

SKY-8101

Compact 1U High Performance Server based on Intel® Xeon® Processor Scalable Family



Features

- 1U 20" deep rackmount server
- Single Intel® Xeon® Platinum, Gold, Silver or Bronze Processor
- 6x DIMM sockets support up to 384 GB DDR4 2933MHz ECC RDIMM/LRDIMM
- Rich Add-In Card Support: Up to two FH/FL PCIe x8 Gen3 slots (optional: one FH/FL PCIe x16 Gen3 slot), one LP PCIe x8 Gen3 slot, one PCIe x4 Gen3 slot for Advantech Personalization Card
- Up to 4x 2.5" hot-swappable HDD/SSD drives
- 1x M.2 2280 SATA/NVMe SSD
- IPMI 2.0-compliant management with reliability and security enhancements
- Optimized platform design for Industrial and Carrier Grade Robustness
- Redhat certified, including Red Hat Enterprise Linux, Red Hat Virtualization, Red Hat Enterprise Linux for Real Time, and Red Hat OpenStack Platform for Compute
- VMware ESXI 7.0 certified



Introduction

The Advantech SKY-8101 is a highly configurable high performance server designed to balance the best in x86 server-class processing with maximum I/O and offload density in a 20" depth chassis. The system is a cost effective, robust platform optimized for superior reliability in business critical applications including, but not limited to, communications, edge and industrial high performance computing. It is specifically designed for high density PCIe card payloads where maximum IO connectivity is needed or the integration of industry leading offload and acceleration technology is essential. The power and cooling options along with the streamlined mechanical design make it ideal for demanding applications requiring high performance acceleration technologies such as GPU, DSP and FPGA cards.

Architected around the new Intel® Xeon® Processor Scalable Family, the single-socket SKY-8101 combines cutting-edge performance with the ruggedness, reliability, and long system lifecycles required by the industry. With integrated security and compression offload based on Intel® QuickAssist technology and two onboard 10GbE ports with SR-IOV and RDMA support, the system offers best-in-class integration in a compact 1U, 20" deep form factor.

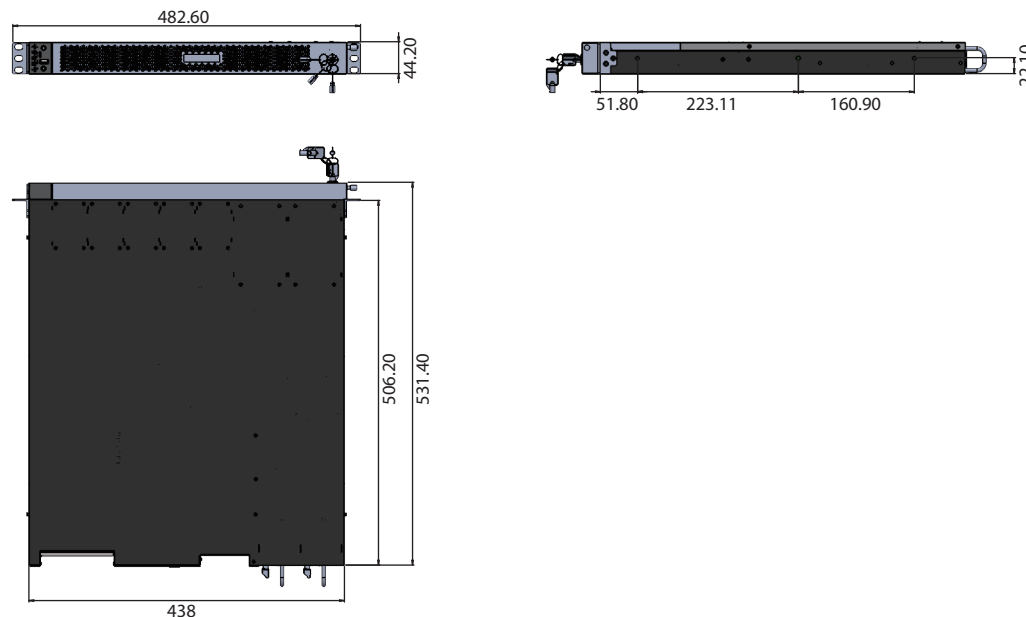
The SKY-8101 is designed to withstand extended environmental conditions in terms of shock, vibration and operating temperature. A replaceable front air filter is supported to cope with dust. Redundant power supplies, the ability to withstand single fan failures, redundant firmware images with failsafe upgrades and hot swappable FRUs make the SKY-8101 the platform of choice for applications requiring zero downtime. The SKY-8101 is designed for NEBS Level 3 carrier grade environments and where limited rack space is available. Interoperability testing is performed with a wide selection of third-party PCIe card vendors.

