

# 7090 CE Packet Transport Solutions

*Intelligent Carrier Ethernet Platforms for Next-Generation Networks*

## ADDRESSING NETWORK GROWTH WITH PACKET TRANSPORT SOLUTIONS

Network traffic continues to grow exponentially due to expanding mobile networks and the rise of data center applications and cloud-based computing. In addition, network services are becoming increasingly dynamic with rapidly changing requirements. To meet these evolving industry needs, the Coriant portfolio of innovative solutions includes a packet transport component that provides network operators with unprecedented levels of scalability, efficiency, and flexibility. With packet-based granularity, oversubscription capabilities, and numerous per-flow traffic management options, service providers can cost effectively maintain high performance network requirements.

## COST EFFECTIVELY ENABLING NEW CE SERVICES AND EXTENDING PACKET TRANSPORT NETWORKS

The Coriant® 7090 Carrier Ethernet (CE) Packet Transport Solutions are an integral component of the Coriant comprehensive end-to-end transport portfolio and work 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, as shown in Figure 1. The Coriant® 8000 Intelligent Network Manager (INM) and the Coriant® Transport Network Management System (TNMS) can manage all 7090 CE platforms as part of a complete Coriant solution. This enables end-to-end network provisioning and maintenance from a single management system. The Coriant portfolio provides flexible and reliable transport solutions that meet a wide variety of service needs from the access to metro/regional networks.

## PROVIDING EFFICIENCIES FOR INSTALLATION, PERFORMANCE, AND PROTECTION

The 7090 CE platforms, as shown in Figure 2, are MEF CE 2.0 certified and provide a comprehensive feature set to accelerate service activation and enable service providers to offer assured wholesale and retail business Ethernet services as well as mobile backhaul, small-cell, and WiFi access point services. Zero Touch Provisioning eliminates dependency on expert personnel to perform the initial system installation and commissioning and ensures that personnel without extensive system knowledge can install and commission the NIDs. By supporting rapid fault detection and simplifying fault isolation, the 7090 CE platforms can reduce expensive truck rolls to remote sites. The 7090 CE platforms offer a comprehensive timing solution ideal for mobile backhaul applications. In addition, the 7090 CE solutions provide carrier-class sub 50 msec protection for Ethernet services using industry standard protection mechanisms.

## BENEFITS OF CORIANT® 7090 CE PACKET TRANSPORT SOLUTIONS

- **Grow revenue** by providing cost-effective feature-rich Carrier Ethernet services
- **Improve network efficiency** with packet-based transport
- **Upgrade existing networks** to more cost-effective, scalable packet solutions
- **Efficiently upgrade** existing SONET/SDH networks to 10G packet rings
- **Enable new** revenue generating MEF CE 2.0 services
- **Extend the powerful networking capabilities** of 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

