

Sierra™ M6-1

SAS and SATA Protocol Test System



Key Features

- **6 Gb/s SAS/SATA protocol analysis or jammer**
- **Native PHY for fast lock time**
- **Easy mode triggering**
- **Cascade capability, up to 8 ports**
- **Sync with other Teledyne LeCroy Sierra™ systems**
- **Hardware filtering**
- **Automatic error detection**
- **Comprehensive decoding of SAS and SATA data traffic**
- **Logical and chronological traffic displays**
- **Statistical reporting**
- **Trace memory 2, 4 or 8 GB**
- **GbE & USB 2.0 host machine interfaces**

The Sierra M6-1 products are ultra-portable single-port systems with models available that function as a protocol analyzer or as a jammer. Measuring just 6.25" wide, 1.38" high and 9.0" deep (15.9 x 3.5 x 22.9 cm) and weighing in at 1.7 lbs (0.77 Kg), Sierra M6-1 systems are incredibly compact units that fit easily into a corner of a briefcase or backpack. Capable of operating at 1.5, 3 or 6 Gb/s data rates and equipped with up to 8 GB of recording memory, the Sierra M6-1 offers world-class protocol analysis or jammer capability at price points within reach of every budget.

Flexibility to meet any debug challenge

Sierra M6-1 systems come standard with both USB and GbE interface ports for maximum flexibility in connecting to the host machine running the analysis or jammer software. The versatile GbE port can be used for either local or remote network connectivity. Sierra M6-1 systems can be linked together in cascaded configurations to provide additional recording channel capacity, or used in tandem to combine simultaneous jamming and trace capture/analysis capabilities (requires multiple Sierra M6-1 units, at least one licensed as a protocol analyzer model and one licensed as a jammer model).

Expert Analysis Software

When configured as a protocol analyzer, the Sierra M6-1 offers all the protocol analysis features as other products in the Teledyne LeCroy SAS/SATA product line. The analyzer software offers an intuitive GUI combining easy setup with

flexible data analysis displays. The packet view logically assembles frames and primitives that are part of a specific SAS or SATA command. Users are able to quickly view the completion status of any command, which is especially useful in addressing system-level debug challenges. Statistical reports provide event and error counters, as well as performance metrics, that give users a snapshot into captured traces and rapid access to items of interest.

InFusion™ Jammer

The Sierra M6-1 InFusion models perform as a stand-alone 1.5, 3 or 6 Gb/s version of the Teledyne LeCroy InFusion Jammer, allowing engineers to verify error recovery characteristics of their designs. An easy-to-use pop-up menu interface allows the creation of customized test scenarios in just minutes. The user can program on-the-fly modifications to any field within any frame, as the data moves across the link. Any primitive or data pattern can be intercepted and changed to a different user-specified pattern. Examples include support for changing DWORD values, disconnecting links, and forcing various error conditions such as an intermittent CRC error or running disparity errors. This enables unprecedented corner case modification for SAS and SATA traffic, which is especially useful during final test and integration cycles.

Specifications

Host Machine Minimum Requirements

Microsoft Windows® 8, Windows Server 2012, Windows 7, Windows Server 2008R2, Windows XP; 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 2.0 port and/or 100/1000baseT Ethernet. For optimal performance, please refer to our recommended configuration in the product documentation.

Recording Memory Size

2 GB, 4 GB or 8 GB

Data Rates Supported

1.5, 3 and 6 Gb/s SAS or SATA

No. of Ports Supported

1 port per system

Cascade Capability

Up to 8 ports (8 systems)

Host Interface

USB 2.0 and 100/1000baseT Ethernet

Front Panel Indicators

5 LEDs each for Host and Device Ports (Trigger, Error, Link, Speed, Data); Power LED; Status LED

Front Panel Connectors

Two internal SATA bus connectors (Host And Device)

Rear Panel Controls

Power ON/OFF

Rear Panel Connectors

Multi-function connector combines External Trigger IN/OUT and Sync Expansion Port; USB 2.0; 100/1000baseT Ethernet; DC power

Dimensions (W x H x D)

15.9 x 3.5 x 22.9 cm (6.25" x 1.38" x 9.0")

Weight

0.77 Kg (1.7 lb)

Power Requirements

12V DC (90-254 VAC, 47-63 Hz for supplied AC adapter)



Rear panel of Sierra M6-1 supports USB 2.0; multifunctional connector for External Trigger IN/OUT and Sync Expansion Port; 100/1000baseT Ethernet; 12V DC power

Ordering Information

Product Description

Sierra M6-1, 6 Gb/s SAS/SATA Protocol Analyzer, 8 GB Trace Memory
 Sierra M6-1, 6 Gb/s SAS/SATA Protocol Analyzer, 4 GB Trace Memory
 Sierra M6-1, 6 Gb/s SAS/SATA Protocol Analyzer, 2 GB Trace Memory
 Sierra M6-1, 6 Gb/s SATA Protocol Analyzer, 8 GB Trace Memory
 Sierra M6-1, 6 Gb/s SATA Protocol Analyzer, 4 GB Trace Memory
 Sierra M6-1, 6 Gb/s SATA Protocol Analyzer, 2 GB Trace Memory
 Sierra M6-1 SAS/SATA InFusion Jammer, 2 GB Memory

Product Code

SA1-M006-801-X
 SA1-M006-401-X
 SA1-M006-201-X
 ST1-M006-801-X
 ST1-M006-401-X
 ST1-M006-201-X
 SA1-MJ06-201-X