Specifications

Processor System	CPU	Single CPU from the New Intel® Xeon® Processor Scalable Family up to 28 cores, 165W
	Chipset	Intel® C622 chipset (optional variants with C626 and C627)
Memory	Technology	Up to 6x 2933MHz DDR4 Standard ECC RDIMM/LRDIMM
	Capacity	Max capacity per channel: 64GB Max total capacity per system: 384GB
	Socket	6x 288-pin DIMM
PCIe	Expansion slots	Total 2x rear PCIe Gen3 x8 (FH/FL) or 1x rear PCIe Gen3 x16 (FH/FL), 1x PCIe Gen3 x8 (LP/HL), 1x PCIe Gen3 x4 expansion slot for Advantech Personalization Card (PersCard)
IO	Front IO	Option1 (Default): 1x PWR button, 1x ID button, 1x USB3.0/2.0, 1x microUSB console, 5x LEDs (Power, ID, 3x SW definable) Option2: 1x PWR button, 1x ID button, 1x RJ45 console, 5x LEDs (Power, ID, 3x SW definable)
	Rear IO	2x GbE LAN RJ45, 1x Display port, 2x USB3.0/2.0, 2x 10GE SFP+, 2x hole ground lug
Ethernet	Gigabit Ethernet Interface	10/100/1000 Mbps
	10 Gigabit Ethernet Interface	10Gbps / 10Gbps
	Controller	GbE LAN1: Intel I210-AT, GbE LAN2: Intel I210-AT 10GbE SFP+ LAN1/2: Integrated into PCH, with SR-IOV and RDMA support
	Connector	2x RJ-45, 2x SFP+
Storage		4x 2.5", hot-swappable, SAS/SATA HDD/SSD trays in front (SAS drives supported via HBA/RAID adapter on PCIe slots) 1x M.2 2280 SATA/NVMe SSD
Power Supply	Power Rating	700W red. AC PSU / 600W red. DC PSU
	Input	(AC) 100-240Vac, 9-4A, 50-60Hz (DC) -44 ~ -65Vdc, 18-10A
Environment	Humidity Operational (non-condensing)	50% @ 25 °C to 95% @ 40 °C
	Operational Temperature	0°C (32°F) to 40°C (104°F), optional -5°C (23°F) to 55°C (131°F) with Intel high Tcase processor installed
	Storage Temperature	-40 °C (-40 °F) to 70 °C (158 °F)
Cooling	Chassis Fan	Five 40 x 56 mm front replaceable, hot swappable fans
	Thermal Control	Two separate thermal zones for motherboard and FL PCIe cards
	Reliability	Resilient to single fan failure
	Air Filter	Front replaceable
System Management	Advantech BMC	Aspeed AST2500 BMC Advanced Lights Out Management compliant to IPMI2.0 with security and availability enhancements iKVM Support Configurable shared or dedicated NIC support
	Dimension (W x D x H)	438.00 x 506.20 x 44.20 mm (17.24" x 19.93" x 1.74")
Physical	Weight (N.W.)	15kg
	Security	Lockable front bezel and chassis intrusion sensor

Dimensions

Unit: mm [inch]



Front View



Rear View



Ordering Information

Part Number	Description
SKY-8101SAS-0000E	20" 1U server w GSMB-8101, single Intel® Xeon® Processor, Intel® C622 chipset, AC 700W PSU, 4 x 2.5" SSD/HDD, 2 x FH/FL slots, 1 x LP slot, 1 x Advantech PersCard slot
SKY-8101SAS-0001E	20" 1U server w GSMB-8101, single Intel® Xeon® Processor, Intel® C622 chipset, DC 600W PSU, 4 x 2.5" SSD/HDD, 2 x FH/FL slots, 1 x LP slot, 1 x Advantech PersCard slot

Optional Accessories

Part Number	Description
1700025629-01	Cable, Display Port to D-Sub (VGA) 150cm
1702002600-02	Power Cord 3P UL/CSA(USA) 125V 10A 1.83M 180D
1702002605-02	Power Cord 3P European 10A/16A 250V 1.83M 90D
1700000237-01	Power Cord 3P PSE 12A 125V 1.83M Japan

FRU Accessories

Part Number	Description
SKY-8101S-PSUACE	SKY-8101 AC PSU Module, 700W
SKY-8101S-PSUDCE	SKY-8101 DC PSU Module, 600W
SKY-8101S-FAN00E	SKY-8101 Fan Module
SKY-8101S-SRL00E	22" slide rail (pair) for SKY-8101

NOTE1: Please contact your local Advantech sales representative for more information of Processor, memory, storage, PCI express card selection.

Advantech Personalization Card Options

Part Number	Description
PCIE-1220PS-00A1E	PersCard: Dual Port Fiber (SFP+) 10GbE with Intel® X710
PCIE-1221PS-00A1E	PersCard: Dual Port Copper (RJ45) 10GbE with Intel® X550
PCIE-1130PS-00A1E	PersCard: Quad Port Copper (RJ45) GbE with Intel® I350
PCIE-1131PS-00A1E	PersCard: Quad Port Fiber (SFP) GbE with Intel® I350