

Carrier Ethernet Demarcation



Carrier-class Ethernet enables service providers to leverage the ubiquity of Ethernet to provide service scalability, end-to-end service level agreements (SLAs), performance and fault management, bandwidth efficiency, and support for multiple services that will differentiate them in a very competitive market.

Telco Systems' use of industry-standard engineering protocols to effectively deploy carrier Ethernet services provides a practical blueprint for service providers looking to bridge the gap between today's Ethernet/legacy deployments and tomorrow's Carrier Ethernet services.

T-Marc 3208SH



T-Marc 340



T-Marc 380



T-Marc 280



T-Marc 250/254



Metrobility R861



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	Family	T-Marc	T-Marc		T-Marc	T-Marc		R861		
	Model	3208SH	380	340	280	250	254	-1S	-SS	
Physical	# of Active Interfaces (Access/Network)	8/4	8/2	4/2	2/2	4/2	8/2	1/1		
	10/100Base-T					4	4			
	100Base-FX									
	10/100/1000Base-T	8	10	6	3	1	1	1	0	
	100/1000Base-X	12	10	6	2	1	1	1	2	
	1000Base-X					1	1			
	10GBase-X									
	T1/E1 CES	16						4		
	T3/E3 CES									
	OC3/STM-1 CES									
PS = AC; DC; Dual-Feed DC=DFDC, Redundant=Red	Red AC; Red DC	AC; Red AC; DFDC		AC; DC	AC; DC		Based on chassis used			
L2 Features	#VLAN, #MAC	4K/4K VLAN, 32K MAC	4K/4K VLAN, 16K MAC		256/4K VLAN, 8K MAC	256/4K VLAN, 8K MAC		16/4K VLAN, 8K MAC		
	MEF Services and Certifications	E-Line, E-LAN, E-Tree, MEF 9 ¹ , 14 ¹ , 18	E-Line, E-LAN, E-Tree; MEF 9, 14		E-Line, E-LAN, E-Tree; MEF 9, 14	E-Line, E-LAN, E-Tree; MEF 9, 14, 18		E-Line, E-LAN, E-Tree; MEF 9, 14		
	MPLS services: Pseudowires; H-VPLS; RSVP-TE; LDP	H-VPLS; Pseudowires; LSR, RSVP-TE; OSPF-TE				CESoMPLS (254H)				
	TLS, Q-in-Q	Supported	Supported		Supported	Supported		Supported		
	GVRP		Supported		Supported	Supported				
	Bandwidth (Gbps)/ Forwarding Rate (Mpps)	24Gbps / up to 17.376Mpps	20Gbps / Up to 14.881Mpps	12Gbps / Up to 8.9286Mpps	8Gbps / Up to 2.9762 Mpps	5Gbps / Up to 2.9762 Mpps		Up to 0.29762 Mpps		
	Timing & Synchronization	IEEE 1588v2; SyncE; ext. clock; phase source (BITS ²)	IEEE 1588v2 PTP		IEEE 1588v2 PTP	IEEE 1588v2 PTP (254H CES only)				
	Resilient Link, LAG, LACP Fast Ring (<50mSec), RSTP (802.1w), MSTP (802.1s), MPLS FRR,G.8031	Resilient Link, LAG, LACP Fast Ring, xSTP, G.8031/2	Resilient Link, LAG, LACP Fast Ring, xSTP, G.8031/2		Resilient Link, LAG, LACP, xSTP	Resilient Link, LAG, LACP; xSTP				
	# 802.1p Ques./ PCP=P / Diffserv=D	8/P/D	8/P/D		4/P/D	4/P/D		4/P/ D		
	Multi-layer OAM	MEF SOAM, 802.3ah, 802.1ag, Y.1731	MEF SOAM, 802.3ah, 802.1ag, Y.1731		MEF SOAM, 802.3ah, 802.1ag; Y.1731	MEF SOAM, 802.3ah, 802.1ag		802.3ah, 802.1ag,* Y.1731*		
Traffic & BW Management	Traffic Generation & Testing HQoS	RFC 2544 test head Supported	RFC 2544 test head Supported		RFC 2544 test head					
	802.1x	Supported	Supported		Supported	Supported				
	RADIUS & TACACS+	Supported	Supported		Supported	Supported		RADIUS only		
	SSH	Supported	Supported		Supported	Supported				
	Port/VLAN	Supported	Supported		Supported	Supported		Supported		
	Security	Out-of-Band port	RS232 Craft and Ethernet	RS-232 via RJ-45 connector		RS-232 via RJ-45 connector	RS-232 via RJ-45 connecto		RS-232 via Phillips connector	
		Proxy-based/Mid-level Management		Via service mediator		Via service mediator	Via service mediator		WebBeacon	
		EMS Support	BiNOSCenterNG	NetBeacon ESP, BiNOSCenterNG		NetBeacon ESP, BiNOSCenterNG	NetBeacon ESP, BiNOSCenterNG		NetBeacon ESP	
		SNMP	v1/v2c/v3	v1/v2c/v3		v1/v2c/v3	v1/v2c/v3		v1/v2c/v3	
		Management Services FCAPS	RIP=R/ OSPF=O/ BGP=B/ IS-IS=I	O,I						
ECMP=E/ LSR=L VRF=V/ IRDP = I										
Multicast Features	IGMP Snooping=I / MVR=M / GMRP=G/ PIM-SM/DM=S/D		I,M	I,M	I,M	I				
	Future release									

