

# SCB-1946C

Edge computing Server

## AEWIN Technologies Co., Ltd.

2U Edge Computing Server with dual AMD Zen5/Zen4c/Zen4 Turin/Bergamo/Genoa processors. Support 2x dual-width PCIe Gen5 x16 (FHFL GPU/FPGA), 4x PCIe Gen5 x8 slots for Network Expansion Module. 2x 2.5" hot-swappable SSD, IPMI, USB3.0, 2x 1GbE, 1x Console, mSATA/mini-PCIe, M.2, Redundant PSU



### Features

- Support Dual AMD EPYC 9005/9004 Series Processors (Turin/Bergamo/Genoa), LGA6096
- Support 16x DDR5 RDIMM memory, up to 6000MHz
- 2x Dual Width FHFL PCIe Gen5 x16 slots (GPU/FPGA), 4x PCIe Gen5 Expansion Module bays
- Support BMC/IPMI & hardware One-Key Bypass function
- Verified with two AMD Instinct MI210 Accelerators

### Description

The SCB-1946C is a high-performance 2U rack-mount network appliance powered by dual AMD Zen5/Zen4c/Zen4 Turin/Bergamo/Genoa processors, delivering breakthrough computing performance with up to 128 cores per EPYC 9005/9004 processor. It supports 16x DDR5 RDIMM channels (up to 6000 MHz) for high-speed memory operation.

The SCB-1946C features 2x dual-width PCIe Gen5 x16 slots for FHFL accelerators (GPU/FPGA) and is verified with dual AMD Instinct MI210 GPUs, making it an ideal computing server for Edge and AI workloads. The system also provides 4x PCIe Gen5 x8 slots for AEWIN self-design functional modules. A variety of network expansion module are available for flexible port configurations, including 1/10/40/100 Gigabit fiber and Gigabit copper/fiber options, with or without BYPASS functionality. Additionally, the expansion bay accommodates 2x hot-swappable U.2 NVMe SSD trays for scalable storage.

### Specifications

#### Processor System

CPU	Support Dual AMD EPYC 9005/9004 Series Processors (Turin/Bergamo/Genoa), LGA6096
System Bus	xGMI up to 32Gbp/s
BIOS	AMI® UEFI BIOS

#### Memory

Technology	Total 16 DIMMs (8 channels per CPU, 1x DIMM per channel, 8 DIMMs per CPU) 16x DDR5 RDIMM memory, up to 6000MHz
Capacity	RDIMM up to total 2TB

#### Expansion

Onboard Expansion Slots	2x Dual Width FHFL PCIe Gen5 x16 slots (GPU/FPGA), 4x PCIe Gen5 Expansion Module bays Verified with two AMD Instinct MI210 GPUs
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#### I/O

USB	External: 2x USB2.0 at Front (CPU0), 1x USB3.0 at Rear (CPU1) Internal: 1 USB2.0 Pin Header (CPU0), 1x USB3.0 Pin Header (CPU1, 1 for Rear USB)
Serial	1x RJ45 Console port (COM1) 2x internal pin header (COM2 & COM3)
Secure Boot	Support OT006B module

#### Ethernet

GbE Ethernet	2x RJ45 1GbE ports on the front panel
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#### Storage

SATA	Support 2x 2.5" SATA HDD or SSD
mSATA/mPCIe	1x socket (co-layout)
M.2	1x M.2 2280 socket (M key) (CPU0 supports PCIe3 x4, CPU1 supports PCIe3x4)

#### Power Supply

Watt	1+1 CPRS 1200W/1300W/1600W AC/DC Redundant power supply
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#### Mechanical and Environment

Form Factor	2U Rackmount
LED	1x Power LED (Green) 1x HDD LED (Red) 2x Status LED (Green/Amber via programmable GPIO)
Dimension (W x D x H)	440 mm(W) x 600 mm(D) x 88 mm(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	20kg
Certification	CE/FCC

#### Packing List

- 1x SCB-1946C unit
- 2x power cord
- 1x CD (Manual, Quick Installation Guide, Utilities & Drivers)

Optional

BP009A	CRPS Power Distribution Board for 2U system	RS054A	5 pin Fan card for FAN module 180D Male connector
BP013A	Backplane with HDD Active LED and HDD Fault LED support 2 2.5", SATA HDD Tray with hot-swappable	RS055A	5 pin Fan card for FAN module 180D Female connector
R594A	TPM 2.0 module via SPI pin header, Temp -20~85degree	RS058A	Riser Card with 4x PCI-E x8 slot to 4x SlimSAS 8i for 3U Layer LAN Module
R642A	I/O card with Console, LAN, USB, 4xLEDs	RS065A	Riser card with high-speed CONN (ExaMax) to 2x SlimSAS 8i connectors
RS041A	Riser card with 2 SlimSAS x8 to 1 PCIe x16 Slot for rear standard PCIe add-on card	RS066A	Riser card with 2x SlimSAS 8i connectors to 1x PCI-E x16 slot
RS042A	Riser card with mSATA CONN to CF socket	ZRS059A	2 PCIe x8 Golden Finger to 1 PCIe x16 Slot with re-driver IC DS80PCI810NJY

I/O

