

## Small Business Multi-WAN Load Balancing Router - Official Technical Overview & Hardware Datasheet

### PRODUCT OVERVIEW & MARKET POSITIONING

The Small Business Multi-WAN Load Balancing Router (Model Series: SB-R3000) represents a paradigm shift in edge connectivity for the distributed enterprise. Designed to eliminate single points of WAN failure and aggregate diverse broadband links (Fiber, DSL, 5G/LTE), this platform delivers carrier-grade link redundancy at a cost-optimized entry point.



### CORE ARCHITECTURE & CHASSIS DESIGN

The SB-R3000 is housed in a compact, fanless 1RU hardened metal chassis measuring 9.8 x 6.2 x 1.7 inches. The architecture is built around a dedicated

Network Processing Unit (NPU) offloading session-based load balancing from the main CPU. Passive thermal dissipation enables silent operation in open office environments while supporting 0°C to 45°C ambient temperatures.

#### HARDWARE FEATURE MATRIX

- WAN PORTS: 4x Gigabit Ethernet (Copper) configurable as either WAN or LAN
- LAN Switching: 4x Gigabit Ethernet (Copper) with integrated 802.1Q VLAN
- USB Extension: 1x USB 3.0 for LTE modem failover or configuration backup
- Console Port: 1x RJ45 Serial (115200 default)
- Load Balancing Algorithms: Weighted Round Robin, Least Latency, Packet Hash, and Failover Only
- Session Persistence: Source IP, Destination IP, and Round Robin sticky modes

#### TECHNICAL SPECIFICATIONS

Parameter	Specification
Form Factor	1RU Compact (Fanless / 9.8 x 6.2 x 1.7 inches)
Switching Capacity	2.0 Gbps (Full-duplex wire-speed)
Concurrent Sessions	50,000 (stateful firewall tracking)
Power Supply	External 12VDC / 2A (12W typical)

	consumption)
Weight	1.2 kg (2.65 lbs) chassis only
MTBF (Telcordia SR-332)	285,000 hours at 25°C

## PROTOCOL & INTEROPERABILITY LAYER

The control plane supports full dynamic routing with RIP v1/v2, static route leak, and Policy-Based Routing (PBR) to steer traffic by application signature or DSCP tag. The unit acts as a transparent bridge for PPPoE passthrough and includes Deep Packet Inspection (DPI) for application-aware load distribution. IPsec VPN performance is hardware-accelerated up to 350 Mbps with concurrent 30 VPN tunnels.

## QUALITY OF SERVICE & TRAFFIC MANAGEMENT

Per-port hierarchical QoS with 8 hardware queues supports Low Latency Queuing (LLQ) and Class-Based Weighted Fair Queuing (CBWFQ). The SB-R3000 can shape traffic at 1Kbps granularity and includes Smart Queue Management (SQM) for bufferbloat mitigation.



## ORDERING INFORMATION & SKU GUIDE

Base Unit (SB-R3000-00): 4x WAN + 4x LAN, fanless chassis, external 12VDC PSU.

Advanced Security Bundle (SB-R3000-SEC): Adds DPI, IPS/IDS signatures, and content filtering.

LTE Failover Bundle (SB-R3000-LTE): Includes USB LTE dongle adapter and external antenna kit.

Rack Mount Kit (RMK-1U-3000): 1RU flush-mount ears for two units side-by-side.