

# SCB-1943

Performance Network Appliance

## AEWIN Technologies Co., Ltd.

The SCB-1943 is a 2U Rackmount Single 4th Gen Intel Xeon Scalable Processor (Sapphire Rapids-SP) and Intel® C741 PCH Network System, support 8 DDR5 RDIMM up to 512GB, 8x PCIe x8 Gen 5 slot for Network Expansion Module, 2x 2.5" SATA HDD hot-swappable, IPMI, 2x USB 3.0, 2x 1GbE, 1x Console, mSATA/mini-PCIe, M.2 2280 (PCIe x4/SATA) with VROC RAID support, BMC, Redundant PSU



### Features

- Support Single 4th Gen Intel Xeon Scalable Processors (Sapphire Rapids-SP), Socket E FCLGA4677
- 8 x DDR5 RDIMM memory, up to 4800 MHz
- Support Intel QAT on processor
- 2x 1GbE RJ45 ports (MGMT / IPMI) , 8x PCIe Gen5 Expansion Module bays
- 2x 2.5" SATA, 2x M.2 2280 (PCIe x 4/SATA) with VROC RAID support, 1x mSATA
- IPMI v2.0, Optional Intel AEWIN TSB V2 module (developing)

### Description

The SCB-1943 is a 2U Rack-Mount hardware networking system. Supporting 4th Gen 5 Intel® Xeon® Scalable Processors (Sapphire Rapids) and Intel® C741 PCH. The new generation platform provides remarkable performance with increased CPU cores (up to 60C per CPU) and 4 Ultra Path Interconnect (UPI) links up to 16 GT/s.

The SCB-1943 supports 8x channels DDR5 register ECC RDIMM (up to 4800 MHz) and maximum memory capacity is up to 512GB. With 80 PCI Express lanes per CPU, the SCB-1943 can support up to 8x PCIe Gen5 x8 slots for Network Expansion Modules for flexible port configuration, such as 1/10/40/100 Gigabit fiber, Gigabit Copper/Fiber with or without BYPASS function. The SCB-1943 Series also provides the flexibility to change the 2x PCIe slots to 1x PCIe x16 slot for standard PCIe form factor which can install off-the-shelf add-on card for additional function required.

The strong IO elements of SCB-1943 include two management port (one for management, another for option IPMI function), a console port, USB ports, LEDs for power/HDD/2x GPIO. In addition, the SCB-1943 also supports two front hot-swappable 2.5" SATA HDDs/SSDs and onboard m-SATA/mini-PCIe, M.2 slot for network storage application.

### Specifications

#### ▼ Processor System

CPU	Support Single 4th Intel Xeon Scalable Processor (Sapphire Rapids-SP), Socket E, FCLGA4677pin
Chipset	Intel® Emmitsburg C741
System Bus	UPI up to 16GT/s
BIOS	AMI® UEFI BIOS

#### ▼ Memory

Technology	Total 8 DIMMs (8 channels per CPU, 1x DIMM per channel, 8 DIMMs per CPU) -- ECC & Registered RDIMM : DDR5 4800 MHz memory, up to 64GB per DIMM
Capacity	ECC RDIMM up to 512GB

#### ▼ Expansion

Onboard Expansion Slots	8x PCIe Gen5 x8 slots for NIC modules, 1 mSATA/miniPCI-E, 1 internal SlimSAS 4i connector, 1 minSAS HD connector 1 MCIO 8i for PCIe 5 slot
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#### ▼ I/O

USB	2x USB 2.0 ports (Front) 1x USB 3.0 port (Rear) 2x Internal USB3.0 pin header
Serial	1x RJ45 Console port (COM1) 2x internal pin header (COM2 & COM3)

#### ▼ Ethernet

GbE Ethernet	2x RJ45 1GbE ports in system front
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#### ▼ Storage

SATA	Support 2x 2.5" SATA HDD or SSD
NVMe	External 2x2.5" NVME SSD Hot-Swappable Module (through BPO20 kit on Expansion Slot)
mSATA	1
M.2	2x M.2 2280 (PCIex4/SATA) with VROC RAID support

