

SierraNet™ M328Q

Ethernet and Fibre Channel Protocol Test System



Key Features

- Analyze Native Ethernet and Fibre Channel fabrics
 - 10/25/40/50/100GbE
 - 8/16/32GFC
- 1U form-factor with optional rack mount kits
- Integrated 25/50/100 Gbps Ethernet QSFP-28 ports, backward compatible for QSFP+ legacy applications
- Optical or copper cable connections supported
- QSPF28 to 4-SFP28 copper fan-out cables included
- Advanced multi-state triggering and filtering
- Standard 128 GB recording buffer
- Dynamic memory allocation
- Extensive Ethernet and Fibre Channel protocols natively supported
- Multiple trace view formats
- USB 3.0 & Gigabit Ethernet host interfaces for fast upload and easy management

The Teledyne LeCroy SierraNet™ M328Q is a highly advanced, fully integrated Ethernet and Fibre Channel protocol analysis and impairment system. The SierraNet M328Q platform provides best in class traffic capture and manipulation for testing application or link characteristics. SierraNet M328Q is the latest in the line of industry leading test and measurement tools designed for today's high-speed storage and communications fabrics. SierraNet M328Q supports examination of Ethernet link speeds of 10/25/40/50/100Gb or Fibre Channel fabrics from 8Gb up to the high speed of 32Gb, Gen 6 connections.

The SierraNet M328Q offers engineers 100% recording capabilities for all Ethernet and Fibre Channel related traffic at full line rates on all logical ports. A wide range of SAN and LAN specific protocols are supported for triggering, analysis and debug operations, among these are NVM-oF, FCoE, iSCSI, and TCP/IP related traffic.

Teledyne LeCroy pioneered the art of “real time traffic” corruption with the InFusion™ (jamming and impairment tool) for real-time protocol jamming capabilities. In combination with the NetProtocol Suite™, the SierraNet M328Q provides users with intuitive and powerful tools for altering traffic and data patterns in effort to determine the behavior of the test components. Useful for problem recreation, and for remediation testing, the patented InFusion software may be used singularly or in an automated test batch scenario. For example, engineers may use InFusion for the disruption of stable links to observe recovery or fail over characteristics; test the

capabilities of operating system drivers, or for introduction of corner case error conditions.

SierraNet M328Q is lightweight – less than 10lbs – and its 1U rack height is easily integrated into datacenter cabinets. Connection into the link or fabric under test is accomplished via SFP connectors, or with the included QSFP28 to SFP28 copper fan out cables.

Multiple SierraNet platforms maybe daisy-chained to examine higher port counts and analyze captured traffic across all systems in a single, easy to understand NetProtocol Suite™ trace view. SierraNet platforms may be connected via the CrossSync™ application to other Teledyne LeCroy protocol tools to observe traffic across multiple connections to understand how traffic, stimulus, or errors propagate across bridges or adapters.

The NetProtocol Suite utility provides the most advanced triggering and filtering state machines available. Up to 24 states, with four transitions per state, and multiple trigger, filter, and timer conditions per capture project are standard features. Advanced triggering enables state specific filtering to eliminate the capture of unwanted traffic, providing users intuitive and easy navigation to the information and events of importance.

Specifications	
Host Machine Minimum Requirements	Microsoft® Windows® 11, Windows 10, Windows Server 2016 (x64), Windows Server 2019 (x64); 2 GB of RAM; Storage with at least 200 MB of free space for the installation of the software and additional space for recorded data; display with resolution of at least 1024x768 with at least 16-bit color depth; USB 3.0 port and/or 100/1000 Mbps Ethernet network interface. For optimal performance, please refer to our recommended configuration in the product documentation
Data Rates Supported	8, 16, and 32G Fibre Channel; and 10, 25, 40, 50, and 100 Gbps Ethernet
Recording Memory Size	Maximum of 128Gb
Host System Interface	USB 3.0 and 1Gb Ethernet
Front Panel Indicators	Four LEDs (Link, Speed, Status, Errors) for each TX & RX pair, Status LCD Panel, Power LED
Front Panel Controls	Power ON/OFF, Menu Navigation and Selection Wheel
Rear Panel Connectors	AC Power, Expansion Port
Cascade and Expansion Capability	Up to 8 SierraNet Systems 10/25GbE and/or 8/16/32GFC: Up to 32 Links 40/100GbE: Up to 8 Links
Dimensions (H x W x D)	Chassis: 44 x 432 x 358 mm (1.75" x 17" x 14.1") With Bumpers: 52 x 455 x 367 mm (2" x 17.9" x 14.5")
Weight	4.3 Kg (9.5lb)
Power Requirements	100-240VAC, 50-60Hz, 100W
Environmental Requirements	Operating: 0 to 55C (32 to 131F) Non-operating: -20 to 80C (-4 to 176F) Humidity: 10 to 90% RH (non-condensing)

Ordering Information

Base Hardware Platform

SierraNet M328Q Platform (Base HW platform with 128GB Memory)

Product Code

HSF-M328Q-128-X

M328Q License Option Examples

SierraNet 25G Ethernet Analysis - License for 4 ports
 SierraNet 50G Ethernet Analysis - License for 4 ports
 SierraNet 100G Ethernet Analysis - License for 8 ports
 SierraNet 32G Fibre Channel Analysis - License for 2 ports
 SierraNet Ethernet Analysis Bundle - License for 1-100GbE, 1-50Gbe, 2-25Gbe Links
 SierraNet 25Gb Ethernet InFusion - License for 4 ports
 SierraNet 25Gb Ethernet InFusion - License for 4 ports
 SierraNet 32G Fibre Channel InFusion - License for 2 ports
 SierraNet 100Gb Ethernet InFusion - License for 4 ports

NET-T025-004-A
 NET-T050-004-A
 NET-T100-008-A
 FC-T032-002-A
 NET-TALL-008-A
 NET-J025-004-A
 NET-J025-004-A
 FC-J032-002-A
 NET-J100-008-A



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