



Router 6676

The Router 6676 is a high-capacity cell site router, designed to enable high quality network performance in advanced 4G/5G radio networks in a very energy efficient way.

Router 6676 provides high density 1/10/25GE and 100GE ports with 360Gbps switching capacity in a compact, less than 300mm deep, and environmentally hardened 1RU form factor. The Router 6676 switch processor natively supports SRv6 without performance impacts.

Router 6676 supports VPN services over IP/MPLS/SRv6 networks, service provider SDN service exposure using NETCONF/YANG, hierarchical quality of service and advance synchronization features.

The high capacity, low latency and precise synchronization are optimized to maximize the 5G performance enhancements such as ESS, COMP and Carrier Aggregation that enable efficient use of spectrum.

The Router 6676 has strong node security features such as vendor credential and vendor software authentication ensuring data security even in insecure environments.

The Router 6676 is part of the Ericsson Router 6000 Series, a RAN integrated and service provider SDN enabled IP transport family of products.

The Router 6000 series offers a range of high-performance routers with resiliency features and form factors optimized for the various needs of metro, backhaul and fronthaul networks.

Ericsson Network Manager (ENM) manages the complete end-to-end network for both Mobile and Fixed deployments: Radio, Metro and Backhaul, Mobile Core, and Data Center. This enables seamless plug and play capabilities for radio and router installation and network operation.

Ericsson Transport Automation Controller (ETAC) is an intelligent, cloud-native transport controller that uses AI and ML to analyze and automate microwave, IP and optical networks, allowing an easy and cost-effective management of IP transport network

Meeting the strictest radio requirements

360Gbps switching capacity in a 1RU compact and hardened form factor enabling lower rental costs and lower OPEX. Native 25GE ports for baseband connection and 100GE ports for uplink. The Router 6676 has low latency native SRv6 support without performance degradation.

Precise and proven synchronization

5G enhancements, such as advanced coordination and carrier aggregation that enable higher capacities, have strict synchronization requirements. The Router 6676 can act as a PTP grandmaster or boundary clock to provide resilient and robust frequency and time/phase synchronization to the basebands and vDUs. It meets the stringent Class C timing requirements. The Ericsson synchronization solution comes pre-verified to work with RAN.

SDN capabilities and programmability

Provides application aware traffic engineering with open and standardized interfaces, enabling network slicing and ability to tailor services for utmost agility.

Designed for low CAPEX and OPEX

Router 6676 uses highly integrated merchant silicon and advanced fan speed algorithms in an efficient way to minimize the power consumption and save OPEX. Filter less design removes frequent costly frequent air filter inspections, resulting in \$1000 yearly OPEX savings/site.

Strong Security

Router 6676 provides secure boot, vendor credential that enables ubiquitous deployments in trusted and untrusted environments.

Radio integrated Transport

Provides tight hardware and mechanical integration as part of Ericsson Radio System and allows for significantly easier deployment and lower overall TCO.

Technical specification for Router 6676

Connectivity

Interfaces:	4x100GE QSFP28, 20x1GE/10GE/25GE SFP28, 1x1GE RJ45 1x 100 / 1000 Base-T Ethernet for Out-of-Band Management 1x RJ45 console port 1x RJ45 Alarm ports for 3 input and 1 output alarms contacts 1x USB , type C, port for file uploads and downloads
Synchronization interfaces:	1x RJ45 ports 1PPS+TOD input/output

Mechanical

System weight:	Fully configured chassis: 7.0kg / 15.4lbs
Dimension (H x W x D):	44mm x 444mm x 280mm
Air flow:	Filter-less design, Front to Back with field swappable fan tray

Electrical

Power supply DC:	-48 VDC, Dual Feed
Power Consumption	Typical 95 Watts, Max (with optics) 175 Watts

