Stackable Edge Switch Wholesale - Official Technical Overview & Hardware Datasheet

STACKABLE EDGE SWITCH WHOLESALE

OFFICIAL TECHNICAL OVERVIEW & HARDWARE DATASHEET

EXECUTIVE SUMMARY

The Stackable Edge Switch Wholesale platform represents a paradigm shift in access-layer and edge network economics, delivering carrier-grade reliability, wire-speed performance, and unmatched deployment flexibility for wholesale and high-volume channel partners. Engineered for managed service providers, campus edge aggregation, and industrial IoT backbones, this hardware family combines physical stackability with advanced Layer 3 dynamic routing to reduce operational overhead while expanding per-port feature density.

Designed specifically for wholesale distribution models, the switch eliminates proprietary lock-in through standards-compliant management interfaces (full CLI, SNMPv3, RESTCONF) and interoperable transceiver support. Every unit undergoes 48-hour burn-in testing and ships with a common spare parts inventory framework to minimize field maintenance costs.



HARDWARE ARCHITECTURE & SILICON

At the core of the platform lies a merchant silicon forwarding ASIC with a non-blocking shared memory packet buffer. The architecture segregates control plane and data plane processing via a dual-core ARM Cortex-A53 CPU complex (1.2 GHz) and a dedicated TCAM engine for IPv4/IPv6 forwarding tables. The switch fabric supports physical stacking of up to 8 units through two integrated QSFP+ stack ports (40Gbps per stack link), creating a single logical switching domain with distributed link aggregation across member units.

Passive copper backplane connectors and a high-efficiency VRM design ensure that stacking bandwidth remains uncongested even under full line-rate traffic. The silicon also embeds hardware-based sFlow sampling (1:1, 1:1024 ratios) and remote packet mirroring (RSPAN, ERSPAN) for wholesale monitoring

overlays.

KEY FEATURES & ROUTING LOGIC

- Stackable Physical Architecture: 8-unit maximum stack, 320 Gbps stack fabric bandwidth, single IP management across stack members.
- Layer 3 Feature Set: OSPFv2/v3, BGP-4 (limited prefix scale up to 16k routes), static routing, VRF-lite, policy-based routing (PBR).
- High-Density Edge Interfaces: 48x 1/10GBASE-T (RJ45, 30m at 10G) + 4x 25G SFP28 uplinks + 2x 40G stacking ports (shared with uplink ports via breakout modes).
- Forwarding Engine: 1.44 Tbps non-blocking switching capacity, 1,070 Mpps forwarding rate (64-byte packets).
- Energy Efficiency: 80 PLUS Titanium power supplies, port auto-power-down, EEE 802.3az, idle power draw < 55W.

COMPLIANCE & STANDARDS

IEEE 802.1Q (VLAN tagging, QinQ), IEEE 802.1ad (Provider Bridging), IEEE 802.1w (RSTP), IEEE 802.1s (MSTP), IEEE 802.3ad (Link Aggregation, LACP), IEEE 802.1X (port-based authentication), RFC 2328 (OSPFv2), RFC 4271 (BGP-4 limited support). The hardware is certified to EN 55032 Class A, FCC Part 15

Subpart B Class A, VCCI-CISPR 32, and carries CE, UKCA, RCM marks. Safety compliance includes IEC 62368-1, UL 60950-1 (grandfathered), and NEBS Level 3 (GR-63-CORE, GR-1089-CORE) for carrier environmental hardening.

TECHNICAL SPECIFICATIONS

Parameter	**Specification**
Form Factor	1RU Rack-mount (stackable up to 8 units)
Switching Capacity	1.44 Tbps (non-blocking, full duplex)
Power Supply	Dual 550W hot-swappable redundant AC (100-240V, 50/60Hz) or -48V DC option
MTBF (predicted)	385,000 hours @ 40 °C GB, 310,000 hours @ 50°C (Telcordia SR-332)
Typical / Max Power Draw	75W typical (no optics) / 195W max (full PoE+ load + stacking)
Operating Environment	0 ° C to 50 ° C, 10% to 90% non-condensing humidity
Acoustic Noise	42 dBA (typical fan speed), 62 dBA (max speed)
Packet Buffer Memory	12 MB shared buffer (dynamic per

	port)
MAC Address Table	32,000 entries
Jumbo Frame Support	9,600 bytes

ORDERING SKU INFORMATION

- SSW-484T-4S28: 48x 10GBASE-T, 4x 25G SFP28, dual AC PSUs, 2x stack ports.
- SSW-484T-4S28-DC: Same as above with -48V DC power inputs (dual feed).
- SSW-4M-STK-KIT: Stacking cable kit (0.5m, 1.5m, 3m passive copper).
- SSW-FAN-TRAY: Hot-swappable fan tray unit (front-to-rear airflow).
- SSW-AC-PSU-550: Spare 550W AC power supply module.

All SKUs include 3-year hardware warranty with NBD advance replacement and perpetual software license (no subscription fees). Wholesale volume discounts available for orders of 100+ units.


10GbE
10GbE
1GbE