

7090 Packet Transport Solutions

A Series of Scalable, Efficient, and Flexible Platforms

ADDRESS 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 Dynamic Optical Cloud™ Solution includes a packet transport component and 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.

LEVERAGE PACKET TRANSPORT FOR ALL APPLICATIONS

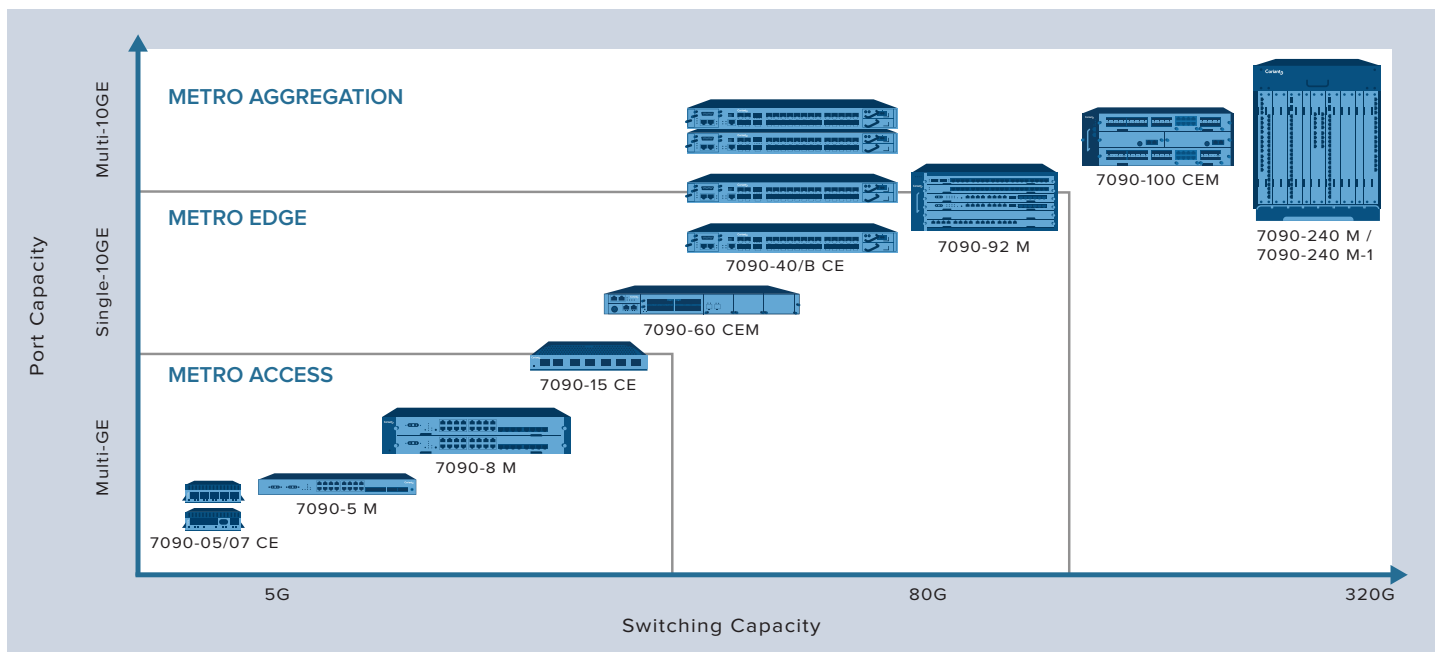
The Coriant® 7090 Packet Transport Solutions provide a complete portfolio of end-to-end packet transport platforms, including NIDs, aggregation devices, and scalable switching platforms. The 7090 Series provides scalable Carrier Ethernet and MPLS-TP technology and supports the delivery of Ethernet, PDH, and SONET/SDH services over an efficient, converged packet transport infrastructure. With support for all MEF CE 2.0 certified services and circuit emulation of legacy transport interfaces, the 7090 Series is the ideal platform to ensure a smooth migration from traditional SONET/SDH networks to a more efficient, more scalable, and more flexible packet transport network. The 7090 Series can be easily integrated into any transport network with features such as point-and-click end-to-end service provisioning, network protection similar to SONET/SDH, service reliability, innovative smart SFPs supporting clear channel OC-3/STM-1 and OC-12/STM-4, end-to-end OAM, high SLA assurance, and various synchronization options. The 7090 Series provides a consistent operational model for legacy networks without sacrificing network performance or manageability.

