Router 6675

The Router 6675 is a high capacity pre-aggregation and aggregation router, designed to enable high quality network service delivery while at the same time lowering operating costs through features such as a completely filter-less mechanical design. It provides high 10GE and 100GE port densities in a compact and hardened 1RU form factor enabling lower rental costs and lower OPEX. It supports VPN services over IP/MPLS networks, service provider SDN, service exposure using NETCONF/YANG, extensive quality of service and precise synchronization features. The Router 6675 has strong security features such as IPSec, vendor credential and vendor software authentication ensuring data security even in insecure environments. With 320Gbps of switching capacity, the Router 6675 delivers performance needed to fully support LTE, LTE Advanced, 5G, access sites for years to come.

The Router 6675 is part of the Ericsson Router 6000 Series, a radio integrated, service provider SDN enabled and subscriber aware IP transport family of products. The Router 6000 offers a range of high-performance routers with resiliency features and form factors optimized for the various needs of metro and backhaul networks.

The Ericsson Router 6000 Series is an essential component of the Ericsson Radio system and is tightly integrated with Ericsson Radio and Microwave to provide high capacity mobile backhaul with unprecedented quality of experience. All routers in the Ericsson Router 6000 Series run the IP Operating System (IPOS), enabling accelerated feature delivery and operational efficiencies. 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.

Meeting the strictest radio requirements
Provides high 10GE density with 100GE support and 320Gbps switching capacity in a 1RU compact and hardened form factor enabling lower rental costs and lower OPEX.

Precise and proven synchronization
LTE-A enhancements such as COMP and e-ICIC that enable efficient use of spectrum have strict synchronization requirements. The Ericsson synchronization solution comes pre-verified to work with Radio.

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 6000 series uses merchant silicon and a cost optimized design to lower CAPEX. Filter less design removes costly truck rolls every 3 months to inspect the filters, resulting in $1000 yearly OPEX savings/site.

Strong Security
Strong and complete security solution for Macro cell, Small Cell and Aggregation in trusted and untrusted environments enables ubiquitous deployments.

Radio integrated Transport
Provides Radio aware transport for mobile backhaul enabling improved Quality of Experience for end users. Tight hardware and mechanical integration as part of Ericsson Radio System allows significantly easier cell site deployment and lower overall TCO.
Technical specification for Router 6675

Connectivity

Interfaces:
- 24x GE / 10GE SFP+ ports
- 4x QSFP28 ports each can be configured as 4x 10GE, 4x 25GE, 1x 40GE or 1x 100GE
- 1x 10/100 Base-T Ethernet for Out-of-Band Management
- 1x RJ45 console port
- 1x RJ45 Alarm port for 3 input and 1 output alarm contacts
- 1x USB 2.0 port

Synchronization interfaces:
- 1x RJ45 port 1PPS+TOD (ITU-T G.703 Amd1)
- 1x RJ48C port for 2.048 MHz, E1/T1 (BITS) input/output

Mechanical

System weight: 8kg / 17.6lbs
Dimension (H x W x D): 1RU 43.6mm x 442.8mm x 315mm
Air flow: Filter-less design, Front to Back with field swappable fan tray

Electrical

Power supply DC: -48 VDC, dual feed
Power consumption: Typical 158 Watts, Max 225 Watts

Environmental

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

GR-3188-CORE Class 1: Controlled Protected Environments
GR-3188-CORE Class 2: Protected Equipment in Outside Environments
EN 500 019-1-3 Class 3.3: Not temperature-controlled locations

Key features

IP Routing MPLS:
- IPv4, IPv6, BGP-4, MP-BGP, BGP FRR, BGP-LS, IS-IS, OSPF v2/v3, VRRPv2/v3, LFA/RLFA, RSVP-TE including FRR, LDP, T-LDP, mLDP. Segment Routing, PCEP, Seamless MPLS, CSPF, Policy Based Forwarding, DHCP relay/Server, NSR support for OSPFv2, v3, ISIS, BGP, mLDP, mLDP *, EVPN
- IPv8.1q virtual LAN (VLAN), IEEE 802.3ad Link Aggregation Control Protocol, BVI – Bridged Virtual Interface, QinQ, G.8032 Ethernet Ring Protection Switching, Broadcast storm protection, LLDP, Jumbo Frames up to 9800 bytes

Layer-2/Layer-3 Virtual Private Networking:
- L3 MPLS VPNs, 6VPE, Inter-autonomous-system MPLS VPN (options A, B, C), VPWS for E-Line Services, VPLS/H-VPLS for E-LAN Services, Pseudowire redundancy, MEF CE 1.0/2.0 Compliant

Multicast Protocols:
- IPv4/IPv6 multicast, PIM-SM/SSM, IGMP v1/v2/v3, MLVdV, MVPN

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), NTP, SyncE with ESMC, Stratum 3E clock, L1 Assist for FTP

Operation and Maintenance:
- IEEE 802.1ag Connectivity Fault Management, ITU-T Y.1713 (DM, SLM and Throughput), Microwave Bandwidth Notification, MACSWAP, MPLS Ping/Traceroute, BFD IPv4 & IPv6 Single Hop, BFD IPv4 & IPv6 Multi Hop, Micro-BFD over LAG, TWAMP Reflect, TWAMP Initiator, Port Mirroring

Security:
- Secure boot, Vendor credential, Secured storage, Access control lists, RADIUS, TACACS+, LDAP, SSH v1/v2, MD5 support for routing protocols, Reverse-path forwarding, IPSec up to 6Gbps, IKEv2, CMPv2, CRL

Quality of Service:
- Strict-queuing, weighted fair queuing, priority-weighted fair queuing, Multi-tier Hierarchical QoS, 24Gb of packet buffers, RED/Weighted RED, Ingress policing, Egress shaping, 802.1p, MPLS EXP bits, Differentiated Services

Network Management:
- Management by Ericsson Network Manager (ENM), Management by Ericsson OSS-RC, Management by Ericsson ServiceOn Element Manager (SoEM), CLI, SNMP v2c/v3, NETCONF, YANG models, Syslog, RMON, PM, Job, Zero touch provisioning with auto-integration, Telemetry Streaming *

Standards and specifications

Safety:

EMC:
- EMC Directive 2014/30/EU, EN 38086, CISPR 32, EN 55032, CISPR 24, EN 55024, EN 55011, EN 55012-1, EN 61100-6-1, 61100-6-2, 61100-6-3, 61100-6-4, 60801-2-2, ES 261448, TR 10-9; CTR 47 Part 15; CEN-EN 55032; VCCI V-3

ENV:

NEBS: GR-1089-CORE, GR-65-CORE, SR-3580 (NEBS Level 3), GR-3188-CORE, ATT-TP-76200, VZ.TPR.9203, VZ.TPR.9205, VZ.TPR.9305

*Future release