stackable gigabit switch bulk - Official Technical Overview & Hardware Datasheet

PRODUCT OVERVIEW & MARKET POSITIONING

Engineered for enterprise aggregation layers and carrier-edge deployments, the stackable gigabit switch bulk series delivers high-density Gigabit Ethernet connectivity with true physical stacking architecture. Designed to unify up to eight individual units into a single logical chassis, this platform eliminates spanning-tree complexities while providing sub-50ms link failover. The bulk SKU configuration is specifically optimized for large-scale infrastructure rollouts, data center top-of-rack deployments, and campus distribution networks requiring predictable forwarding performance and operational simplicity.

HARDWARE ARCHITECTURE & CHASSIS DESIGN

The switch employs a modular, fan-out backplane design supporting mixed fiber and copper interfaces across all 48x 10/100/1000BASE-T ports and 4x 10G SFP+ uplinks. Stacking is accomplished via dedicated 40G QSFP+ stack ports (two per unit), achieving a 160Gbps stack ring bandwidth. Internal airflow is front-to-back with N+1 redundant fan assemblies, enabling hot-swap replacement without service interruption. The bulk packaging variant streamlines procurement for projects exceeding 50 units, reducing per-unit logistics costs while maintaining identical hardware revision control.

HARDWARE FEATURES & REDUNDANCY MECHANISMS

- Physical stacking: Up to 8 units, 384 Gigabit ports + 32x 10G uplinks per stack
- Single IP management with distributed link aggregation (LACP cross-stack)
- Hot-swappable power supplies: 1+1 redundant AC (100-240V) or DC (-48V) options
- IEEE 802.3az Energy Efficient Ethernet (EEE) for idle port power reduction
- Hardware-based IPv4/IPv6 routing: 32k host table, 16k route entries
- Jumbo frame support up to 12kB
- Layer 2 feature set: 802.1Q VLAN (4k active), MSTP, IGMP snooping, GVRP
- Layer 3 base features: Static routes, RIP, OSPFv2, VRRP

COMPLIANCE & STANDARDS CERTIFICATION

This platform holds full CE, FCC Part 15 Class A, VCCI, and RCM certifications for global deployment. Safety compliance includes IEC 62368-1, UL 60950-1, and CB Scheme. Environmental adherence to RoHS2, REACH, and WEEE directives. NEBS Level 3 compliance is available for GR-63-CORE and GR-1089-CORE on DC-powered SKUs. The bulk switch array carries an MTBF of 310,000 hours (MIL-HDBK-217F, 40°C ground benign).

TECHNICAL SPECIFICATIONS

Parameter	Specification
Form Factor	1RU Rack-mountable (19-inch EIA standard)
Switching Capacity	176 Gbps (non-blocking, full-duplex)
Forwarding Rate	132 Mpps (64-byte packets)
Power Supply	1+1 Redundant, hot-swappable AC 100-240V (max 65W)
Stacking Bandwidth	160 Gbps (80G bidirectional per ring)
MAC Address Table	32K entries
Packet Buffer	12 Mbit shared
Fan Configuration	4x N+1 hot-swappable fan trays, front-to-back airflow

PHYSICAL & ENVIRONMENTAL LIMITS

Operating temperature: 0°C to 50°C (32°F to 122°F) – Extended range SKU: -5° C to +65°C

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

Humidity: 5% to 95% non-condensing

Acoustic noise: 52dB at 25°C ambient (dual fan tray)

Dimensions (HxWxD): 44mm x 440mm x 350mm (1RU)

Weight: 5.8kg (fully populated, no transceivers)

ORDERING OPTIONS & BULK KITS

Standard SKU: SGS-B48T4X – 48xGE-T + 4x10G SFP+, 2x stack ports, dual AC PSU

Bulk Pallet SKU: SGS-B48T4X-BLK – 20 units per pallet, factory firmware alignment, reduced carton packaging

DC power SKU: SGS-B48T4X-DC – same port configuration, -48VDC input, NEBS ready

Stack cable kit: SGS-STK-Q40-0.5M / 1M / 3M – 40G passive copper stack cables

LIFECYCLE & SUPPORT FRAMEWORK

All bulk units share a 5-year hardware warranty with advance replacement NBD shipping for critical regions. Software maintenance releases and security patches are provided for 7 years from last-time-buy date. End-of-life notification follows a 12-month discontinuance timeline, allowing bulk infrastructure projects sufficient migration headroom.