Environmental

Operating Temperature:	-40°C to +65°C
Relative Humidity:	5 - 95% Non-condensing

Key features

IP/MPLS:	IPv4, IPv6, BGP-4, MP-BGP, BGP FRR, BGP-LS, IS-IS, OSPFv2/v3, VRRPv2/v3, LFA/RLFA/TI-LFA, RSVP-TE including FRR, LDP, T-LDP, mLDP, Segment Routing MPLS, Segment Routing IPv6(SRv6), PCEP, Seamless MPLS, CSPF, Routing policy, Policy based routing, DHCP client/relay/Server, Segment Routing IPv6 (SRv6), SRv6 SID compression
Ethernet:	802.1Q virtual LAN (VLAN), 802.1ad Provider Bridge, IEEE 802.3ad Link Aggregation Control Protocol, BVI – Bridged Virtual Interface, QinQ, G.8032 Ethernet Ring Protection Switching, BUM storm protection, Jumbo Frame up to 9600 bytes
Layer-2/Layer-3 Virtual Private Networking:	L3 MPLS VPNs, 6VPE/6PE, Inter-autonomous-system MPLS VPN (options A, B, C), VPWS for E-Line Services, VPLS/H-VPLS for E-LAN Services, Pseudowire redundancy, MEF CE1.0/2.0 Compliant, Ethernet VPN for E-Line & E-LAN Services, mEthernet VPN IRB
Multicast Protocols:	IPv4/IPv6 multicast, PIM-SM/SSM, IGMP v1/v2/v3, MLDv2, MVPN, IGMP snooping
Timing and Synchronization:	IEEE 1588-2008 Precision Time Protocol, ITU-T Profiles for Frequency (G.8265.1 SOOC) and Time/Phase (G.8275.1 T-BC/GM & G.8275.2 T-BC/GM), Class C performance, NTP, SyncE with ESMC, Enhanced SyncE, Stratum 3E clock, L1 Assist holdover, PTP quality measurement & monitoring
Operation and Maintenance:	IEEE 802.1ag Connectivity Fault Management, ITU-T Y.1731 (DM, SLM and Throughput), 802.3ah Ethernet OAM, Microwave Bandwidth Notification, Port Loopback, MACSWAP, MPLS Ping /Traceroute, BFD IPv4 & IPv6 Single Hop, BFD IPv4 & IPv6 Multi Hop, Micro-BFD, TWAMP Reflector, TWAMP Initiator, TWAMP Server, Port Mirroring, LLDP, IPFIX (IP Flow Information Export, Event Manager
Security:	Secure boot, Vendor credential, secured storage, Control plane protection, Access Control lists, RADIUS, TACACS+, LDAP, SSH v2, Reverse-path forwarding, CMPv2, CRL, TLS, 802.1x port-based network access control, Routing authentication, IPsec
Quality of Service:	Strict-queuing, WFQ, priority-WFQ, 3-level Hierarchical QoS, Deep packet buffers, RED/Weighted RED, Ingress policing, Egress shaping, 802.1p, MPLS EXP bits, DiffServ
Network Management:	Ericsson Network Manager (ENM), CLI, SNMP v2c/v3, NETCONF, YANG models, Syslog, RMON, Fault Management, Configuration Backup & Restore, Performance Management Job, Zero Touch Provisioning, Telemetry Streaming

Standards and specifications

Safety:	LVD Directive 2014/35/EU, IEC/EN 62368-1, CFR 29 Part 1910, UL/CSA 62368-1
EMC:	EMC Directive 2014/30/EU, EN 300386, EN 301489-1, CISPR 32, EN 55032, CISPR 35, EN55035, EN 50121-1, EN 50121-4, EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4, EN 300132-2, ES 201468, DTAG 1 TR 9; CFR 47 Part 15, ICES-003; VCCI V-3
ENV:	RoHS Directive 2011/65/EU, WEEE Directive 2012/19/EU, EN 300 019-2-1, EN 300 019-2-2, EN 300 019-2-3, EN 300 753
NEBS:	GR-1089-CORE, GR-63-CORE, SR-3580 (NEBS Level 3), GR-3108-CORE, ATT-TP-76200, VZ.TPR.9203, VZ.TPR.9205, VZ.TPR.9305