FLEX 3100-SX+

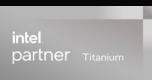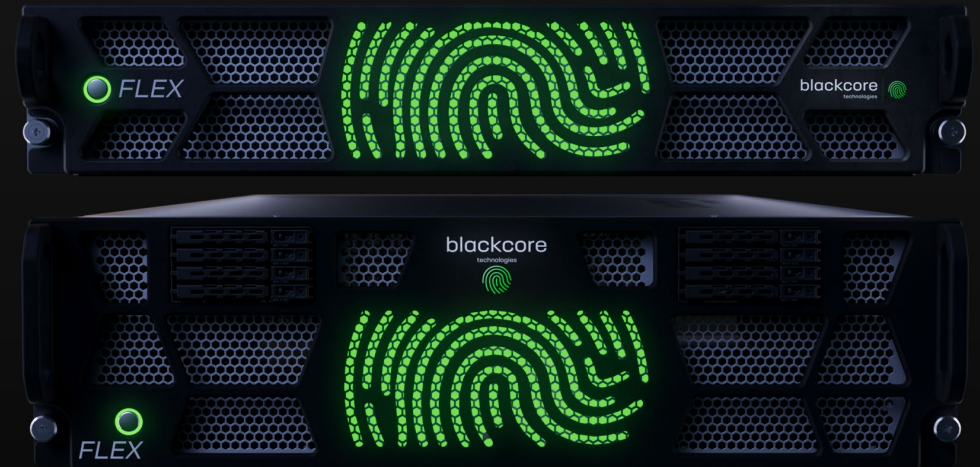| **60**	**4.2**	**1**	**4**
CPU	GHz	TB	FHFLDW
CORES	CLOCKSPEED	RAM	QUAD FPGA SUPPORT

As FPGA usage has increased in popularity for electronic trading the Blackcore FLEX Range of servers aims to bring clients new capabilities related to FPGA use-cases not previously possible in the existing Blackcore range, or traditional server platforms.

Featuring support for 4* full-height, full-length, double-width FPGAs plus an additional full-height single-width card, such as a NIC or PPS breakout card. This includes the power and micro-USB connections needed for all cards. Built on top of an overclocked Intel® Xeon-W 3595X for optimal utilisation.
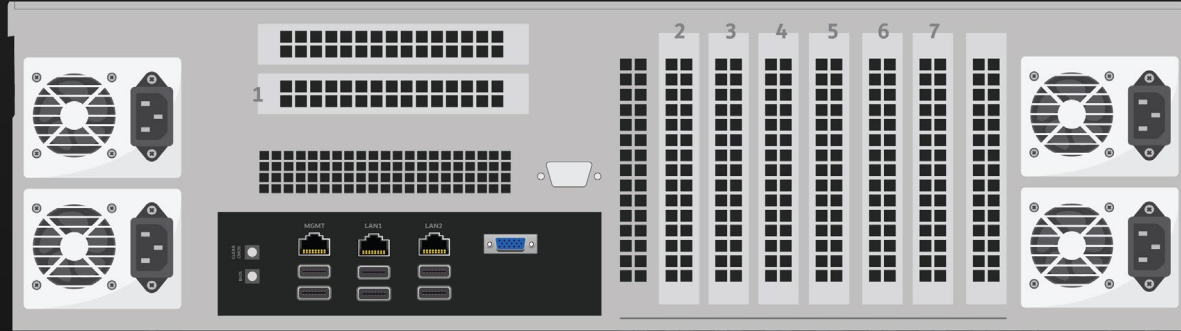
HTS-84715000

intel XEON w9

intel partner Titanium

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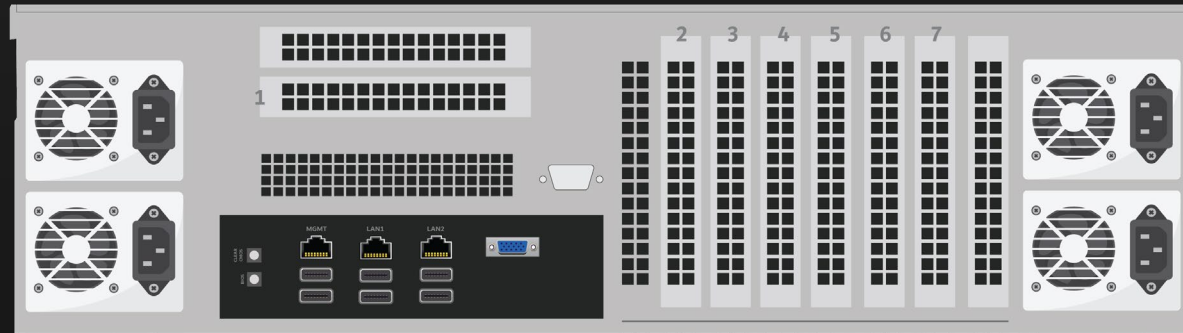|	
CPU	Intel® Xeon® w9-3595X
CPU Frequency	60 Cores @ Intel Stock Specification
Cache	112MB @ up to 2.7GHz
Chipset	W790
RAM	Up to 1TB of DDR5 ECC RDIMM Up to 768GB Overclocked ECC RDIMM
PCIe	Slot 1 - Physical x16, Electrical x16, FHFL Double Width Slot 2 - Physical x16, Electrical x16, FHFL Double Width Slot 4 - Physical x16, Electrical x16, FHFL Double Width Slot 6 - Physical x16, Electrical x8, FHFL Single Width Slot 7 - Physical x16, Electrical x16, FHFL Double Width - or - 7 * 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 2 x M.2 Socket M
OS Compatibility	Minimum - RHEL 7.8+ Recommended - RHEL 9.1+
Management Tools	AMI SCE Redfish
PSU	2 * 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: 28KG Boxed: 33KG Without Cards
Rail Kit	Included
Certifications	UKCA, CE
Export Code	HTS-84715000

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"Stock" is Intel's default specification with no adjustments. This includes HT on.

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FLEX 3134-SX+

3U

CPU	Intel® Xeon® w9-3595X
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 768GB Overclocked ECC RDIMM
PCIe	Slot 1 - Physical x16, Electrical x16, FHFL Double Width Slot 2 - Physical x16, Electrical x16, FHFL Double Width Slot 4 - Physical x16, Electrical x16, FHFL Double Width Slot 6 - Physical x16, Electrical x8, FHFL Single Width Slot 7 - Physical x16, Electrical x16, FHFL Double Width - or - 7 * 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 2 x M.2 Socket M
OS Compatibility	Minimum - RHEL 7.8+ Recommended - RHEL 9.1+
Management Tools	AMI SCE Redfish
PSU	2 * 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: 28KG Boxed: 33KG Without Cards
Rail Kit	Included
Certifications	UKCA, CE
Export Code	HTS-84715000

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Specification Comparison

	FLEX 3034-SX+	FLEX 3134-SX+
Form Factor	3U	3U
Dimensions (H x W x D)	132 x 438 x 720mm	132 x 438 x 720mm
PCIe Compatibility	7* x16 (Physical) FHFL	1* x16 (Physical) FHFL 1* x16 (Physical) HHFL
PCIe Orientation	Vertical	Vertical
PSU	2000W	2000W
Clock Speed	Up to 60 Cores @ STOCK	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

"Stock" is Intel's default specification with no adjustments. This includes HT on.