

7090-40 CEM Packet Transport Platform

Extend Carrier Ethernet Services from the Metro Edge to Access Networks with Zero Touch Provisioning

HIGH-DENSITY AGGREGATION SOLUTION FOR PACKET TRANSPORT NETWORKS

The Coriant® 7090-40 CEM Packet Transport Platform is a Metro Ethernet Forum (MEF) Carrier Ethernet (CE) 2.0 certified Layer 2 transport solution. The platform supports multiple business, residential broadband, and mobile service applications in a cost-effective, high-capacity, and compact footprint (1RU) that is easy to deploy, operate, and support. With strong equipment redundancy and modular power supply options, the 7090-40 CEM helps service providers to easily and reliably extend the reach of Carrier Ethernet switching and aggregation capabilities to metro edge and access network locations.

The 7090-40 CEM is an integral component of the Coriant product portfolio and works seamlessly with the Coriant® 7100 Packet Optical Transport Solutions, the Coriant® mTera® Universal Transport Platform, the Coriant® hiT 7300 Multi-Haul Transport Platform, and the Coriant® 8600/8800 Smart Router Series. Together they provide flexible and reliable transport solutions that meet a wide variety of service needs from the access to metro/regional networks. The entire solution can be end-to-end managed via the Coriant® 8000 Intelligent Network Manager (INM) or the Coriant® Transport Network Management System (TNMS).

ROBUST, SCALABLE, AND FLEXIBLE MEF CE 2.0 CERTIFIED SOLUTION

The 7090-40 CEM supports 1G/10G/40G interface ports and switching and aggregation capabilities for data speeds ranging from 10 Mbps to 40 Gbps. The platform also supports extensive traffic management, Quality of Service (QoS), OAM, and protection mechanism features that are specified by MEF CE 2.0. In addition to support for E-Line and E-LAN services, the 7090-40 CEM certification includes support for E-Access services with full E-NNI (SP to SP) capabilities for ease of operator service turn-up.

Classification of traffic is supported with a range of Layer 2 and Layer 3 options including port, Media Access Control (MAC) address, Virtual Local Area Network (VLAN) ID, and Differentiated Services Code Point (DSCP). Dual rate tri-color policing supports enforcement of service contracts and provides a means to manage traffic allocation in the network. Class-based queuing and scheduler options provide flexible QoS capabilities to match any network application. Carrier-class OAM capabilities comply with the latest industry standards such as 802.3ah link-layer OADM, 802.1ag Ethernet connectivity fault management, and ITU-T Y.1731 end-to-end OAM. These capabilities enable rapid notification of network faults while providing a reporting mechanism to help ensure that Service Level Agreements (SLAs) are being met.

BENEFITS OF THE CORIANT™ 7090-40 CEM

- **Provide** scalable, efficient packet transport aggregation
- **Efficiently upgrade** existing SONET/SDH networks to 10G and 40G packet rings
- Enable **new revenue generating MEF CE 2.0 services**
- **Extend the powerful networking capabilities** of the Coriant® 7100, mTera® UTP, and hiT 7300 Packet Optical Transport Solutions
- **Simplify provisioning and troubleshooting** with fully MEF-certified OAM capabilities
- **Accelerate** network deployments with Zero Touch Provisioning of nodes



FULL FEATURE SET ENABLES THE AGGREGATION AND DISTRIBUTION OF NUMEROUS SERVICES

At the traffic level, data protection is supported by a full suite of standards-based protection mechanisms including: STP/RSTP/MSTP, LACP (balanced and active/standby LAG), G.8031 point-to-point, and G.8032 ring-based protection. With its large switch fabric, high port density, intelligent traffic management capabilities, and sophisticated QoS feature set, the 7090-40 CEM is optimized for network aggregation and distribution of a multitude of services – Internet, Voice over Internet Protocol (VoIP), Internet Protocol Television (IPTV), etc.

OPTIMAL SOLUTION FOR UPGRADING EXISTING INFRASTRUCTURES

A key application of the 7090-40 CEM is to provide bandwidth relief for service providers in the access network economically and with less complexity than an L3 network. Typically for the access network, a 10G ring is used to aggregate traffic from multiple residential and business locations. Due to the growing demand for broadband services, the 10G access rings become network bottlenecks. For this situation, the 7090-40 CEM provides a cost-effective option to quadruple the access network bandwidth by upgrading the 10G fiber ring to a 40G fiber ring.

Carrier-class quality for strong, dependable network performance achieving 6-9s over an industry-leading product lifetime

Front to rear, side to side, fully redundant cooling option



In-place, field replaceable maintenance modules

Dual PSU options

TECHNICAL SPECIFICATIONS

Interface Configurations

- 7090-40 CEM: 2x QSFP+ (40 GbE), 4x SFP+ (10 GbE), 26x SFP (10/100/1000 copper or 1 GbE fiber)

Quality of Service

- IEEE 802.1Q VLAN Tagging
- IEEE 802.1ad Q-in-Q VLAN Tagging
- Port/Class Level Shaping
- Color Aware Policing
- QoS based PM
- srTCM and trTCM based rate limiting
- MEF 10.2 Policing and BW profile [CIR/EIR/CBS/EBS/CM/CF]
- Hierarchical rate limiting with two-level policing
- Flow and MAC based mirroring
- RED, WRED Scheduling

Carrier Ethernet OAM

- IEEE 802.3-2008 [3ah] - Ethernet First Mile
- IEEE 802.1ag - Connectivity Fault Management

- ITU-T Y.1731 - AIS & PM with one-way delay measurement support
- Dying Gasp

Carrier Ethernet Protection

- IEEE 802.1AX-2008 Link Aggregation w/ LACP
- IEEE 802.1D-2004 RSTP, 802.1Q-2011 MSTP
- ITU-T G.8031 Ethernet Linear Protection
- ITU-T G.8032 Ethernet Ring Protection

Test and Timing

- ITU-T G.8264 Synchronous Ethernet
- RFC 2544 Ethernet Service Activation Testing
- ITU-T Y.1564 Ethernet Service Activation Testing

Environmental & Safety Specifications

- Temperature Hardened
- Redundant -48v DC Power Supply Modules
- Removable Fan Tray
- NEBS Compliant

Management

- IEEE 802.1AB-2009 LLDP
- CLI, 7191 Craft Station, Coriant® Transport Network Management System (TNMS)
- Zero Touch Provisioning (DHCP/TFTP)
- Automatic Laser Shutdown (ALS)
- IP Access Control Lists (ACLs)
- SNMP and In-Band VLAN Management
- Secure Remote Access with SSH
- RADIUS / TACACS+
- Syslog

Service Types

- E-Line
- E-LAN
- E-Access

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