

SAF6101I Edge Server



Product Applications

- Edge computing services
- SD-WAN gateway
- uCPE applications
- Edge security appliance
- Wi-Fi access controller
- Smart IoT gateway

Product Overview

The SAF6101I Edge Server is an open network appliance based on Intel® Xeon® D-1700 processors. The Edge Server includes a number of flexible options that enable service providers to deliver and deploy innovative services at the network edge with agility and scalability. The system contains two 25G SFP28 ports, eight 1G RJ-45 PoE ports, SATA SSD and M.2 local storage options, PCIe and OCP expansion slots, and 5G WAN and Wi-Fi 5 wireless options, all in a 1RU rackmount form factor.

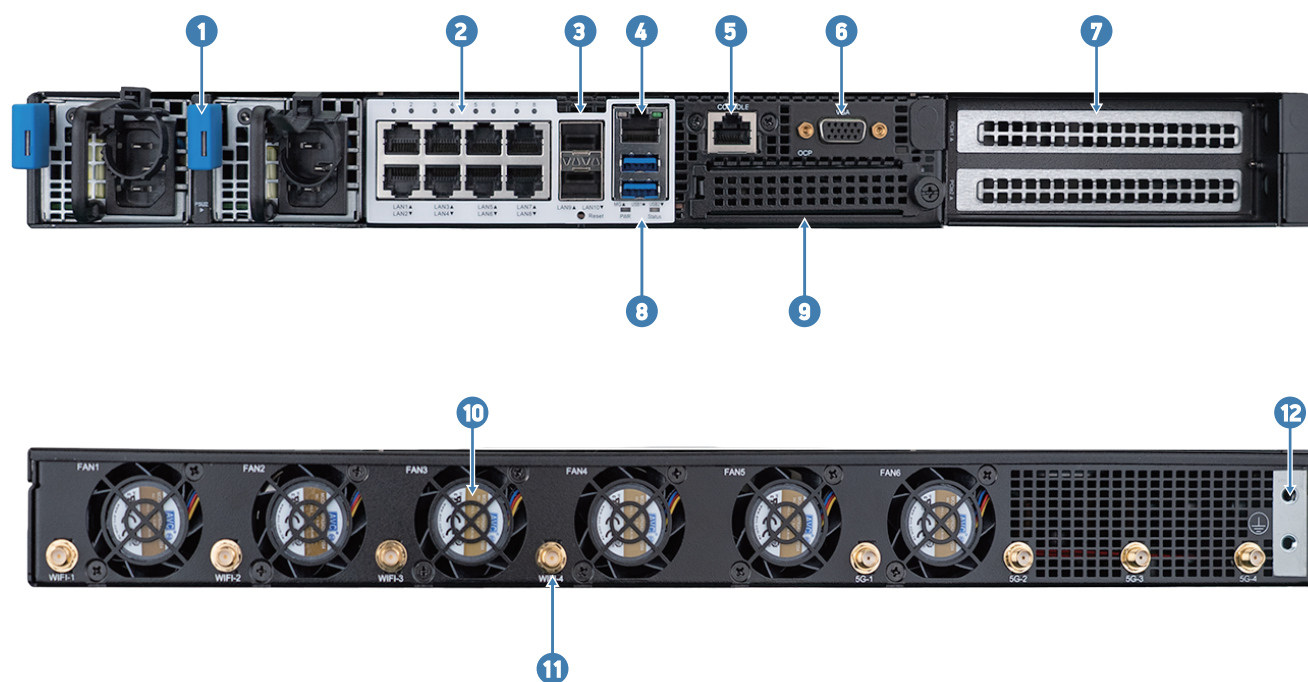
With the dual redundant power supplies, network ports, and expansion slots all accessible on the front panel, the Edge Server is easy to maintain. The OCP NIC 3.0 slot supports various network interface cards, and the PCIe slots allow a choice of AI accelerator, FPGA, GPGPU, or other cards to be installed.

The Edge Server platform is an ideal solution for edge computing applications, where cloud-based IaaS, PaaS, and SaaS services can be extended out to the network edge, close to the source of the data. This delivers improved performance, requires less bandwidth, and reduces latency. Deployed in SD-WAN or uCPE applications, the SAF6101I Edge Server provides increased agility and reduces both CAPEX and OPEX.

