Network Cloud Packet Forwarder

ASA926-18XKE

The ASA926-18XKE is a Network Cloud Packet Forwarder (NCP) featuring 18xOSFP 800G Network Interface (NIF) ports with 20xOSFP 800G fabric interface ports. The ASA926-18XKE can either work independently as standalone network cloud router or can be coupled with an AS9936-128D Network Cloud Fabric (NCF) engine to build a scalable Virtual Output Queue (VoQ) based fabric Distributed Disaggregated Chassis (DDC) network cloud cluster that is optimized to support AI/ML applications.

The ASA926-18XKE supports 14.4 Tbps full-duplex switching and the OSFP network interface ports support an 800 GbE operation mode, as well as being configurable as 2 x 400 GbE mode. The OSFP fabric interface ports can be used as connection interfaces with AS9936-128D fabric engines.

The DDC cluster architecture solution offers the best option for AI back-end networking. It creates a single-Ethernet-hop architecture that is non-proprietary, flexible, and scalable up to 32K-GPU 800G/400G AI/ML cluster. This yields workload Job Completion Time (JCT) efficiency, as it provides a lossless network performance while maintaining an easy-to-build cluster physical architecture.

Key Features

Interfaces
- High-radix 18x800G switch with 20x800G fabric interfaces to couple with AS9936-128D fabric engines for superior scale-out DDC network cloud cluster architecture.
- Supports 800GE and superior system integration with in-house Linear drive Pluggable Optics (LPOs) for lower power consumption and TCO.

General
- Advanced design optimized for AI/ML applications.
- Open-networking-friendly disaggregated architecture for compute-intensive workloads with third-party software
- Enables flat, low latency AI/ML clusters with tens of thousands of GPUs
- Hardware-based link failover for optimized workload resiliency and reduced job completion time (JCT)
- Integrated hierarchical traffic manager with support for thousands of flows
- Supports deep buffers
- Supports 1588v2 PTP Class C
- Supports BMC allowing automatic and remote operations for monitoring and managing platform health status
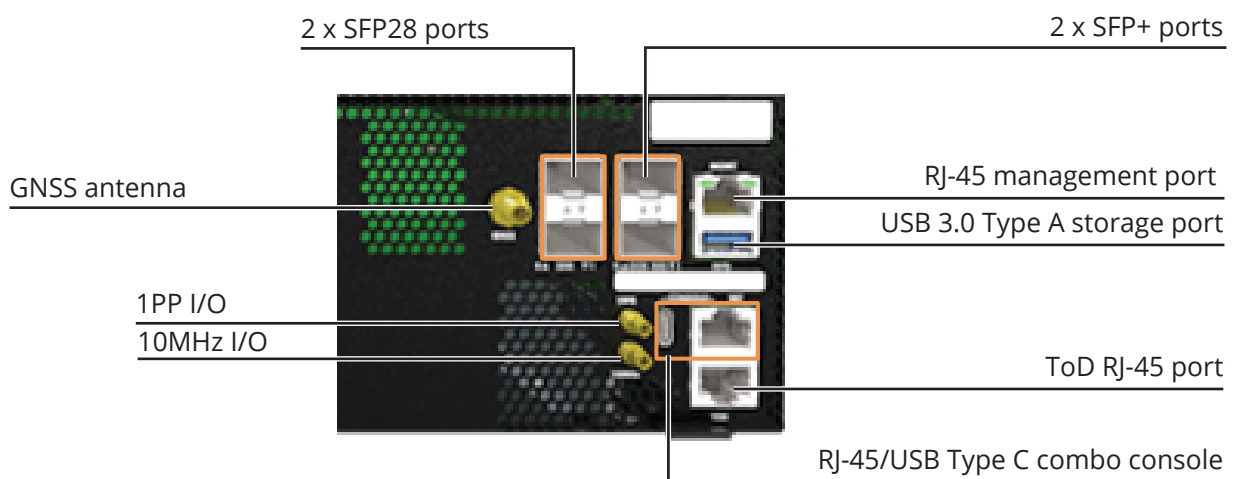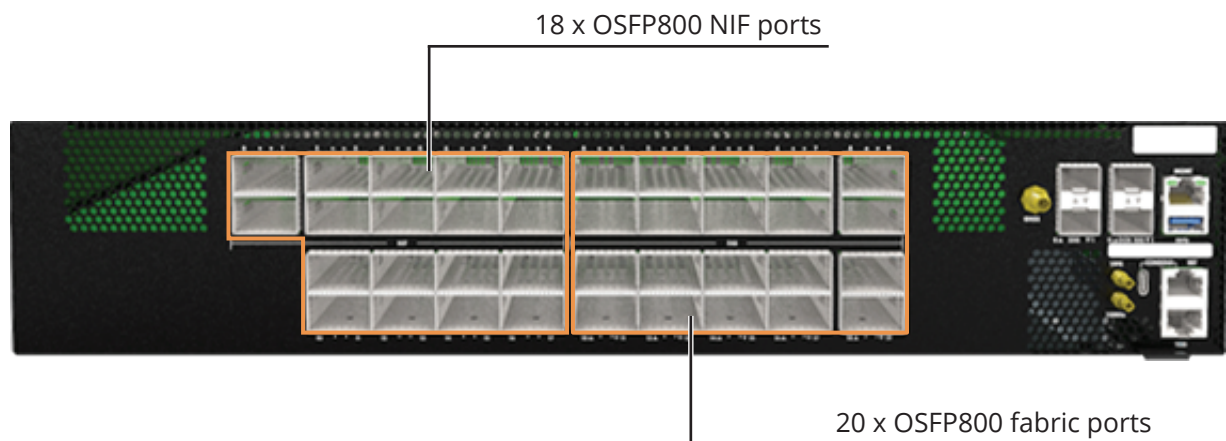
Security
- Supports MACSec
- Supports Platform Firmware Resilience (PFR) to protect the platform from firmware attack and reduce the risk of downtime