¹Certification pending

Carrier Ethernet Aggregation & Multi-service Access



T-Metro 7224



T-Metro 7124S



T-Metro 200



T-Metro 5324T



T5C XG



T5C Family



	Family	T-Metro	T-Metro	T-Metro	T-Metro	T5C	T5C	T5C	T5C	
	Model	7224	200	7124S	5324	XG	48T	24F	24G	24GT
Physical	# of Active Interfaces (Access/Network)	24/4	12/ 4 or 8	24	24/4	28	52	28	24	
	10/100Base-T		8		24		48			
	100Base-FX		12					24		
	10/100/1000Base-T	8			4		2	2	4	24
	100/1000Base-X	24		24	4					
	1000Base-X		4			24	2	2	24	4
	10GBase-X	4		4		24				
T1/E1 CES			4/8							
OC3/STM-1 CES			1+1							
PS = AC; DC; Dual-Feed DC=DFDC, Redundant=Red	AC; Red AC; DC; Red DC	AC; Red AC; DC; Red DC	AC; Red AC; DC; Red DC	AC; Red AC; DC; Red DC	AC; DC	AC; Red AC; DC; Red DC	AC; DFDC	AC; Red AC DFDC	AC; Red AC DFDC	
L2 Features	#VLAN, #MAC	4k VLAN, 256k MAC	4k VLAN, 16k MAC	4k VLAN, 32k MAC	16k MAC	4k VLAN, 32k MAC	4k VLAN, 16k MAC	4k VLAN, 16k MAC	4k VLAN, 16k MAC	
	MEF Services and Certifications	E-Line, ELAN, E-Tree MEF 9 ¹ ,14 ¹	E-Line, E-LAN; MEF 9,14	E-Line, ELAN, E-Tree MEF 9 ¹ ,14 ¹	E-Line, E-LAN MEF 9 ¹ ,14 ¹	E-Line, E-LAN, E-Tree MEF 9,14	E-Line, E-LAN MEF 9,14	E-Line, E-LAN MEF 9,14	E-Line, E-LAN MEF 9,14	
	MPLS services: Pseudowires; RSVP-TE; LDP	Pseudowires / H-VPLS spoke; VPLS PE: RSVP- TE; LDP	Pseudowires / H-VPLS spoke; RSVP-TE; LDP	Pseudowires / H-VPLS spoke; VPLS PE: RSVP- TE; LDP						
	TLS, Q-in-Q		Supported	Supported	Supported	Supported	Supported	Supported	Supported	
	GVRP		Supported				Supported	Supported	Supported	
	Bandwidth (Gbps)/Forwarding Rate (Mpps)	64Gbps / 95 Mpps	12.8Gbps / 9.5Mpps	64Gbps / 95 Mpps		64Gbps / 95Mpps	20Gbps / 9.5/13Mpps	20Gbps/ 9.5Mpps	48Gbps / 35.7Mpps	
	Timing & Synchronization				1588v2; SyncE; ext. clock (BITS)					
	Resilient Link, LAG, LACP Fast Ring (<50mSec), RSTP (802.1w), MSTP (802.1s), MPLS FRR,G.8031	Resilient Link, LAG, LACP, Fast Ring, xSTP, FRR, G.8032	Resilient Link, LAG, LACP, Fast Ring, xSTP, FRR	Resilient Link, LAG, LACP, Fast Ring, xSTP, FRR, G.8031/2	ELPS, ERPS, LAG, LACP, Fast Ring, xSTP, G.8031	Resilient Link, LAG, LACP, Fast Ring, xSTP,G.8031/2	Resilient Link, LAG, LACP, Fast Ring, xSTP	Resilient Link, LAG, LACP, Fast Ring, xSTP	Resilient Link, LAG, LACP, Fast Ring, xSTP, G.8031*	