ENABLE INTEGRATION & SMOOTH MIGRATION

The 7090 Series is integrated into Coriant's end-to-end transport networking portfolio. Carrier Ethernet and MPLS-TP implementation is fully interoperable with the Coriant® 7100 Nano™ Packet Optical Transport Platform, Coriant® 7100 Pico™ Packet Optical Transport Platform, Coriant® hiT 7300 Multi-Haul Transport Platform, and Coriant® mTera™ Universal Transport Platform, supporting a wide range of transport network applications from the edge to the core. Employing CES technology, the 7090 Series enables transport of TDM services such as T1/E1 and ch-STM-1 over an efficient, converged packet transport infrastructure. By interworking with traditional MSPP/SDH equipment, the 7090 Series ensures a smooth migration from legacy technologies to a more scalable, flexible, and efficient transport solution. With a variety of service modes, interface types, climate/environment parameters, and protection capabilities, along with proven reliability and features enabling network operators to customize configurations, the 7090 Series offers the ideal solution for mobile backhaul, residential, business, and utility networks.

BENEFITS OF CORIANT® 7090 PACKET TRANSPORT SOLUTIONS

- **Improve resource utilization** with highly efficient packet transport features
- **Ease migration from TDM to packet-centric services** while building a flexible infrastructure, optimized for future growth
- **Enable highly reliable packet services** with end-to-end OAM and network protection for circuit-oriented transport technologies
- **Optimize end-to-end service delivery** with a single, unified transport platform – reducing OpEx via simplified operations, fewer spares, and reduced training needs
- **Increase overall network efficiency** with advanced multi-layer optimization and fully integrated end-to-end service management
- **Grow revenue** by providing cost-effective, feature-rich Carrier Ethernet and MPLS-TP services



	CONFIGURATIONS											
	7090 M					7090 CEM		7090 CE				
	5	8	92	240	320	60	100	5	7	07 PoE	15	40 A / B
Dimensions (mm)	442 (W) 210 (D) 44.4 (H)	442 (W) 210 (D) 88.5 (H)	442 (W) 220 (D) 188 (H)	442 (W) 235 (D) 550 (H)	442 (W) 235 (D) 550 (H)	422 (W) 235 (D) 44.5 (H)	422 (W) 235 (D) 155 (H)	97 (W) 122 (D) 25 (H)	122 (W) 152 (D) 34 (H)	122 (W) 152 (D) 34 (H)		439.4 (W) 216 (D) 44.5 (H)
Power	33W	70W	320W	750W	920W	83W	210W	18W	19,2W	102W (3 PoE ports)	48W	248 (AC) 236 (DC)
Switching Capacity	5G	8G	92G	240G	320G	62G	220G	3G	5G	5G	34G	146G (40A) 212G (MUVS) 106G (40B)
Interfaces												
E1/T1	16 (E1)	32 (E1/T1)	32 (E1)	64 (E1)	64 (E1)	32 (E1/T1)	64 (E1/T1)					
STM-1/OC-3		2	36	88	112	15	32					
STM-4/OC-12						15	32					
FX	4	8	92	220	280	30	64					
FE	4	8	92	220	280	30	64	1				
GbE (optical)	4	6	92	220	280	30	64	2	5	5 (1 + 4 PoE / 2 + 3 PoE)	4	26 (40A) 52 (MUVS) 26 (40B)
GbE (electrical)	4	6	92	220	280	30	64					
10G	N/A	N/A	10	22	28	4	16				3	4 (40A) 8 (MUVS) 8 (40B)
40G												2 (40A) 0/2 (MUVS)

