower is better] | | 119.6 | 92.9 |
| L2->L2 HIT (ns) [Lower is better] | | 88.6 | 77.0 |
| PCIe Latency - slot1 (ns) [Lower is better] | | 507 | 447 |
| All-core Clock-speed (SSE, GHz) [Higher is better] | | 2.5 | 4.2 |
| Peak IPC (prime95, SSE, per thread) [Higher is better] | | 2.3 | 4.9 |