Key Features and Benefits

- Intel® Xeon® D-1700 processor with 6 x DDR4 RDIMM memory slots, maximum 2933 MHz, 256GB
- Local Storage Options: 1 x eMMC, 1 x 2.5" SATA SSD, 1 x M.2 PCIe/SATA SSD
- 2 x 25G SFP28 ports, 8 x 1000BASE-T RJ-45 PoE ports
- 2 x PCIe slots, Gen. 4 x8 for add-in cards (up to 225 W power)
- 1 x OCP 3.0 SFF slot for network interface expansion
- 3 x M.2 slots
- Wireless Options:
 - 5G NR M.2 module, with 4x4 MIMO external antennas
 - Wi-Fi 5 dual-band, concurrent, with 2 sets of 2x2 external antennas
- Dual redundant, hot-swappable AC PSUs
- Remote management through a Baseboard Management Controller (BMC)

Interfaces



Description

- | | |
|--|---|
| 1. 2 x AC PSUs | 7. 2 x PCIe card slots |
| 2. 8 x 1G RJ-45 PoE ports | 8. System LEDs |
| 3. 2 x 25G SFP28 ports | 9. OCP NIC 3.0 slot |
| 4. 1000BASE-T RJ-45 Management port, 2 x USB ports | 10. 6 x fans |
| 5. Console port | 11. Wireless antenna connectors (4 x Wi-Fi, 4 x 5G) |
| 6. VGA port | 12. Grounding screw |

Form Factor

1RU rackmount

Processor System

Intel® Xeon® D-1700 processor. Default D-1749NT (10C/20T, 3.0 GHz, 90 W)

Memory

6 x DDR4 2400-2933MHz RDIMM slots, 3 channels.

Max support 256GB

Default 32GB (2 x 16GB in 2 channels)

Networking

2 x 25G SFP28 (2 PFs, 64 VFs, 512 queues, SR-IOV, VEB, EVB, DCB), supports 25GBASE-X and 10GBASE-X

8 x 1000BASE-T (SR-IOV), supports 1000/100/10MBASE-T, IEEE 802.3at PoE PSE

Expansion

1 x OCP 3.0 NIC Slot, SFF, PCIe Gen 4 x8, supports up to 25 W NIC

2 x M.2 B-key slots

1 x M.2 M-key slot

2 x PCIe expansion slots (support PCIe Gen.4 x8 interface each slot)

Supports PCIe x8 per slot

Supports one dual-slot AIC, x16 lanes, max 225 W

Wireless Options

5G NR (FR1), 4x4 MIMO, M.2 module

Wi-Fi 5, IEEE 802.11a/b/g/n/ac, 2.4/5GHz dual-band, concurrent, 2x2

GNSS: 5G NR module built-in, support GPS, Glonass, Galileo, BeiDou, QZSS, M.2 module

Security

TPM 2.0

Management

BMC Chip: ASPEED AST2500

1 x RJ-45 serial console

1 x RJ-45 1GBASE-T Management (BMC)

2 x USB 3.0 Type A

VGA port

Local Storage

1 x eMMC.

1 x M.2 2280 SSD (SATA / PCIe x2)

1 x 2.5" SATA SSD

Default 1 x 64GB eMMC, 1 x 512GB 2.5" SATA SSD

Advanced Technologies

Virtualization: SR-IOV, EVB/802.1Qbg, VEB

Intel Data Plant Development Kit

Intel QuickAssist Technology v1.8 (depends on CPU SKU)

New instructions for AI - Intel AVX 512, VNNI, VBMI

Intel Platform Firmware Resistance

Power Supply

2 x 850 W AC PSUs 1+1 redundant, hot swappable

90–132 VAC, 50–60 Hz, 850W, 12 A max, 180–264 VAC, 50–60 Hz, 850 W, 6 A max.

System Fans

6 system fans, supports Smart Fan

System Power Consumption

850 Watts maximum

OS Support

Pre-installed Ubuntu Linux Server 16.04 LTS

Dimensions

(WxDxH) 442 x 540 x 44 mm (17.4 x 21.26 x 1.73 in.)

Weight

9.82 kg (21.64 lb), with 2 PSUs and 6 fans installed

Environment

Temperature Operating: 5° C to 35° C (41° F to 95° F)

Storage: -40° C to 70° C (-40° F to 158° F)

Humidity Operating: 20% to 90% (non-condensing)

Compliances

Emissions

EN 55032:2015+AC:2016, Class A

EN 61000-3-2:2014, Class A

EN 61000-3-3:2013

FCC Class A

Immunity

EN 55024:2010+A1:2015

IEC 61000-4-2/3/4/5/6/8/11

EN 55035:2017

Safety

UL (CSA 22.2 No 62368-1 & UL62368-1)

CB (IEC/EN60950-1 & IEC/EN 62368-1)