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### SierraNet™ Product Family
Protocol Verification Systems

Fast, Flexible and Affordable!

**SierraNet M168**
- 10 Gbps Ethernet and 16G Fibre Channel

**SierraNet M408**
- 10/40 Gbps Ethernet and 16G Fibre Channel

### Ordering Information

<table>
<thead>
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### License Options

- SierraNet Fibre Channel Protocol Analysis—License for 4 ports
  - SierraNet Fibre Channel Protocol Analysis—Upgrade from 4-port to 8-port license
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### Specifications

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**Power Requirements**
- 100-240 VAC, 50-60 Hz, 100W

**Environmental Requirements**
- Operating: 0 to 55°C (32 to 131°F)
- Non-operating: -20 to 80°C (14 to 176°F)
- Humidity: 10 to 90% RH (non-condensing)

**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 (9.5 lb)

**Ordering Information**

- Visit our website to find the most convenient location.

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The SierraNet M408 and M168 offer the best time-stamp resolution. The SierraNet family has been enhanced with a 1 ns time-stamp resolution, setting a new industry standard for trace analysis and for timing measurements required for advanced state machines are easy to use and help engineers trigger, filter and inject errors with surgical precision. With up to 4 sequencers and up to 24 states per sequencer, they concisely target areas of interest and save precious time. When the user cannot accurately define the conditions associated with a problem and needs to capture a broad swath of traffic to identify a cause of an issue, the SierraNet can also dynamically assign up to 50% (or up to 16 GB) of the largest and most flexible recording memory in the industry to one port or spread the memory use across all eight ports, based on the traffic profile.

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**Weight**
- 4.3 Kg (9.5 lb)
**Key Features**

- **1U form-factor with rack mount kits**
- **Eight SFP+ FlexPorts supporting 10 Gbps Ethernet and 16G Fibre Channel over optical or copper connections**
- **Integrated 40 Gbps Ethernet QSFP ports (SierraNet M408)**
- **Advanced multi-state triggering and filtering**
- **Pass-through probe technology (not re-timed)**
- **Standard 16 or 32 GB recording buffers**
- **Dynamic memory allocation**
- **Extensive Ethernet protocols supported including FCoE and iSCSI**
- **Multiple trace view formats**
- **Seamless WireShark integration**
- **USB 3.0 & Gigabit Ethernet host interfaces for fast upload and easy management**

The SierraNet M408 and M168 are the most cost-effective, advanced and fully integrated 10/40 Gbps Ethernet and 16G Fibre Channel data capture and protocol verification systems available for developers and protocol test engineers. The SierraNet M168 is an 8-port multi-function protocol analyzer and error injector supporting up to 16G Fibre Channel and 10 Gbps Ethernet protocols in a single platform. The SierraNet M408 has all the capabilities of the SierraNet M168 and adds 40 Gbps Ethernet protocol analysis and error injection capabilities in a single platform. Both protocol analysis systems provide engineers with 100% recording of all Fibre Channel and Ethernet-related traffic at full line rates on all ports, while maintaining the link integrity through non-retimed pass-through probe technology.

**Flexibility to Meet Any Debug Challenge**

The SierraNet M408 and M168 hardware platforms and graphical user interface provide the highest level of performance and flexibility available in the market. The SierraNet M408 and SierraNet M168 both employ Teledyne LeCroy’s new FlexPort™ technology providing ultimate flexibility in analysis of traditional or converged Ethernet and Fibre Channel products in a single platform and the flexibility to add protocol specific features, functionality and data rates supported either at the time of purchase or at a later time by simply adding more license keys. Each FlexPort pair can probe both Fibre Channel and Ethernet links at speeds up to 10 Gbps for Ethernet and/or 16G Fibre Channel on copper or optical cabling and eliminates the need for separate “single function” blades, pods or adapters found in competitive products—providing a highly compact, extremely flexible, multi-function protocol analyzer.

In addition to FlexPort technology, the SierraNet M408 and M168’s new sophisticated analysis software, the Net Protocol Suite, provides unmatched flexibility with customized data displays that easily identify and navigate quickly to specific events of interest. The Net Protocol Suite’s multiple trace views provide superior visibility for troubleshooting low level to application layer issues and decode the supported specifications and their associated encoding schemes. The Zero Time search and filter capabilities easily find Ethernet and Fibre Channel events in a contextual and intuitive way. In a multi-protocol environment, Teledyne LeCroy can also synchronize and correlate traces with our other leading protocol analysis tools, such as the PCI Express® Gen3 Summit™ analyzers, to understand how traffic, stimulus and/or errors propagate across bridges or adapters.

