8609 Smart Router
Modular Access Router With Extensive Switching and Interface Capacity for LTE Plus Multiservice Support

The Coriant 8609 Smart Router provides a cost-efficient, seamless way to convert a mobile access network from an E1/T1 TDM network to an Ethernet-based packet network without the need to update any of the radio access network equipment. Versatile service capabilities, including Ethernet, TDM, ATM and HDLC connectivity, IP VPN, MPLS switching, IP routing as well as VLAN switching enable the migration of 3G ATM and 2G TDM, Ethernet or IP-based networks into a single network infrastructure. The 8609 Smart Router is ideal for access network cell sites that handle large amounts of mobile traffic. The 8609 Smart Router is only 1RU in height, which enables installations at sites where rack space is limited.

FEATURES AND BENEFITS
The 8609 Smart Router has a packet-based forwarding architecture with QoS awareness, enabling network optimization for voice and data services in LTE, 4G and 3G networks. The advanced quality of service features enable the differentiation of real-time voice and video services from premium and best effort data services. The unique Packet Loop Test feature, which is part of the Coriant Smart Router product portfolio and Coriant 8000 Intelligent Network Manager, helps to analyze delay, jitter, throughput and connectivity parameters.

REMARKABLE THROUGHPUT
Environmentally hardened, the 8609 Smart Router offers 12 fixed Gigabit Ethernet ports and two slots for interface modules providing throughput up to 7.5 Gbps. This makes the 8609 Smart Router optimal for cell and aggregation sites.

ROBUST SYNCHRONIZATION
The 8609 Smart Router supports a high quality Oven Controlled Crystal Oscillator (OCXO), which provides improved temperature stability for IEEE 1588v2 and adaptive timing recovery. It also provides a highly stable node clock holdover. In addition to adaptive timing and IEEE 1588v2 clock recovery mechanisms, node timing can be obtained from a BiTS or GPS source, any PDH, SONET/SDH interface or any of the synchronous Ethernet interfaces. The 8609 Smart Router supports the transition from TDM to packet synchronization in a controlled way by verifying the packet synchronization performance with professional tools.

Without the need for separate E1/T1s at every cell site, the Coriant Smart Router solution provides a cost-optimized solution which is independent from the legacy network.

BENEFITS OF CORIANT’S 8609 SMART ROUTER
- Deliver switching and routing capacity of up to 7.5 Gbps
- Install in a standard 19” rack, ideal for access network cell sites
- Support extensive range of multiple service types
- Deliver network optimization for voice and data services in LTE, 4G and 3G networks
- Reduce operational expenses with intelligent network management
- Deploy a range of synchronization options
The Smart Router Series

The Smart Router series offers versatile and scalable solutions for mobile backhaul from small aggregation sites to controller and gateway sites. In addition, Smart Routers serve fixed and mobile convergence and cloud computing networking needs. These solutions are designed to meet the ever-growing requirements of data hungry mobile and enterprise users. All of the Smart Routers are LTE-ready and provide an extensive Ethernet and IP/MPLS feature set. Simultaneous support for multiservice applications in access and aggregation networks protects earlier network investments. The Smart Router product family is supported by the 8000 Intelligent Network Manager, which is an easy to use end-to-end network management solution. The 8000 Intelligent Network Manager minimizes operational and maintenance costs and scales up to tens of thousands of network elements.

### TECHNICAL SPECIFICATIONS

<table>
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<th><strong>Physical Dimensions</strong></th>
<th><strong>Chassis Configuration</strong></th>
<th><strong>Traffic Management</strong></th>
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<tr>
<td>- 441 x 44 x 300 mm / 17.36 x 1.73 x 11.81 in (W x H x D)</td>
<td>- Two slots for power feed modules</td>
<td>- DiffServ support for up to 7 traffic classes, 7 queues per interface</td>
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<tr>
<td>- Installation into a standard 19-inch rack; The 23-inch and ETSI 600 mm racks are supported with side adapters</td>
<td>- Two slots for user-changeable Line Modules (LM)</td>
<td>- DiffServ aware MPLS Traffic Engineering (DS-TE)</td>
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<tr>
<td>- 1 RU high</td>
<td>- Twelve Fixed Gigabit Ethernet Ports: four 10BASE-T/100BASE-TX/1000BASE-T and eight 100/1000BASE-X SFP</td>
<td>- IEEE802.1P/Q mapping to IP or MPLS</td>
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<tr>
<td><strong>Power and Cooling</strong></td>
<td>- Local management port (RS-232 type)</td>
<td>- Policing and shaping</td>
</tr>
<tr>
<td>- User-changeable dual feed wide range (-48 VDC to +24 VDC) power module (one per element)</td>
<td>- External alarm interface</td>
<td>- VLAN shaping</td>
</tr>
<tr>
<td>- Hot swappable single feed -48 VDC power module (up to 2 per element)</td>
<td>- Station Clock Input (SCI)</td>
<td>- Access Control Lists (ACL)</td>
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<tr>
<td>- Power consumption: typical 70W, maximum 100W</td>
<td>- Station Clock Output (SCO)</td>
<td>- ATM service categories: CBR, rt-VBR, nrt-VBR, UBR+, UBR</td>
</tr>
<tr>
<td>- Hot swappable air filter and fan module</td>
<td>- Pulse-per-Second (PPS) clock input</td>
<td>- ATM VC queuing/shaping</td>
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**Forwarding Plane**

- IPv4 routing
- MPLS switching (LSR and LER)

**Functionality**

- IP VPN (RFC4364)
- Ethernet/VLAN, SAToP, CESoPSN, ATM and HDLC pseudowires
- Single and multi-segment pseudowires
- TDM cross connection
- ATM VP/VC switching
- ATM cell concatenation
- ATM IMA
- MC / MLPPP, PPPmux
- Y.1731 frame loss, frame delay and frame delay variation support
- IEEE802.1ag Ethernet OAM loopback, continuity check, ping and link trace
- BFD (Static routes, OSPF, ISIS, RSVP-TE)

**Forwarding Capacity**

- Up to 7.5 Gbps, typical 4 Gbps (packet size dependent)

**Line Modules (LM)**

- 8 x chE1/chT1 LM
- 8 x 10/100BASE-TX LM

**Resiliency**

- Ethernet Link Aggregation 802.1AX
- 1:1 RSVP-TE LSP protection
- Fast Reroute (FRR)
- IP load balancing (Equal Cost Multipath - ECMP)
- Pseudowire redundancy (ATM, TDM)

**Synchronization**

- ITU-T [G.813] option 1
- ITU-T [G.8262]
- Telcordia [GR-1244] Stratum 3
- Synchronous Ethernet
- SSM over Ethernet [G.8264]
- Adaptive synchronization from SAToP and CESoPSN pseudowires
- IEEE 1588v2 Precision Time Protocol
- IEEE1588v2 Boundary Clock for phase sync

**IPv4 Routing and MPLS Label Distribution Protocols**

- OSPF-TE, ISIS-TE, BGP and MFP-TE
- LDP, RSVP-TE

**Environmental Conditions**

- Storage: ETSI EN 300 019-1.1, Class 11, Temperature: -5°C to 45°C / 23°F to 113°F
- Transportation: ETSI EN 300 019-1.2 Class 2.3, Temperature: -40°C to 70°C / -49°F to 149°F. Relative humidity: 5% to 95%
- Minimum cold boot-up temperature: -20°C / -4°F

* Future release

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