	# 802.1p Ques/ PCP=P / Diffserv=D		32k/D		/D	8/D	8/D	8/D	8/D	
	Multi-layer OAM	MEF SOAM, 802.3ah*, 802.1ag, Y.1731	MEF SOAM, 802.3ah, 802.1ag	MEF SOAM, 802.3ah*, 802.1ag, Y.1731	MEF SOAM, 802.3ah*, 802.1ag, Y.1731	MEF SOAM, 802.3ah, 802.1ag	MEF SOAM, RTR, 802.3ah, 802.1ag	MEF SOAM, RTR, 802.3ah, 802.1ag	MEF SOAM, RTR, 802.3ah, 802.1ag	
Traffic Generation & Testing			RFC 2544*							
HQoS	Supported	Supported	Supported							
Traffic & BW Management	802.1x	Supported	Supported			Supported	Supported	Supported	Supported	
	RADIUS & TACACS+	Supported	Supported	Supported	Supported	Supported	Supported	Supported	Supported	
	SSH	Supported	Supported	Supported	Supported	Supported	Supported	Supported	Supported	
	Port/VLAN	Supported	Supported	Supported	Supported	Supported	Supported	Supported	Supported	
Management Services FCAPS	Out-of-Band port	RS-232 via RJ-45 and RJ-45 craft (10/100Base-T) connectors	RS-232 via RJ-45 and RJ-45 craft (10/100Base-T) connectors	RS-232 via RJ-45 and RJ-45 craft (10/100Base-T) connectors	RS-232 via RJ-45 and RJ-45 craft (10/100Base-T) connectors	RS-232 via RJ-45 and RJ-45 craft (10/100Base-T) connectors	RS-232 via RJ-45 and RJ-45 craft (10/100Base-T) connectors	RS-232 via RJ-45 and RJ-45 craft (10/100Base-T) connectors	RS-232 via RJ-45 and RJ-45 craft (10/100Base-T) connectors	
	EMS Support	BiNOSCenterNG	BiNOSCenterNG	BiNOSCenterNG	BiNOSCenterNG	BiNOSCenterNG	BiNOSCenterNG	BiNOSCenterNG	BiNOSCenterNG	
	SNMP	v1/v2/v3	v1/v2c/v3	v1/v2/v3	v1/v2/v3	v1/v2c/v3	v1/v2c/v3	v1/v2c/v3	v1/v2c/v3	
Routing Features	RIP=R/ OSPF=O/ BGP=B/ IS-IS=I	O,I	R, O	O,I		R, O, I	R, O, B, I	R, O, B, I	R, O, B, I	
	ECMP=E/ LSRR=L VRF=V/ IRDP = I		L, I			E, L, V, I	E, L, V, I	E, L, V, I		
Multicast Features	IGMP Snooping=I / MVR=M / GMRP=G/ PIM-SM/DM=S/D	I,M	I, M, G	I,M	I,M	I, M, G	I, M, G, S, D	I, M, G, S, D	I, M, G, S, D	

¹Future release
¹Certification pending