**Versatile, Cost-effective Platform**

Both the SierraNet M408 and M168 platforms are compact, portable and lightweight. The SierraNet is currently the smallest (1U) and lightest (9.5 lbs) Fibre Channel and Ethernet protocol analyzer platform in the market, saving valuable real estate and rack space in customer labs and providing the best portable solution for engineers on the move. The SierraNet M408 is also the only analyzer in the market with integrated 40 Gbps QSFP ports, eliminating the complexity of external “octopus” cables used in some competitive products. The integrated QSFP ports ensure reliable analysis and error injection by eliminating the risk and associated cost of the additional eight potential failure points that “octopus” cables create in a test environment.

**Performance**

The SierraNet M408 and M168 offer the fastest and most convenient access to the data that engineers need. A USB 3.0 host interface provides the fastest upload speeds available, delivering more than a 5x transfer rate improvement over any other Fibre Channel or Ethernet protocol analyzer. Since USB is Plug and Play, this is particularly useful when capturing large amounts of data is necessary but a quick connection to the analyzer is required, such as at a customer site. In addition to the performance and ease-of-use of the USB 3.0 interface, a Gigabit Ethernet host interface is also standard on the SierraNet platforms and the IP address set-up...
Spreadsheet View
The familiar spreadsheet view offers users an easy-to-understand columnar format that can be customized, add or delete columns, and mark frame and event types with user-defined colors to speed the eye through complex traces. An important adjunct to the Spreadsheet View is the Frame Inspector View which provides a detailed window into each frame and ordered set in several helpful formats. Spec View shows frames in the same format as you would see them in the technical specification documents.

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- 1U form-factor with rack mount kits
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| Recording Memory Size | Up to 32 GB |
| Data Rates Supported | 1, 2, 4, 8 and 16 G Fibre Channel and 10/40 Gbps Ethernet |
| No. of Ports Supported | 8 SFP+ FlexPorts per system; 2 QSFP ports per system* |
| Cascade Capability | Up to 64 SFP+ FlexPorts (8 SierraNet systems); Up to 16 QSFP ports (8 SierraNet systems)* |
| Host Machine Interface | USB 2.0, USB 3.0 and 10/100/1000BaseT Ethernet |
| Front Panel Connectors | Eight SFP+ FlexPorts; Two QSFP Ports; External Trigger IN/OUT |
| Front Panel Indicators | Three LEDs (Link, Speed, Status) 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 (Expansion cards are optional) |
| Dimensions (H x W x D) | Chassis: 44 x 432 x 358 mm (1.75” x 17” x 14.1”); With Bumpers: 42 x 455 x 367 mm (2” x 17.9” x 14.5”); Weight: 4.3 Kg (9.5 lb) |
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Ordering Information

| Product Description | Product Code |
| SierraNet M168 8-port Platform (16 GB memory) | NET-T016-168-X |
| SierraNet M168 8-port Platform (32 GB memory) | NET-T016-328-X |
| SierraNet M408 10-port (8+2) Platform (32 GB memory) | NET-T010-328-X |

License Options

| Product Description | Product Code |
| SierraNet Fibre Channel Protocol Analysis—License for 4 ports | NET-T016-004-A |
| SierraNet Fibre Channel Protocol Analysis—Upgrade from 4-port to 8-port license | NET-T016-008-U |
| SierraNet 10G Ethernet/FCoE/iSCSI Analysis—License for 4 ports | NET-T010-004-A |
| SierraNet Ethernet Protocol Analysis—Upgrade from 4-port to 8-port license | NET-T010-008-U |
| SierraNet 40G Ethernet/FCoE/iSCSI Analysis—Prerequisite: Licenses for 8 ports of 10G Ethernet | NET-T040-002-A |
| SierraNet 40G Ethernet InFusion (Jammer)—License for 2 ports | NET-J040-002-A |
| SierraNet 10G Ethernet InFusion (Jammer)—License for 4 ports | NET-J010-004-A |
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