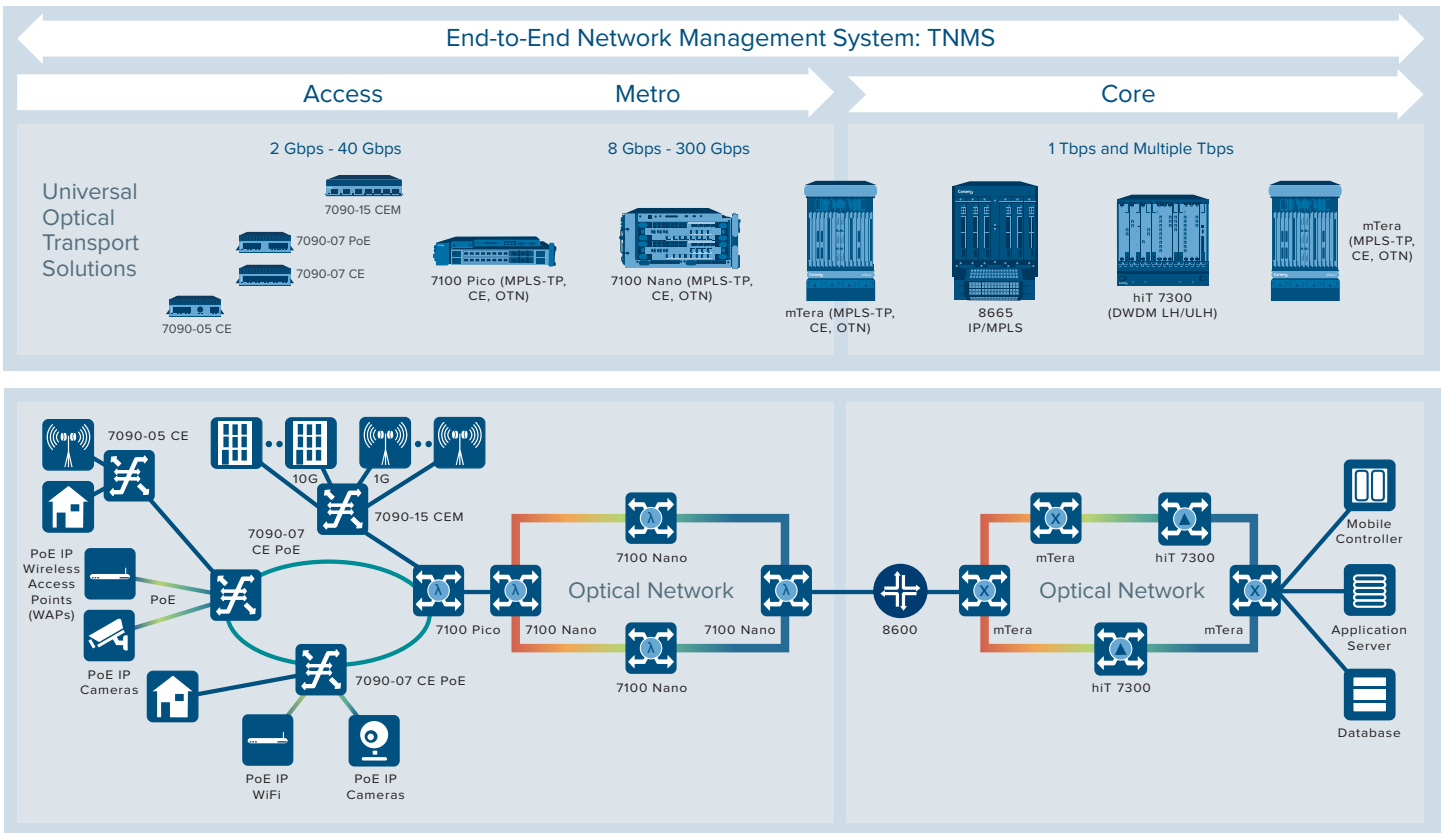


Figure 1: Coriant End-to-end Transport Networking Portfolio

The 7090 CE Network Interface Device (NID)/Customer Premises Equipment (CPE) platforms are offered with options for AC/DC power, standard or extended operating temperatures, and single or dual power supplies. These features deliver flexibility to service providers and enable solutions tailored to specific requirements.

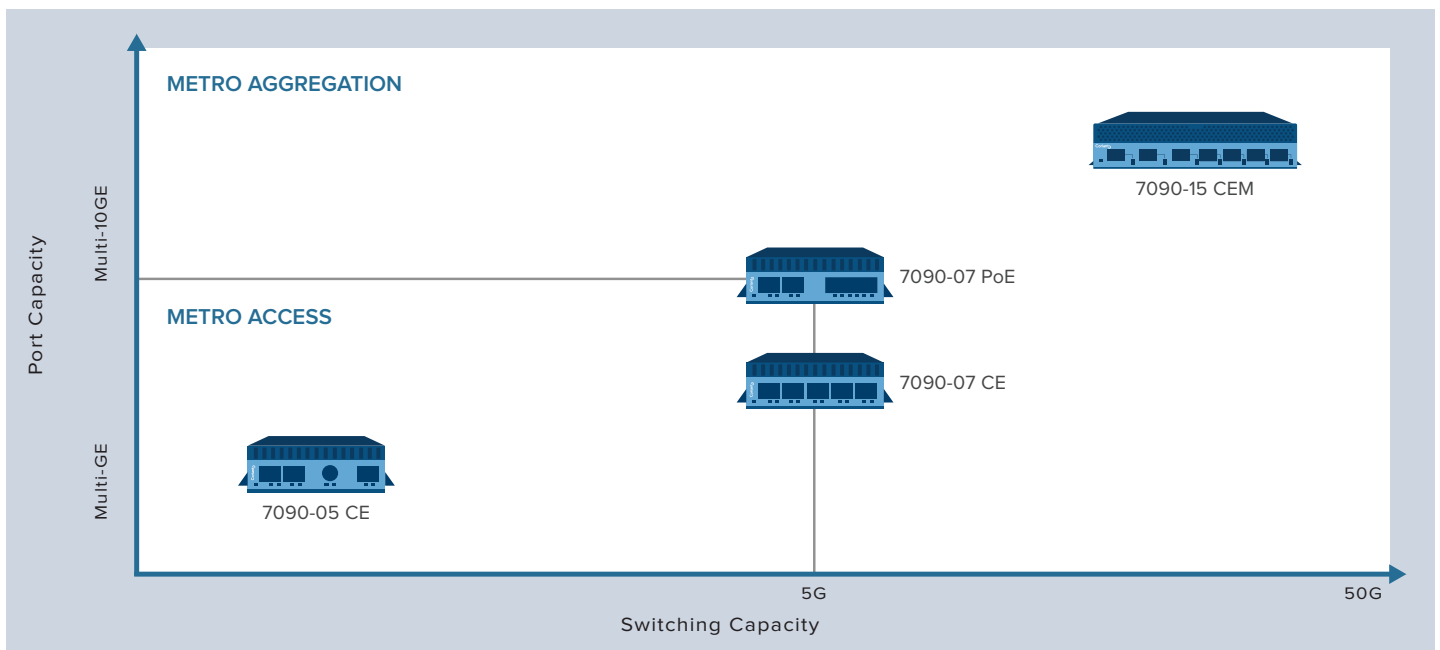


Figure 2: 7090 CE Packet Transport Solutions

## 7090 CE APPLICATIONS

Key target applications for the 7090 CE solutions include:

