

Fixed Configuration Switch Price - Official Technical Overview & Hardware Datasheet

FIXED CONFIGURATION SWITCH PRICE - OFFICIAL TECHNICAL OVERVIEW & HARDWARE DATASHEET

EXECUTIVE SUMMARY

This document provides a comprehensive technical overview of the Fixed Configuration Switch Price portfolio, engineered for enterprises, service providers, and data center operators requiring predictable performance, streamlined procurement, and carrier-grade reliability. The fixed configuration model eliminates modular complexity, delivering deterministic switching capacity, unified software features, and a cost-optimized total cost of ownership (TCO) across access, aggregation, and top-of-rack (ToR) deployment scenarios. All units are factory-validated, fully integrated, and ready for zero-touch provisioning (ZTP) upon power-on.



ARCHITECTURE & CHASSIS DESIGN

The Fixed Configuration Switch Price series is built upon a non-blocking shared-memory switching fabric with integrated packet buffer architecture. Each unit features a sealed, forced-air cooling system with front-to-back or side-to-side airflow options, compatible with standard 19-inch EIA-310-D racks. The chassis is fabricated from zinc-coated cold-rolled steel with electrostatic powder coating (IEC 62368-1 fire-retardant rating). Port-side intake and power-side exhaust ensure thermal alignment with adjacent compute and storage infrastructure. All field-replaceable components — including power supply units (PSUs), fan trays, and transceiver modules — are accessible without chassis extraction or special tooling.

HARDWARE FEATURES

- Non-blocking wire-speed forwarding on all interfaces
- Dual redundant hot-swappable AC/DC power supplies (1+1 architecture)
- Field-replaceable fan tray array (N+1 redundancy)
- Up to 48 x 1/10/25GbE SFP/SFP+/SFP28 ports + 4 x 40/100GbE QSFP28 uplinks
- MAC address table capacity: 128K entries
- IPv4/IPv6 dual-stack forwarding hardware acceleration
- IEEE 802.1Q VLAN support with 4K active VLANs
- Link Aggregation Control Protocol (LACP) across 8 member ports per trunk
- Jumbo frame support up to 9,216 bytes
- Hardware-based sFlow / NetFlow sampling at line rate
- Precision Time Protocol (PTP) IEEE 1588v2 transparent clock

COMPLIANCE & STANDARDS

The Fixed Configuration Switch Price platform complies with international regulatory and industry interoperability standards, including:

- IEEE 802.3 (Ethernet), 802.1D (STP), 802.1w (RSTP), 802.1s (MSTP)
- Energy Efficient Ethernet (EEE) IEEE 802.3az
- RoHS Directive 2011/65/EU, REACH EC 1907/2006

- FCC Part 15 Class A, ICES-003, CE Mark, VCCI-CISPR 32
- EN 55032 (EMI), EN 55035 (EMS), IEC 61000-4-2 through -6
- NEBS Level 3 (GR-63-CORE, GR-1089-CORE) – Optional ruggedized SKU

TECHNICAL SPECIFICATIONS

Hardware Parameters:

- Switching capacity: up to 440 Gbps (full duplex)
- Forwarding rate: up to 655 Mpps (64-byte packets)
- CPU: Quad-core ARM Cortex-A72 at 1.5 GHz
- System memory: 2 GB DDR4
- Flash storage: 8 GB eMMC
- Packet buffer: 12 MB shared
- Latency (store-and-forward): < 1.5 microseconds for 64-byte frames
- Mean Time Between Failures (MTBF): 420,000 hours at 40°C ambient

Parameter	Specification
Form Factor	1RU / 1.75-inch (H) x 17.3-inch (W) x 18.5-inch (D)
Switching Capacity	440 Gbps (full duplex, non-blocking)
Power Supply	1+1 Redundant AC (100-240V, 50-60Hz) or DC (-48V), hot-swappable

Typical Power Consumption	65W (24-port GigE) to 180W (48-port 25GbE)
Operating Temperature	0°C to +45°C (standard), -40°C to +75°C (ruggedized SKU)
Humidity	5% to 95% non-condensing
Acoustic Noise	≤ 45 dBA @ 25 ° C (standard fan speed)

ORDERING OPTIONS

The following SKUs represent the baseline fixed configuration price models. Custom factory configurations (alternate transceiver loads, enhanced airflow, extended temperature range) available under volume procurement agreements.

- SW-FIX-24T-4Y: 24 x 1GbE RJ45 + 4 x 10GbE SFP+, 1RU, single PSU
 - SW-FIX-48T-4Y: 48 x 1GbE RJ45 + 4 x 10GbE SFP+, 1RU, dual hot-swap PSU
 - SW-FIX-48S-4H: 48 x 1/10GbE SFP+ + 4 x 40GbE QSFP+, 1RU, dual PSU
 - SW-FIX-24X-4C: 24 x 1/10/25GbE SFP28 + 4 x 100GbE QSFP28, 1RU, dual PSU,
- PTP
- SW-FIX-RUG-12P: 12 x 1GbE PoE++ (90W) + 2 x 10GbE SFP+, industrial temp

(-40°C to +75°C), sealed chassis

- SW-FIX-ACC-8F: 8 x 100GbE QSFP28, 1RU, low-latency mode (sub-600ns)



DEPLOYMENT NOTES

All Fixed Configuration Switch Price units ship with: two AC power cords (C13-C14), rack-mount brackets (front and center-mount), console cable (RJ45-DB9F), ground lug kit, and Quick Start Guide. Software license (Base OS) included; advanced features (MPLS, VXLAN, EVPN) require add-on license key. Factory warranty: 5 years hardware, 90 days software. Extended support (NBD onsite, 24x7 TAC) available as separate line item. For pricing, refer to the current price book or contact authorized distribution partners. Specifications are subject to change without notice.