#### ▼ Power Supply

Watt	800W/1300W Redundant power supply (CRPS), 12V output / RoHS
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#### ▼ Mechanical and Environment

Form Factor	2U Rackmount
LED	1x Power LED (Green) 1x HDD LED (Red) 2x Status LED (Green/Yellow via programmable GPIO)
Dimension (W x D x H)	440mm(W) x 600 mm(D) x 88mm(H)
Operating Temperature	Operating: 0 ~ 40°C ( 32 ~ 104°F )
Storage Temperature	-20 ~ 75°C (-4 ~ 167°F)
Humidity	10 ~ 85% relative humidity, non-operating, non-condensing
Weight	21 kg
Certification	CE/FCC

#### ▼ Packing List

- 1x SCB-1943 unit
- 2x power cord
- 1x CD (Manual, Quick Installation Guide, Utilities & Drivers)

## Ordering Information

**SCB-1943A** 2U Rack-Mount, Single Intel SPR/EMR processor with C741 PCH, 8 DDR5, 8 PCIe 5 x8 slot for NIC, Console, 2x RJ45 GbE (MGMT/IPMI), 2x USB 2.0, 2 USB 3.0, M.2 2280, BMC, 2x2.5" SATA HDD, PCIe 5 x8 slot for standard PCIe Card

**SCB-1943C** 2U Rack-Mount, Single Intel SPR/EMR processor with C741 PCH, 8 DDR5, 4 PCIe 5 x8 slot for NIC, 2 Standard PCIe 5 x16 slot for 2 dual width GPU card on 2nd layer, Console, 2x RJ45 GbE (MGMT/IPMI), 2xUSB 2.0, 2 USB 3.0, M.2 2280, BMC 2x2.5" SATA HDD, without PCIe 5 x16 slot for PCIe card

**SCB-1943B** 2U Rack-Mount, Single Intel SPR/EMR processor with C741 PCH, 8 DDR5, 4 PCIe 5 x8 slot for NIC, 2 Standard PCIe 5 x16 slot for FHHL PCIe card on 2nd layer, Console, 2x RJ45 GbE (MGMT/IPMI), 2x USB 2.0, 2 USB 3.0, M.2 2280, BMC, 2x2.5" SATA HDD, PCIe 5 x16 slot for PCIe card

## Optional

**R594A** TPM 2.0 module via SPI pin header, Temp -20~85°C

**R386A** Expansion module with 4 SFP+ 10 GbE ports, Intel XL710-BM1 w/o re-driver

**OT006B** AEWIN TSB module (ROT/COT Module)

**R387A** Expansion module with 2 QSFP+ 40 GbE ports, Intel XL710-BM2 w/o re-driver

**BPO20A** HDD Backplane with 1 MCIO 8i to 2 NVME 4.0 CONN (SFF-8639)

**R405A** Expansion module with 4 SFP GbE ports, Intel I350-AM4

**R671A** Expansion module with 2 QSFP28 100GbE ports, Intel E810-CAM2

**R406A** Expansion module with 4 RJ45 GbE ports, two pairs Gen3 Bypass, Intel I350-AM4

**NFT801A** Expansion module with 8x SFP+ GbE ports, Intel E810-CAM2

**R445B** Expansion module with 2 SFP+ 10GbE ports, Intel® X710-BM2 w/o Re-driver

**R384B** Expansion module with 8 SFP GbE ports, Intel i350-AM4

**R471D** Expansion module with 8 RJ45 GbE ports with two pairs Gen.3 Bypass, Intel® I350-AM4

**R385B** Expansion module with 8 RJ45 GbE ports, two pairs Gen 3 Bypass, Intel I350-AM4

**NMG801AL** Expansion module with 4 SFP GbE and 4 RJ45 GbE ports, 2 pair Bypass, Intel i350-AM4 with PCIe G2 Switch ASMedia ASM1812, L2R

**R385C** Expansion module with 8 RJ45 GbE ports, Intel I350-AM4

## I/O

