

NuStreams® Modules

10/100 Mbps & 1000 Mbps ETHERNET TEST MODULES

FEATURES SUMMARY

- XM-22L8:
 - 8-Port 10/100 Mbps UTP Ethernet Test Module
- XM-23L4:
 - 4-Port 10/100/1000 Mbps UTP Ethernet Test Module
- XM-23L4G:
 - 4-Port 1000 Mbps Mini-GBIC Ethernet Test Module
- Flexible traffic generation and analysis
 - Real-time, wire speed generation and analysis of layer 2 and 3 traffic
 - Synchronous generation and analysis of layer 2 to 7 traffic
 - Customizable payload contents
 - Variable frame size
 - Generation of packets for protocols such as IP, UDP, TCP, IGMP, VLAN, and OSPF etc.
- Extensive statistics
 - Real-time 64 bits counter and frame rate
 - External file logging for statistics and alerts
- X-Trailer for frame data integrity verification
- Generation and response to ARP and Ping for layer 3 testing

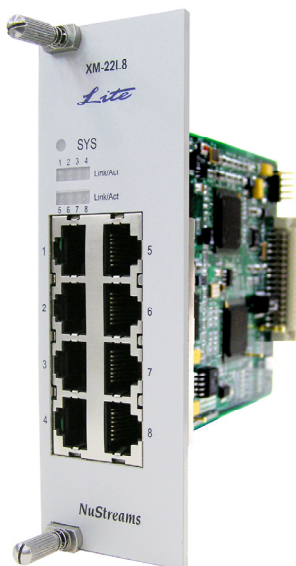
MAJOR BENEFITS

- High test quality & reliable test result – The test modules are specifically built for production test at wire speed to ensure the quality and reliability of the test
- High test throughput – The modules can generate more packets than conventional PC based solutions in shorter period and multiple DUTs can be tested simultaneously without causing degradation in test quality and test speed
- High density & low cost – A single NuStreams-2000 chassis can accommodate up to 64 Fast Ethernet ports or 32 Gigabit Ethernet ports thus reducing the per port cost of the tester
- Customizable test program – The modules are supported by API for the development of customized test programs. Generic production test program with pre-defined templates is available to minimize the development effort

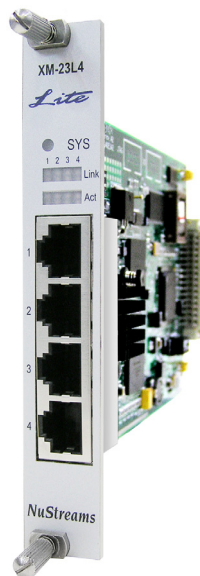
SUPPORTED APPLICATIONS

- NuStreams® API (Application Programming Interface)
- Customized mass production test programs

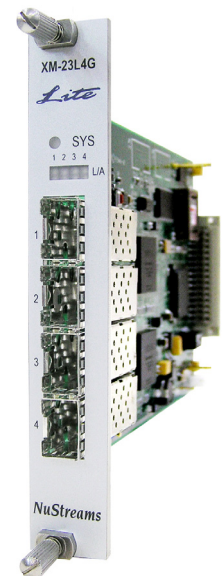
XM-22L8



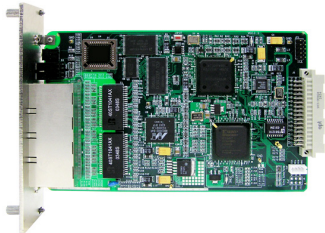
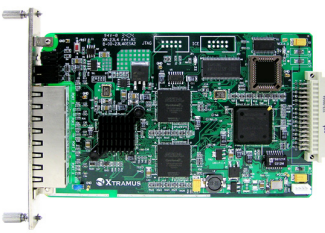
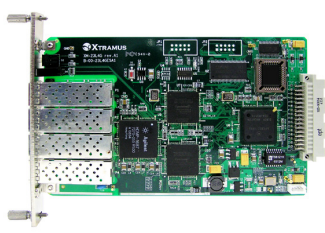
XM-23L4



XM-23L4(G)



NuStreams® -2000/600 ETHERNET TEST MODULES

Model No.	XM-22L8	XM-23L4	XM-23L4(G)
Photo			
No. of Test Port	8	4	4
Interface	RJ-45		Mini-GBIC
CPU and Memory	MPC852T / 512KB (Software) (per port)	MPC852T / 1MB(Software) (per port)	
Speed and Mode	10/100 Mbps: Half / Full Duplex	10/100 Mbps: Half / Full Duplex; 1000 Mbps: Full Duplex	Full Duplex Only
Auto MDI / MDIX	Yes	Yes	n/a
NWay	Enable / Disable		
Preamble	8 Bytes	4 ~ 16 Bytes	
Frame Length (w/o VLAN Tag)	48 ~ 2,036 Bytes Fixed / Increase / Random	48 ~ 16,380 Bytes Fixed / Increase / Decrease / Random	
Data Field	Fixed / increase / decrease / random in byte or in word; User defined; Pre-defined patterns		
Inter-frame Gap	Fixed (10 Mbps: 8800 ns ~ 1 sec; 100 Mbps: 880 ns ~ 1 sec)	Fixed / Random (10 Mbps: 8800 ns ~ 1 sec; 100 Mbps: 880 ns ~ 1 sec; 1000 Mbps: 88 ns ~ 1 sec)	Fixed / Random (1000 Mbps: 88 ns ~ 1 sec)
Error Generation	No CRC, CRC Error, Alignment Error, IP Check Sum Error, Dribble Error	10/100 Mbps: No CRC, CRC Error, Alignment Error, IP Check Sum Error, Dribble Error; 1000 Mbps: No CRC, CRC Error, IP Check Sum Error	1000 Mbps: No CRC, CRC Error, IP Check Sum Error
Collision	Single		
Data Integrity / Sequence Checking	Yes		
Source / Destination MAC Address	24 bits Fixed / Increase	32 bits Fixed / Increase / Decrease/Random	
Source / Destination IP Address	16 bits Fixed / Increase	16 bits Fixed / Increase /Decrease/ Random	
IP Generation	Hardware		
VLAN (VLAN ID / COS Field)	Fixed / Increase (COS Field only)	Fixed / Increase / Decrease / Random	
MPLS (Label / COS / TTL Field)	N/A	N/A	
Flow Control	Asymmetric; Response to 802.3x Flow Control Frames (default as reception)		
Capture Buffer Size	128 packets (2K bytes / packet) (Software)	512 packets (2K bytes / packet) (Software)	
Capture Mode	Event		
Capture Event	By 2 User define conditions	By 8 User define conditions	
QoS Testing	Up to 2 Priority Queues	Up to 8 Priority Queues	
Line Performance	Wire Speed		

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The specification may be changed without prior notice. Please contact Xtramus for the latest specification update.

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