	SPECIFICATIONS										
	7090 M					7090 CEM		7090 CE			
	5	8	92	240	320	60	100	05	07	15	40
MPLS-TP											
Static LSP	X	X	X	X	X	X	X				
Static SS/MS PW	X	X	X	X	X	X	X				
MPLS-TP 1:1 LSP protection	X	X	X	X	X	X	X				
MPLS-TP LSP 1:1 SNC protection	X	X	X	X	X	X	X				
MPLS-TP ring protection	X	X	X	X	X	X	X				
MPLS-TP dual homing / dual star protection	X	X	X	X	X	X	X				
Ethernet Functionalities											
MEF 2.0 Certification	X	X	X	X	X	X	X	X	X	X	X
IEEE 802.1Q VLAN Tagging	X	X	X	X	X	X	X	X	X	X	X
IEEE 802.1ad Q-in-Q VLAN Tagging	X	X	X	X	X	X	X	X	X	X	X
64k Granular Rate Limiting					X	X	X	X	X	X	X
Hierarchical rate limiting with two-level policing					X	X	X	X	X	X	X
CIR/EIR and CBS/EBS Policing and Shaping					X	X	X	X	X	X	X
CoS Priority (IEEE 802.1P/IEEE802.1Q)	X	X	X	X	X	X	X	X	X	X	X
9600 Bytes Jumbo Frame	X	X	X	X	X	X	X	X (10 056)	X (10 056)	X (10 056)	X
VLAN Manipulation: Stack/Switch/Strip	X	X	X	X	X	X	X	X	X	X	X
L2CP Policy Management						X	X	X	X	X	X
Link Aggregation (IEEE 802.3ad)	X	X	X	X	X	X	X	X	X	X	X
Flow Control (IEEE 802.3x)	X	X	X	X	X	X	X				
IGMP Snooping (V1/V2/V3)	X	X	X	X	X	X	X	X	X	X	X
RSTP (IEEE 802.1w)	X	X	X	X	X	X	X	X	X	X	X
LPT (Link Passthrough)	X	X	X	X	X	X	X				
OAM											
Ethernet Service OAM (ITU-T Y.1731, IEEE 802.1ag)	X	X	X	X	X	X	X	X	X	X	X
Ethernet Link OAM (IEEE 802.3ah)	X	X	X	X	X	X	X	X	X	X	X
MPLS-TP OAM (G.8113.1/G.8113.2)	X	X	X	X	X	X	X				X
RFC 2544 Ethernet Service Activation testing with wirespeed, per flow testing of throughput, latency, jitter and loss								X	X	X	X
ITU-T Y.1564 Ethernet Service Activation testing with multi-flow testing of data rate, latency, jitter and frame loss								X	X	X	X
RFC 2544 and ITU-T Y.1564 test head support generation/ reception of in-service and out-of-service L2, L3 and L4 frames								X	X	X	X
Per-port and per-flow loopback with MAC swap								X	X	X	X
Compatible with third party in-band loopback testing								X	X	X	X
Built-in UTP cable tester for troubleshooting through to the Customer Equipment								X	X	X	X
Zero Touch Provisioning								X	X	X	X
DEMARC Auto-Configuration (DAC)								X	X	X	X

SPECIFICATIONS CONTINUED

	SPECIFICATIONS CONTINUED											
	7090 M					7090 CEM		7090 CE				
	5	8	92	240	320	60	100	05	07	15	40	
Synchronization												
External Clock 2MHz, 2MBit, 1PPS+TOD	X	X	X	X	X	X	X					X
Synchronization Ethernet (G.8261, G.8262)	X	X	X	X	X	X	X	X	X	X	X	X
IEEE1588V2 (TC, OC, BC, TC+OC)	X	X	X	X	X	X	X		X (TC)	X (TC)	X (TC)	X (TC)
QoS (Quality of Service)												
L2	VLAN, PRI, MAC address, TPID							Per Port, VLAN, PRI, MAC address, TPID, PCP				
L3								IPv4 Address, In-band Mgmt	IPv4/IPv6 Address, DSCP, Port			
CIR/EIR/CBS/EBS WRED 8 QoS classes Class based queuing SP, DWRR, SP+DWRR Color Aware and Color Blind Mode	X	X	X	X	X	X	X	X	X	X	X	X
Service Multiplexing of up to 256 EVCs	X	X	X	X	X	X	X	X	X	X	X	
User-configurable Ethertype	X	X	X	X	X	X	X					
Ingress and Egress traffic management	X	X	X	X	X	X	X	X	X	X	X	X
CIR/EIR Color Aware “two rates, three colors” bandwidth profiles for ingress rate limiting with hierarchical policing	X	X	X	X	X	X	X	X	X	X	X	X
Layer 2 Protocol Tunneling (L2PT) to encapsulate STP, VTP, PVST and CDP protocols	X	X	X	X	X	X	X	X	X	X	X	X
All ports configurable as UNI or NNI	X	X	X	X	X	X	X	X	X	X	X	X
Equipment Protection												
1+1 Power		X	X	X	X		X		X	X	X	X
Control		X	X	X	X		X					X
Timing	X	X	X	X	X	X	X					X
Fabric		X	X	X	X		X					X
E1 TPS protection			X	X	X							
Linear Protection Switching – Sub 50ms (G.8031)								X	X	X	X	X
Ethernet Ring Protection – (G.8032)								X	X	X	X	X
Rapid Spanning Tree	X	X	X	X	X	X	X	X	X	X	X	X
LSP 1:1 Linear Protection	X	X	X	X	X	X	X					X
LSP SNC Protection	X	X	X	X	X	X	X					
LSP Ring Protection	X	X	X	X	X	X	X					
Link Aggregation (inter and intra board, multi-chassis)	X	X	X	X	X	X	X	X	X	X	X	X
Dual-homing Protection			X	X	X	X	X					X
STM-1 MSP Protection		X	X	X	X	X	X					

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