ICON 3100-SX+





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.







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ICON 3122-SX+

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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	
PCle	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	$4\times2.5"$ SATA \mbox{OR} $2\times2.5"$ NVMe hot-swap caddy $4\times M.2$ 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 580 x 990mm (H x W x D)
Chassis Weight	System: 20KG Boxed: 25KG
Rail Kit	Premium or Short
Certifications	UKCA, CE
Export Code	HTS-84715000

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ICON 3123-SX+

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2U Horizontal



CPU	Intel® Xeon® w7-3595X
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Cache	112MB @ up to 2.7GHz
Chipset	W790
RAM	Up to 1TB of DDR5 ECC RDIMM Up to 384GB Overclocked ECC RDIMM
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LAN	2 x RJ45 Intel® X710 - 10Gb Ethernet 1 x RJ45 Dedicated IPMI LAN (AST 2600)
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Storage	$4\times2.5"$ SATA OR $2\times2.5"$ NVMe hot-swap caddy $4\times M.2$ Socket M

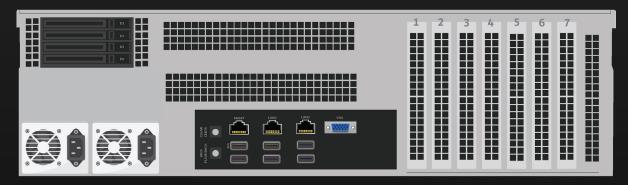
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IEC C15/C16
500W (Idle) 1500W (Load) Power draw based on synthetic load, not including addin cards.
10°C - 27°C (50°F - 80°F)
System: 88 x 438 x 720mm (H x W x D) Boxed: 270 x 580 x 990mm (H x W x D)
System: 20KG Boxed: 25KG
Premium or Short
UKCA, CE
HTS-84715000

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ICON 3132-SX+

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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
PCle	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	$4\times2.5"$ SATA \mbox{OR} $2\times2.5"$ NVMe hot-swap caddy $4\times M.2$ 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 580 x 990mm (H x W x D)
Chassis Weight	System: 25KG Boxed: 30KG
Rail Kit	Premium or Short
Certifications	UKCA, CE
Export Code	HTS-84715000

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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 -rlatency_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