Power and Cooling
- 1 + 1 redundant hot-pluggable PSUs
- 3 + 1 redundant hot-swappable fans

Overview

18 x OSFP800 NIF ports

20 x OSFP800 fabric ports

2 x SFP28 ports

2 x SFP+ ports

GNSS antenna

RJ-45 management port

USB 3.0 Type A storage port

1PP I/O

10MHz I/O

ToD RJ-45 port

RJ-45/USB Type C combo console

Accton

Hardware Specifications

Ports

Fixed Service Ports:
    18 x OSFP800 network interfaces
    20 x OSFP800 fabric interfaces
Management Ports on Port Side:
    1 x RJ-45/USB Type C Combo serial console
    1 x RJ-45 100/1000BASE-T management
    1 x USB 3.0 Type A storage
    2 x SFP+ SDN management
    2 x SFP28 in-band management
    1 x reset button
Clocking and Timing Ports:
    1 x 1PPS I/O DIN
    1 x 10MHz I/O DIN
    1 x TOD port
    1 x GNSS antenna

Key Components

Switch Silicon: Broadcom Jericho3 BCM88860
BMC ASIC: AST2600
PFR ASIC: AST1060
CPU Modules:
    Intel COMe module Ice Lake-D D-1734NT 8C
    Memory: 64GB DDR4 (2 x 32GB) with ECC
Storage: NVMe 240G M.2 SSD or 480G (optional)

Performance

Full-Duplex Switching Capability: 14.4 Tbps
Packet Throughput: 5400 Mpps processing rate

Physical and Environmental

Dimensions (HxWxD): 87 mm (H) × 440 mm (W) × 648.2 mm (D)
Weight: 21 kg
Fans: Hot-swappable 3 + 1 redundant fans
Operating Temperature: 0°C to 40°C (32°F to 104°F)
Storage Temperature: -40°C to 70°C (-40°F to 158°F)
Operating Humidity: 5% to 85% (RH), noncondensing

LEDs

OSFP NIF/OSFP Fabric, SFP28, SFP+ Port LEDs: Link Status, Activity, Rate
Ethernet Management Port LED: Link Status, Activity
System LEDs: Diagnostic, Locator, Alarm, PSU and Fan Status

Power

PSUs: 1 + 1 redundant, load-sharing, hot-swappable VAC/VDC
Input Voltage: 200-240 VAC; -48 to -60 VDC
Power Consumption:
    Typical 782 W (w/o optics)
    Maximum 1615 W (with 800G 14 W optics)

Regulatory Compliance

EMI:
    CE Mark
    EN55032 Class A EN55024/35
    EN 301 489-1
    EN 301 489-19
    EN 303413
FCC Part 15 Subpart B Class A EN 300 386
Safety:
    UL 62368-1 Ed.3
    IEC/EN 60950-1
    IEC/EN 62368-1 Ed.3
    UL 60960
Environmental Compliance:
    Storage: ETSI 300 019-2-1 Class T1.2
    Transportation: ETSI 300 019-2-2 Class T2.3
    Vibration: ETS EN 300 019-2-3 Class 3.2/ IEC 60068-2-64
    Operating Bump Test : ETS EN 300 019-2-3 Class 3.2/ IEC60068-2-27
    Acoustic Noise: ETS 300753
    RoHS-6 Compliant

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