cloud-managed network router wholesale - Official Technical Overview & Hardware Datasheet

CLOUD-MANAGED NETWORK ROUTER WHOLESALE: OFFICIAL TECHNICAL OVERVIEW & HARDWARE DATASHEET

EXECUTIVE SUMMARY

The proliferation of distributed enterprise sites, branch locations, and multi-tenant service provider edge networks demands a routing platform that unifies hardware performance with cloud-native orchestration. The cloud-managed network router wholesale series represents a paradigm shift in wide-area connectivity: a carrier-grade, hardware-accelerated routing appliance that is fully provisioned, monitored, and optimized via a centralized cloud controller while maintaining wire-speed forwarding and full Layer 3 feature parity with traditional on-premise infrastructure. Designed specifically for wholesale distribution channels, system integrators, and managed service providers, this platform reduces operational expenditure through zero-touch provisioning, template-based configuration, and real-time telemetry without sacrificing forwarding plane integrity.



HARDWARE ARCHITECTURE & SILICON

At the core of the cloud-managed network router wholesale lies a purpose-built network processor (NPU) with a non-blocking shared memory packet buffer architecture. The data plane operates independently from the cloud control plane: even during intermittent WAN connectivity to the orchestrator, the forwarding engine continues to apply policy, perform NAT, and execute QoS at line rate. The control CPU complex is isolated to handle management plane tasks, IPsec crypto offload, and NetFlow/ sFlow telemetry generation, ensuring that routing table updates and BGP graceful restart mechanisms never interfere with packet forwarding.

Dual hot-swappable power supply units (AC or DC) and field-replaceable fan trays provide N+1 redundancy, achieving 99.999% uptime in typical

deployments. The chassis is hardened for temperatures from 0°C to 50°C, making it suitable for both controlled data centers and unconditioned MDF/IDF rooms.

KEY FEATURES & ROUTING LOGIC

- CLOUD-NATIVE ORCHESTRATION: Full lifecycle management via HTTPS/TLS 1.3 to regional cloud gateways. Supports ZTP (Zero Touch Provisioning), configuration versioning, and scheduled rollback.

- WIRE-SPEED L3 FORWARDING: 8 Mpps (64-byte packets) to 25 Mpps (IMIX) per 1RU unit. Hardware-based longest prefix match (LPM) with up to 512,000 IPv4 / 256,000 IPv6 routes.

- VPN & SECURITY FABRIC: Hardware-accelerated IPsec (up to 4 Gbps AES256-GCM), MACsec on all WAN-facing ports, and stateful firewall ACLs processed in the NPU without CPU intervention.

- DYNAMIC ROUTING PROTOCOL SUITE: OSPFv2/v3, BGP (full IPv4/IPv6 unicast, with add-path), IS-IS, and VRRPv3. Full MPLS support including LDP, L3VPN, and Segment Routing (SR-MPLS) for wholesale carrier applications.

- INTELLIGENT TRAFFIC STEERING: Application-aware routing based on live latency, jitter, and packet loss metrics forwarded from cloud telemetry engine; automatic WAN failover (<50 ms).

COMPLIANCE & STANDARDS

The platform complies with NEBS Level 3, ETSI EN 300 386, FCC Part 15 Class A, CE, and RoHS. Routing certifications include MEF 3.0 (E-Line, E-LAN), IPv6 Ready Logo Phase 2, and UPnP Forum certification for CPE use cases. All hardware crypto modules are FIPS 140-2 Level 2 validated.

TECHNICAL SPECIFICATIONS

Parameter	**Specification**
Form Factor	1RU standard, 19-inch rackmount (or optional 2RU for high-density SKU)
Switching Capacity	80 Gbps (non-blocking) – 240 Gbps (high-density aggregation model)
Power Supply	Dual hot-swappable redundant AC (100-240V ~ 50/60Hz) or DC (-48V)
Forwarding Rate	25 Mpps (64B) to 50 Mpps (high-density model)

DRAM / Flash	4 GB DDR4 / 8 GB eMMC (control plane) + dedicated NPU packet buffer 32 MB
Management Ports	1x RJ45 out-of-band management (10/100/1000), 1x USB-A console
Operating Temperature	0°C to 50°C (short-term -5°C to 55°C)
MTBF (Telcordia SR-332)	385,000 hours (1RU model with dual PSU)

ORDERING SKU INFORMATION

cloud-managed network router wholesale - 4x 1GE SFP + 4x 1GE RJ45, 8 Gbps IPsec, 25 Mpps: SKU CMNR-W-1000

cloud-managed network router wholesale - 8x 10GE SFP+ with 2x 40GE uplinks, 16 Gbps IPsec, 50 Mpps: SKU CMNR-W-10G

cloud-managed network router wholesale - High-density aggregation, 12x 10GE SFP+ MACsec, dual PSU: SKU CMNR-W-AGG

Accessory - Cloud orchestrator perpetual license (1 year support): SKU-CMNR-CLOUD-LIC

