

S2U "KING COBRA"

100% LRU, SHORT RACK 2U SERVER WITH ROUTER,
MANAGED SWITCH, ULTRA HIGH SPEED RAID
AND QUAD GPU



S2U SERVER SPECIFICATIONS

Processors / Cache	Up to two 14 core Intel Xeon E5-2600 v4 (Dual Socket R3, LGA 2011), Up to 2.3 GHz, with up to 35 Mbyte cache per processor
Main Memory	Up to 256 GB – 2133 MHz ECC DDR4 using VLPRDIMM, 8 slots Optional configuration for up to 1 TB – 2133 MHz ECC DDR4 using LRDIMM
Chipset	Intel C612 PCH
Native Graphics	Silicon Motion SM750 GPU
Native Network Controllers	Intel i350 dual port Gigabit Ethernet Controller, RJ45 x2 Intel XL710 dual port 10 Gigabit Ethernet Controller, SFP+ x2
Trusted Computing	Intel Trusted Execution Technology, TPM module, TGC V1.2 and V2.0 supported
Native Mass Storage	mSATA socket, chipset SATA Gen 3. Optional SAM™ I/O site
Front Drive Bays	Twelve 2.5" trays: Native chipset SATA, Hardware RAID SATA/SAS and NVMe supported at all sites. User defined configurations
Rear Drive Bay	Optional Removable 2.5" NVMe, PCIe Gen 3 x4 interface
RAID Support	PCIe slot for optional hardware RAID controller, Up to twelve 2.5" SATA / SAS devices at Front Drive Bay
PCIe Expansion – Add-in Cards	Removable PCIe Expansion Module, four full height/full length x16 slots, I/O at rear, Support for high power consumption GPUs
I/O Expansion – SAM™ sites	Up to seven Special Applications Modules (SAM™). Each SAM™ site includes PCIe Gen 3 x1 and USB 2.0 interfaces. mSATA form factor
XMC Site	Optional XMC site at rear, x16 PCIe, Access to XMC front panel I/O
Ethernet Switch with Optional Router Function	MicroSemi VSC743x Enterprise Ethernet Switch, with SMBStaX firmware, and optional Embedded Services Router function, Twenty Gigabit Ethernet Ports, RJ45, with option for four ports from router, PoE+ supported at all Gigabit Ports, Two 10 Gigabit Ports, SFP+ sockets
Front I/O	USB 3.0 x2, USB 2.0 x2, HDMI, Gigabit Ethernet RJ45, Audio In/Out jack, Power On/Off, System status and Drive Bay indicators
Rear I/O - System	USB 3.0 x2, USB 2.0 x2, HDMI, Gigabit Ethernet RJ45 x2, 10 Gigabit Ethernet SFP+ x2, BMC Ethernet RJ45 (IPMI port)
Rear I/O – Ethernet Switch	Gigabit Ethernet RJ45 x20 with PoE+ (150W max), 10 Gigabit Ethernet SFP+ sockets x2
Backup Battery	Coin cell backup battery, accessible from rear
BMC and System Management	Aspeed AST2150 BMC, AMI MegaRAC SP-X Management System monitoring: Temperature and voltages from system sensors and fans IPMI over Ethernet, RJ45 at rear, LCD control panel at rear: Real-time system status display
Fans	Two redundant, removable fan trays, six high efficiency fans per tray, BMC based automatic fan speed control
Power Supply	Up to three hot-swap OpenVPX 3U power supplies 110/220 VAC, 50/60/400Hz or 28 VDC input power
Auxiliary Power Unit	Optional alternative to standard hot-swap OpenVPX 3U power supplies – Provides up to five minutes of hold-up on loss of power. Takes the place of the PCIe Expansion module. Allows for OpenVPX expansion at front panel: Up to three 3U OpenVPX sites, 110 VAC or 28 VDC input power
Form Factor	2U rack mount: 3.25" height, 17" width, 17" depth, 30 lbs for typical configuration. Rack mount rails included
Power	300 to 600 watts for typical configuration. System design supports configurations up to 1200 watts
LRU Components	All electronic Sub-assemblies are LRU: Processor/IO (6U OpenVPX 10HP), Ethernet Switch (6U OpenVPX 5HP), Power Supplies (3U OpenVPX 5HP), 2.5" Mass Storage, Fan trays, PCIe Expansion module, Front Panel I/O, Backup Battery
Operating Environment	Standard Operating Range: 0°C to 55°C. Available in Ruggedization levels R1 to R3
System BIOS	AMI Aptio UEFI BIOS

S2U "KING COBRA" SYSTEM PART NUMBERS

PART NUMBER	RUGGED LEVEL	DESCRIPTION
GMS-S2U-01-00	1	S2U Basic Configuration: Dual Xeon E5-2658-v4 (14 cores, 2.3GHz, 105W) processors 128GB DDR4 RAM Dual Fan-Tray with AC power in rear 500W Single height 110VAC 3U OpenVPX power supply Not Included: COM Module, APU/PCIe, SAM™ I/O, System I/O, Operating System, SPF+ inserts and Drives
GMS-S2U-01-01	1	Same as above with 256GB RAM
GMS-S2U-01-02	1	Same as above with 512GB RAM (consult factory)
GMS-S2U-01-03	1	Same as above with 1024GB RAM (consult factory)

S2U "KING COBRA" INDIVIDUAL PART NUMBERS

PART NUMBER	RUGGED LEVEL	DESCRIPTION
GMS-S2U-COM-01-00	1	COM module with 20 GigE ports Managed switch with PoE+ (up to 150W)
GMS-S2U-COM-01	1	COM Module with 20 GigE ports and hardware Router (No Cisco® IOS installed). See IOS options
GMS-S2U-PCIe	1	PCIe card cage with four full length PCIe sites (no modules installed). See PCIe Card Options.
GMS-S2U-SYSIO	1	System I/O module full up
GMS-S2U-APU-00	1	APU with 1500W 110V 60Hz Power Supply, and 100KVA APU. (Omit 3U OpenVPX Power Supply/Supplies.), No AC power on rear Fan Tray
GMS-S2U-APU-01	1	APU with 1500W 110V 400Hz Power Supply, and 100KVA APU. (Omit 3U OpenVPX Power Supply/Supplies.) No AC power on rear Fan Tray.
GMS-S2U-APU-02	1	APU with 1500W 28VDC Power Supply, and 100KVA APU. (Omit 3U OpenVPX Power Supply/Supplies.) No AC power input on rear Fan Tray
GMS-S2U-CPU-DB	1-3	Removable drive Bay for CPU module. No Drives included
GMS-S2U-SS-DB	1-3	Removable Drive Bay for Storage Subsystem (Up to 12). No Drives included
GMS-S2U-3UPS-01	1-3	500W Single high 110VAC 60Hz 3U OpenVPX power supply (Up to 3 units)
GMS-S2U-3UPS-02	1-3	500W Single high 110VAC 400Hz 3U OpenVPX power supply (Up to 3 units)
GMS-S2U-3UPS-03	1-3	500W Single high 28VDC 3U OpenVPX power supply (Up to 3 units)

S2U "KING COBRA" RUGGEDIZATION LEVELS

RUGGED LEVELS	R1	R2	R3	R4	R5
Shock	20g	20g	52g	100g	100g
* Vibrations	0.0001g ² /Hz	0.0008g ² /Hz	0.03g ² /Hz	0.03g ² /Hz	0.1125g ² /Hz
Temperature	0°C to + 55°C	-20°C to + 55°C	-20°C to + 75°C	-40°C to + 85°C	-40°C to + 85°C
IP Levels	54	64	64	66	67



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