

DRIVING CARRIER ETHERNET ACCESS

Ethernet Demarcation Product Line

Telco Systems' Ethernet demarcation solutions enable 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 multiple services that will differentiate

them in a very competitive market. Located at the customer premise, these demarcation devices support industry standards and MEF frameworks to provide a rich management toolset to reduce operational expenses and scale management to large networks.

Ethernet Demarcation Product Line – Application Matrix

	Application	Description	Products
Service Providers	Ethernet Transport Demarcation	Managed, book-ended mediated framework for remote "IP-less" management	R231, R821, R851 (See Note 1)
	Ethernet Service Demarcation	A flexible and scalable metro Ethernet network delivering managed services directly to the customer's edge	R821, R851, T-Marc 25x, T-Marc 3x0 (See Note 1)
	Ethernet Service Aggregation (Virtual Ethernet Access)	Managed L2-based multi-service demarcation and aggregation solution	T-Marc 25x, T-Marc 3x0
	T1/E1 transport over Carrier Ethernet	Provide business customers a competitive service offering including TDM-based service	T-Marc 25x
	Optical Ethernet Transport	Managed protocol-agnostic, multi-service transport delivery	R380, CWDM OAM and Mux/Demux Modules
Wireless Operators	2/3G cellular backhaul over Carrier Ethernet	Transport co-located 2G and 3G base stations traffic over future proof converged network	T-Marc 25x
	Resilient Ethernet rings for Cell site backhaul	Telco system resilient Carrier Ethernet Access rings for Cell site aggregation reduce Cellular Access operational and capital expenditure	T-Marc 25x
	Cellular backhaul over fixed wireless Ethernet	Telco Systems multi-service access switches transport Ethernet and TDM traffic over low cost Ethernet radios. Cost effective, quick deployment cellular backhaul	T-Marc 25x
	Circuit Emulation to deliver T1/E1 leased line services over DOCSIS / Ethernet	Provide business customers a competitive service offering including TDM-based service	T-Marc 25x
MSO/Cable Operators	Ethernet Transport Demarcation	Managed, book-ended mediated framework for remote "IP-less" management	R231, R821, R851 (See Note 1)
	Ethernet Service Demarcation	A flexible and scalable metro Ethernet network delivering managed services directly to the customer's edge	R821, R851, T-Marc 25x, T-Marc 3x0 (See Note 1)
	Ethernet Service Aggregation (Virtual Ethernet Access)	Managed L2-based multi-service demarcation and aggregation solution	T-Marc 25x, T-Marc 3x0
	Optical Ethernet Transport	Managed protocol-agnostic, multi-service transport delivery	R380, CWDM OAM and Mux/Demux Modules

Note 1: R-series products require associated chassis (R5000, R4000, R1000, R400, or R200). R502 management card is required for extended management. For more information, please visit our website www.telco.com



Ethernet Demarcation Product Line – Feature Matrix

		R380	R231	R821	R851	T-Marc 250/250P	T-Marc 254/254P	T-Marc 340	T-Marc 380
Physical	10/100Base-T			1		4	4		
	100Base-TX		1						
	100Base-FX		1	1		1	1	6	10
	10/100/1000Base-T				1			6	10
	1000Base-X				1, 2	2	2	6	10
	T1/E1 CES						4		
	Multi-rate to 2.7 Gbps	Supported							
	PS AC=A, DC=D, Dual-Feed= -, Red.=2	Based on chassis used	Based on chassis used	Based on chassis used	Based on chassis used	A, D	A,D	A, D, 2A, 2D, 2AD	A, D, 2A, 2D, 2AD
L2 Features	MAC-layer Services		Supported	Supported	Supported	Supported	Supported	Supported	Supported
	#VLAN, #MAC			16/4K VLAN, 4K MAC	16/4K VLAN, 8K MAC	256/4K VLAN, 8K MAC	256/4K VLAN, 8K MAC	4K/4K VLAN, 16K MAC	4K/4K VLAN, 16K MAC
	MEF Services and Certifications			E-Line MEF9	E-Line	E-Line, E-LAN, E-Tree; MEF9, 14	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
	TLS, Q-in-Q			Supported		Supported	Supported	Supported	Supported
	GVRP					Supported	Supported	Supported	Supported
	Bandwidth (Gbps)/ Forwarding Rate (Mpps)	Up to 5.4 Gbps	Up to 0.029776 Mpps	Up to 0.29776 Mpps	Up to 2.9762 Mpps	Up to 2.9762 Mpps	Up to 2.9762 Mpps	Up to 8.9286 Mpps	Up to 14.881 Mpps
	Resilient Link, Fast Ring (<50mSec), RSTP (802.1w), MSTP (802.1s)					Resilient Link xSTP	Resilient Link xSTP	Resilient Link, Fast Ring*, xSTP*	Resilient Link, Fast Ring*, xSTP*
	Policing		Supported	Supported		Supported	Supported	Supported	Supported
	802.1p QoS Ques no./ Diffserv=D			4, P, D	2, P	4, P, D	4, P, D	8, P,D	8, P, D
	Multi-layer OAM			802.3ah	802.3ah	802.3ah, 802.1ag, MEF SOAM	802.3ah, 802.1ag, MEF SOAM	802.3ah, 802.1ag, Y.1731*, MEF SOAM*	802.3ah, 802.1ag, Y.1731*, MEF SOAM*
Traffic & BW Management	Generation & Testing					RFC 2544-based test head	RFC 2544-based test head	RFC 2544-based test head	RFC 2544-based test head
	802.1x					Supported	Supported	Supported	Supported
	RADIUS	Supported	Supported	Supported	Supported	Supported	Supported	Supported	Supported
	TACACS+					Supported	Supported	Supported	Supported
Security	SSH					Supported	Supported	Supported	Supported
	Port/VLAN			Supported	Supported	Supported	Supported	Supported	Supported
	Out-of-Band port			Out-of-band RS-232 via Philips connector	Out-of-band RS-232 via Philips connector	Out-of-band RS-232 via RJ-45 connector	Out-of-band RS-232 via RJ-45 connector	Out-of-band RS-232 via RJ-45 connector	Out-of-band RS-232 via RJ-45 connector
Management	Proxy-based/Mid-Level Management	WebBeacon	WebBeacon	WebBeacon	WebBeacon	Logical Proxy*	Logical Proxy*	Logical Proxy*	Logical Proxy*
	EMS Support	NetBeacon ESP	NetBeacon ESP	NetBeacon ESP	NetBeacon ESP	NetBeacon ESP, BiNOSCenterNG	NetBeacon ESP, BiNOSCenterNG	NetBeacon ESP, BiNOSCenterNG	NetBeacon ESP, BiNOSCenter
	SNMP	v1/v2c/v3	v1/v2c/v3	v1/v2c/v3	v1/v2c/v3	v1/v2c/v3	v1/v2c/v3	v1/v2c/v3	v1/v2c/v3

* Future Release