

XM-28L1

10 Gigabit Ethernet Test Module for NuStreams®-2000/600

FEATURES SUMMARY

- Interface types: 1 x 10Gbps port with XFP connector
- Traffic generation capabilities:
 - Wire speed generation and analysis of layer 2 ~ 3 packets
 - Single / Burst / Multi-burst / Continuous packet generation
 - Frame sizes from 44 to 16388 bytes
 - Varies multiple address fields to create millions of unique flows
 - Random IFG generation support
 - 802.3x flow control
 - Independent operation in each module
- X-Trailer® for data integrity verification and sequence checking
- Generation and response to ARP and Ping for layer 3 testing
- Extensive statistics
 - Real-time 64-bit counters that provide detailed statistics about every aspect of the packets being transmitted / received
 - Automatic generation of test results in tabular formats within the NuStreams® software suites
- Professional software support for interactive and/or automated tests

MAJOR BENEFITS

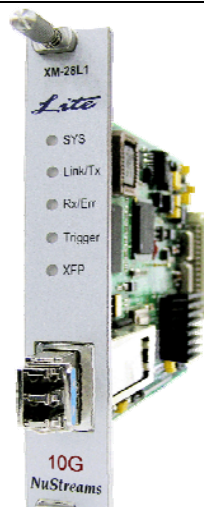
- Most cost-effective 10G test solution off the shelf
- Wire speed generation and analysis of packets at speeds of up to 10Gbps
- Optimized testing
 - Validate the functionality and performance of network and networking devices at various speeds and load conditions
 - Perform deterministic and repeatable layer 2 to layer 3 tests for the most accurate test results
- Customizable test program – The modules are supported by API for the development of customized test programs.

A generic production test program with pre-defined templates is available to minimize development effort.


SOFTWARE APPLICATIONS

- NuLite Window (for interactive functional testing)
- APMPPT (all purpose L2 mass production test program)
- NuAPI (Application Programming Interface) for C, C++ and TCL/TK
- NuApps-2544 (RFC-1242/2544) (* Available soon)
- NuApps-2889 (RFC-2285/2889) (* Available soon)

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XM-28L1 10 Gigabit Ethernet Test Module

Photo	
Standard	IEEE 802.3ae-compliant 10GBASE-R (LAN)
Interface	Pluggable XFP (ordered separately)
Speed and Duplex Mode	10Gbps / Full Duplex Only
Preamble	8 Bytes (Fixed)
Frame Length	40 ~ 16,384 Bytes (without CRC): Fixed / Increment / Decrement / Random / Loop
Transmit Mode	Single / Burst / Multi Burst / Continuous
Inter-Frame Gap	9.6 nSec. ~ 1.073 Sec. Unit: Packets/Sec, %Utilization, Random, Databits/Sec, Frame bits/Sec, Total bits/Sec, nSec, uSec, mSec, Sec
Data Pattern	All zeros, All ones, Custom, Random, IP, UDP, UDP-RTP, TCP, ARP, RARP, ICMP, IPX, Pause, 555, AAAA, Incrementing byte, Incrementing word, Decrementing byte, Decrementing word, F0F0, 0F0F, FF00, FFFF0000, 0000FFFF, 8-F's 8-0's, 8-0's 8-F's
Error Generation	CRC Error, IP Checksum Error, Undersize, Oversize
Data Integrity Verification / Sequence Checking	Yes
Source / Destination MAC Address	Fixed / Increment / Decrement / Random
Source / Destination IP Address	Fixed / Increment / Decrement / Random
IPv4 / IPv6 Support	IPv4
802.1Q / MPLS / 802.1ad	YES
Hardware Counters	Rx Frames, Rx Bytes, Undersize, Oversize, Broadcast, Multicast, Unicast, Pause, VLAN, IPv4, CRC Error, DI Checksum Error, Serial No. Error, IP Checksum Error, Rx ARP Requests, Rx ARP Replies, Rx ICMP Ping Requests, Rx ICMP Ping Replies, RxUDF 0 ~ 7, Tx Frames, Tx Bytes, Tx ARP Requests, Tx ARP Replies
RxUDF	Eight trigger states are provided for counting packets that appear in specific conditions.
QoS Testing	Up to 8 Priority Queues
Line Performance	10.3125 Gbps

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Melbourne

4/585 Blackburn Road
Notting Hill, VIC 3168
Tel: (03) 8562 9000
Fax: (03) 9561 7412

Sydney

99 Baxter Road
Mascot, NSW 2020
Tel: (02) 8080 9600
Fax: (02) 8080 9602

Canberra

2/42 Geils Court
Deakin, ACT 2600
Tel: (02) 6291 4922
Fax: (02) 6291 8100