

XenaCompact Series

Compact Ethernet Test Systems



Specifications

Port Level Features

XenaCompact system	C1-M2XFP, C1-M2SFP+, C1-M2CX4	C1-M6SFP
Interface category	10 Gigabit Ethernet	1 Gigabit Ethernet
Number of test ports	2	6
Interface type	C1-M2XFP : 10GBASE-SR/LR C1-M2SFP+ : 10GBASE-SR/LR C1-M2CX4 : 10GBASE-CX4	SFP 10/100/1000BASE-T, or SFP 100FX, or SFP 1000BASE-X
Factory cfg with transceiver modules	Yes	No
Replaceable transceiver modules	Yes	Yes
Transceiver module type	C1-M2XFP : 850 nm TRX10GVP2001 (1) : 1310 nm TRX10GDP0301 (1) C1-M2SFP+ : 850 nm TRX10GVP2010 (1) : 1310 nm TRX10GDP0310 (1) C1-M2CX4 : Connector (built-in)	10/100/1000BASE-T: FCMJ-8521-3 (2) 100FX : FTM-3401C-SL2G/SL2CG/SL10CG (3) 1000BASE-X: any MSA compliant
Port statistics (4)	Link state, FCS errors, Pause Frames All traffic: RX and TX Mbit/s, packets/s, packets, bytes Traffic w/o test payload: RX and TX Mbit/s, packets/s, packets, bytes	
Adjustable Inter Frame Gap (IFG)	Configurable from 16 to 56 bytes, default is 20B (12B IFG + 8B preamble)	
Transmit line rate adjustment	Ability to adjust the effective line rate by forcing idle gaps equivalent to range of ± 400 ppm, in increments of 10 ppm	
ARP/PING	Supported (configurable IP and MAC address per port)	
Field upgradeable	System is fully field upgradeable to product releases (FPGA images and Software)	
Histogram statistics (4)	Two real-time histograms per port. Each histogram can measure RX/TX packet length or IFG distribution for all traffic, or a specific stream.	

Transmit Engine

XenaCompact system	C1-M2XFP, C1-M2SFP+, C1-M2CX4	C1-M6SFP
Number of transmit streams per port	256	32
	Each stream can generate millions of unique traffic flows through the use of field modifiers	
Test payload insertion per stream	Wire-speed packet generation with timestamps, sequence numbers, and data integrity signature optionally inserted into each packet	
Stream statistics (4)	TX Mbit/s, packets/s, packets, bytes, FCS error, Pause	
Bandwidth profiles	Burst size and density can be specified. Uniform and bursty bandwidth profile streams can be interleaved	
Field modifiers	Two 1-16 bit modifiers per stream, inc, dec, random, and repetition group size	
Packet length controls	Fixed, random, butterfly, and incrementing packet length distributions. Packet length from 56 to 16383 bytes	
Packet payloads	Repeated user specified 1 to 18B pattern, a 8-bit incrementing pattern	
Error generation	Undersize length (56B min) and oversize length (16384 max) packet lengths, injection of sequence, disorder, payload integrity, and FCS errors	
TX packet header support and RX auto-decodes	Ethernet, Ethernet II, VLAN, ARP, IPv4, IPv6, UDP, TCP, LLC, SNAP, GTP, ICMP, RTP, RTCP, STP, or fully specified by user	

Specifications

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Receive Engine

XenaCompact system	C1-M2XFP, C1-M2SFP+, C1-M2CX4	C1-M6SFP
Number of traceable receive streams per port	2048	680
Automatic detection of test payload for received packets	Real-time reporting of statistics and latency, loss, payload integrity, sequence error, and disorder error checking	
Stream statistics (4)	RX Mbit/s, packets/s, packets, bytes. Loss, payload integrity errors, sequence errors, disorder errors Min latency, max latency, average latency	
Latency measurements	8 ns resolution	32 ns resolution
	Latency measurements can calibrate and remove inherent latency from MSA compliant transceiver modules	
Filters	6 x 64-bit user definable match term patterns with mask, and offset 6 frame length comparator terms (longer, shorter) 6 user defined filters expressed from AND/OR'ing of the 6 match and 6 length terms.	
Filter statistics (4)	Per filter: RX Mbit/s, packets/s, packets, bytes.	

Capture

XenaCompact system	C1-M2XFP, C1-M2SFP+, C1-M2CX4	C1-M6SFP
Capture criteria	All traffic, stream, FCS errors, filter match, or traffic without test payloads	
Capture start/stop triggers	Capture start and stop trigger: none, FCS error, filter match	
Capture limit per packet	16 – 16384 bytes	
Wire-speed capture buffer per port	64 kB	16 kB
Low speed capture buffer per port (10Mbit/s speed)	4096 packets (any size)	4096 packets (any size)

(1) all 10 Gbps optical transceiver by vendor MergeOptics

(2) from vendor Finisar

(3) from vendor Source Photonics (FiberXon series)

(4) counter size: 64 bits

Chassis Specifications

1U PHYSICAL

- One Rack Unit (RU) high
- 1.7" (H) x 17.2" (W) x 9.8" (D)
- Weight: 10.0 lbs (4.5 kg)
- Color: Black

ENVIRONMENTAL

- Operating Temperature: 10 to 35° C
- Storage Temperature: -40 to 70° C
- Humidity: 8% to 90% non-condensing

POWER

- AC Voltage: 100-240 VAC,

REGULATORY

- FCC (US), CE (Europe)



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