

3M Introduces New Serial Attached SCSI Interconnect Product Line

The design challenges of increasing data transmission rates in enterprise network storage applications can be met with a new line of SCSI (small computer system interface) interconnects from the 3M Electronic Solutions Division. The ROHS compliant(a) family of 3M brand Serial Attached SCSI (SAS) interconnects feature 29-position combination signal and power connectors and has a data transfer rate of up to 3.0 Gb/s in full duplex mode. The new connector is an improvement over the currently used Ultra 320, which needs an 80-pin connector to support the data rate of 320 Mb/sec in half duplex mode, a speed not able to support the demand of faster data rate for servers (RAID/BLADE) in the enterprise computing market.

Used in enterprise network storage applications such as storage area networks (SAN), redundant array of inexpensive disks (RAID), direct attach storage (DAS) and network attached storage (NAS), the 3M Serial Attached SCSI (SAS) connectors are designed on a 1.27 mm (.050") in-line contact pitch and is backward compatible to existing SCSI. Because the signal transmission is serialized through two differential pairs, the overall connector size is much smaller compared to previous SCSI connectors. The new 29-pin 3M Serial Attached SCSI (SAS) interconnects (both plug and receptacle) have been defined in the standard SFF 8482.

3M Serial Attached SCSI (SAS) connectors are recognized in three interface segments. The first segment is the primary signal portion, which appears in a seven-contact format. Two pairs serve as the transmit (Tx) and receive (Rx) contacts, while three grounds also function as the EMLB contacts, making the 3M Serial Attached SCSI (SAS) connector hot pluggable.

The second interface recognized in the 3M SAS connector is the 15 contact power segment. The segment accommodates three primary voltage ranges (3.3 V, 5 V and 12 V). Each voltage is allocated three contacts for standard power: positive (+), negative (-) and ground (G), leaving six additional contacts. Five of them are used for GROUND and one for READY LED.

The third segment is the secondary signal port, which provides a redundant path for each drive and is desirable to have in the event of controller failover. Like the primary signal portion, it has seven pins, but the pitch differs: 0.8 mm (0.032") compared to the primary signal segment's 1.27 mm (0.05") pitch. As it is redundant, two pairs serve as the transmit (Tx) and receive (Rx) contacts, while three grounds also function as the EMLB contacts, also making it hot pluggable. The signal plugs are available in combination with power.

All connectors are all matte tin terminal with 30 micron gold plating. Standard lead time is 28 days after receipt of order. For more information, go to <http://www.3m.com/interconnect>.

About 3M Electronic Solutions Division

The 3M Electronic Solutions Division, headquartered in Austin, Texas, has numerous technologies and provides a wide range of products for the electronics market. It provides products and solutions to meet the electronic industry's challenges of protecting sensitive components and precisely delivering them to the assembly point, as well as flexible and multilayer microinterconnect packaging solutions; embedded capacitance laminate materials, copper and fiber interconnect systems; cables and cable assemblies; static control products, and Textool brand test and burn-in sockets. The business is part of 3M Company, a \$21 billion diversified technology company with leading positions in consumer and office; display and graphics; electronics and telecommunications; health care; industrial; safety, security and protection services; transportation and other businesses.

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(a) "RoHS compliant" means that the product or part does not contain any of the following substances in excess of the following maximum concentration values in any homogeneous material, unless the substance is in an application that is exempt under RoHS: (a) 0.1% (by weight) for lead, mercury, hexavalent chromium, polybrominated biphenyls or polybrominated diphenyl ethers; or (b) 0.01% (by weight) for cadmium. Unless otherwise stated by 3M in writing, this information represents 3M's knowledge and belief based on information provided by third party suppliers to 3M.

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