

PIO-5049P-OSN HARDWARE CONFIGURATION (TESTED)

Component	PN	Description/Comments
Chassis	CSE-847BE1C4- R1K23LPB	4U rackmount server enclosure w/ 36 3.5" HDD bays.
Motherboard	MBD-X11SPL-F-O	X11SPL-F (BIOS: 2.1, IPMI Firmware: 1.46) Single-Socket P (LGA3647) 165W Skylake-EP 8 DIMM slots 1 (x4) PCIe 3.0 low-profile expansion slot 6 (x8) PCIe 3.0 low-profile expansion slots M.2 Interface: PCI-E 3.0 x4
Front Backplane	BPN-SAS3-846EL1	Single-expander (dual-port) 24-drive SAS3 backplane.
Rear Backplane	BPN-SAS3-826EL1-N4	Single-expander (dual-port) 12-drive SAS3 backplane. (Connectors for SAS #9,#10,#11,#12 are hybrid ports that support both SAS3 and NVMe. cf. UG2-4)
SSD Bays	MCP-220-82609- 0N	Rear 2.5 x 2 Hot swap HDD kit. HDD0 (left, viewed from rear) => I-SATA2 HDD1 (right, viewed from rear) => I-SATA3
SSD (OS)	HDS-I2T0- SSDSC2KB240G8	(2x) Intel D3-S4510 240GB SATA 6Gb/s 3D TLC 2.5" 7mm System boot drives (RAID1).
SAS Cables	CBL-SAST-0531- 01	(4x) MINI SAS HD,12G,INT,80CM,30AWG Backplane <=> LSI3008 interconnects
CPU	P4X-SKL6140- SR3AX	18-core 2.3GHz Skylake 6140 processor @140W.
Memory	MEM-DR432L- HL01-ER26	256GB: (8x) 32GB DDR4-2666 2Rx4 ECC REG DIMM
HDD (Data)	HDD-A8000-ST8000NM0075	(36x) 8T Seagate 3.5" SAS3 data drives Firmware: E003
Storage AOC	AOC-S3008L-L8E	LSI 3008 based SAS3 HBA, 12Gb, 8 internal ports. Firmware: 15.00.03.00 PCI Slot #2 [b3:00.0] (x8) Port1 (x4 SAS ports) => BPN-SAS3-846EL1 J49 via CBL-SAST-0531- 01 Port2 (x4 SAS ports) => BPN-SAS3-846EL1 J50 via CBL-SAST-0531- 01
Storage AOC	AOC-S3008L-L8E	LSI 3008 based SAS3 HBA, 12Gb, 8 internal ports. Firmware: 15.00.03.00 PCI Slot #3 [b4:00.0] (x8) Port1 (x4 SAS ports) => BPN-SAS3-846EL1 J14 via CBL-SAST-0531- 01 Port2 (x4 SAS ports) => BPN-SAS3-846EL1 J15 via CBL-SAST-0531- 01
Network AOC	AOC-MCX413A-GCAT-MS046	ConnectX-4 EN NIC, 50GbE single-port QSFP28, PCIe3.0 x8 Firmware: 12.24.1000 PCI Slot #5 [17:00.0] (x8)
Network AOC	AOC-MCX413A-GCAT-MS046	ConnectX-4 EN NIC, 50GbE single-port QSFP28, PCIe3.0 x8 Firmware: 12.24.1000 PCI Slot #6 [65:00.0] (x8)
PSU	PWS-1K23A-1R	(2x) AC-DC 1200W, Titanium Level, Redundancy, 1U, +12V/+5Vsb
Tested in the JHU prototype, but excluded from the early 2019 BOM.		
NVMe Storage	HDS-SMN0-MZ1LB1T9HALS07	(6x) Samsung PM983,1.9TB,NVMe, PCIe3.0x4,V4 TLC VNAND,M.2,22x110mm
-	-	M.2 Motherboard Slot [06:00.0] (x4) => 1.92T Samsung 983 DCT (1 of 6)
NVMe AOC	AOC-SLG3-2M2	PCI Slot #1 [01:00.0] (x4 in x8) M.2_1 => 1.92T Samsung 983 DCT (2 of 6) M.2_2 => (empty - slot only has four lanes)
NVMe AOC	AOC-SLG3-2M2	PCI Slot #4 [18:00.0, 19:00.0] (x8) M.2_1 => 1.92T Samsung 983 DCT (3 of 6) M.2_2 => 1.92T Samsung 983 DCT (4 of 6)
NVMe AOC	AOC-SLG3-2M2	PCI Slot #7 [66:00.0, 67:00.0] (x8 in x16) M.2_1 => 1.92T Samsung 983 DCT (5 of 6) M.2_2 => 1.92T Samsung 983 DCT (6 of 6)
All hardware components are supported and detected by the operating system (Red Hat Enterprise Linux 7.6). See output from <code>dmidecode</code> , <code>ipmitool</code> , <code>lshw</code> , etc.		