- High-density aggregation of access devices such as DSLAMs, GPON/EPON, and OLTs at the network edge
- Ethernet business services
- Wholesale access services
- Mobile backhaul services for small cell and 3G/4G
- Edge aggregation and switching applications in metro networks
- Migration of legacy TDM links to Ethernet
- Residential Ethernet services
- WiFi Access Point services using PoE
- Multicast Ethernet Services

## DELIVERING THE BENEFITS OF CE PACKET TRANSPORT

As service providers are embracing a packet-based future, CE is the preferred transport technology to support business services and mobile backhaul services and to replace legacy SONET/SDH technology. The 7090 CE platforms offer an intelligent access and aggregation solution that integrates seamlessly into any CE OAM landscape. The 7090 CE solutions deliver numerous benefits including:

- Provide a lineup of size optimized aggregation switches and NIDs/CPEs to flexibly deploy the optimal solution for each application
- Incorporate industry standard OAM functionality and a common management infrastructure to provide a reliable Ethernet network with the adaptability to support a variety of services
- Support business Ethernet services including mobile backhaul and video distribution
- Offer scalability, resiliency, service assurance, and monitoring while maintaining the efficiency of a packet network
- Leverage a high-density design that consumes minimal power for an efficient and cost-effective solution
- Feature temperature hardened equipment to perform at optimum capacity even in the most demanding environments

CORIANT VERSION		7090-05 CE A/B	7090-05 CE C/D	7090-07 CE	7090-07 CE PoE	7090-15 CEM
MEF Compliance	Carrier Ethernet 2.0 Certified		X	X	X	X
	MEF 9, 14 and 21 Compliant	X	X	X	X	X
Traffic Management	IEEE 802.1Q VLAN Tagging	X	X	X	X	X
	IEEE 802.1ad Q-in-Q VLAN Tagging	X	X	X	X	X
	64K Granular Rate Limiting	X	X	X	X	X
	Hierarchical rate limiting with two-level policing	X	X	X	X	X
	CIR/EIR and CBS/EBS Policing and Shaping	X	X	X	X	X
	per Port	X	X	X	X	X
	per EVC	X	X	X	X	X
	per Class of Service	X	X	X	X	X
	per MAC Address, IP Address, ToS, DiffServ	X	X	X	X	X
	IEEE 802.1p CoS Priority	X	X	X	X	X
	L2CP Policy Management	X	X	X	X	X
	IGMP Snooping per RFC 4541		X	X	X	X
	IEEE 1588v2 Transparent Clock		X	X	X	X
	IEEE 1588v2 Boundary					X
	IEEE 1588v2 Slave					X
Synchronous Ethernet		X	X	X	X	

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Operations, Administration and Maintenance (OAM)	IEEE 802.3ah Link OAM	X	X	X	X	X
	IEEE 802.1ag Service OAM	X	X	X	X	X
	ITU-T-Y.1731 Performance Monitoring	X	X	X	X	X
	SLM/SLR		X	X	X	X
	TWAMP		X	X	X	X
	MIB Statistics (RMON)	X	X	X	X	X
	Syslog					X
Service Activation Testing	IETF RFC 2544 with Built-in Test-head		X	X	X	X
	Third-party In-band Loopback Support		X	X	X	X
	ITU-T-Y.1564 Service Testing with Built-in Test-head		X	X	X	X
Protection and Redundancy	Port Redundancy (Primary and Backup Link)	X	X	X	X	X
	LAG with LACP (1:1 and 1+1)		X	X	X	X
	ITU-T-G.8031 Ethernet Linear Protection		X	X	X	X
	ITU-T-G.8032 Ethernet Ring Protection		X	X	X	X
	IEEE 802.1w Rapid Spanning Tree Protocol	X	X	X	X	X
Automatic Provisioning	Zero-Touch Provisioning (DHCP/TFTP)	X	X	X	X	X
	DPoE DEMARC Auto Configuration Algorithm		X	X	X	
Security Authentication	TACACS+		X	X	X	X
	Access Control Lists		X	X	X	X
	RADIUS		X	X	X	X
	802.1X		X	X	X	X
Power	Redundant AC/DC Power Inputs			X		X

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