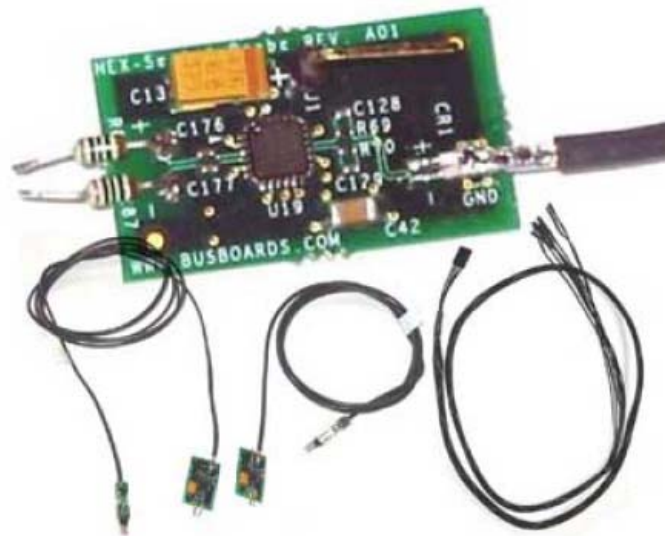

NEX-SERIALPROBE



- Designed for the customer that can not use the Tektronix Mid-Bus connection or do not use the PCI-Express slot
- Single lane PCI-Express probe compatible with the Tektronix TMS817/818 PCI-Express support
 - Same cable length, electrical loading and electrical performance
 - Connects directly to the TMS817/818 box replacing the Tektronix supplied eight-lane probe
- Single lane Serial RapidIO (SRIO) probe, compatible with NEX-SRIO
- Provides the ability to easily probe serial lanes that are not physically grouped together
- Does not require special connection pads to be added to the customer target
- Connections are made to the target with two resistors that are small enough to attach to most PCB vias
- Acquires signals up to 3.125 Gb/s

General Description

The NEX-SERIALPROBE was designed for customer targets that do not place all the serial lanes in one physical location on the PCB. Prior to this solution there was a requirement to route all of the lanes to be monitored to one set of pads on the customer target. This often caused routing issues that were difficult or impossible to overcome. The design of NEX-SERIALPROBE provides the ability to probe individual lanes on a target without the requirement for any added pads. By connecting the probe to available vias or other similar points on a target, the NEX-SERIALPROBE can be attached to designs without added test points.

The NEX-SERIALPROBE is designed to be used with preprocessor boxes such as the Tektronix TMS817/818 PCI Express support. The NEX-SERIALPROBE is essentially a single lane version of the eight lane probe that Tektronix ships with their TMS817/818 product. The NEX-SERIALPROBE offers the same specifications and feature set as the TMS817/818 probe.

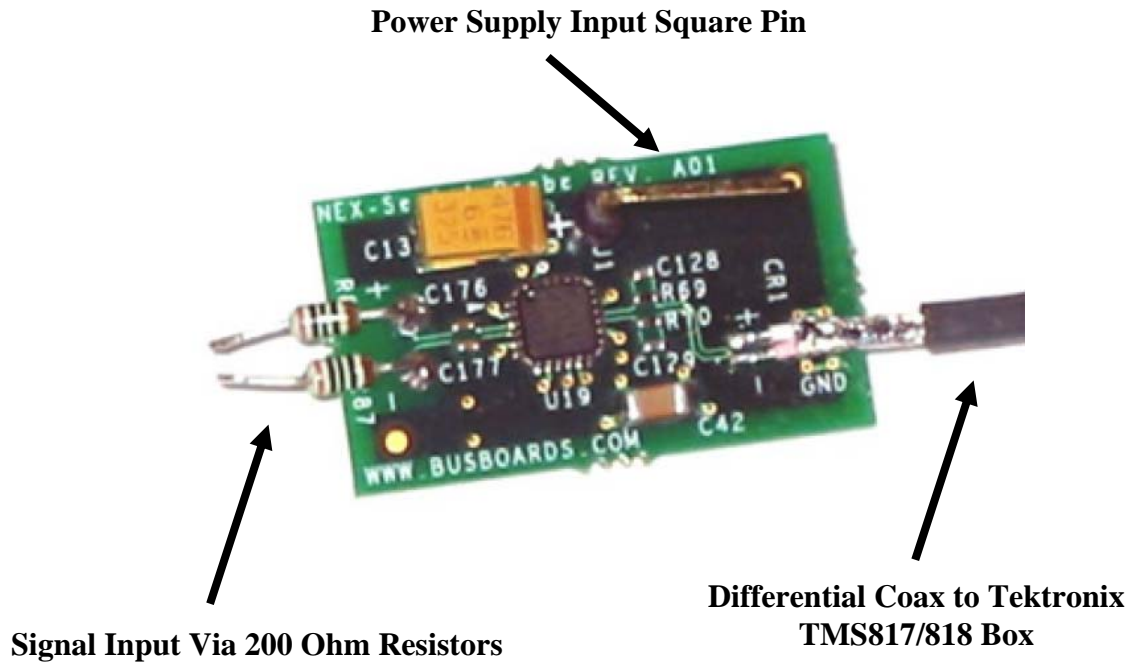
The NEX-SERIALPROBE connects to the target with two, replaceable, 200-ohm, ¼-W, 1% resistors with 0.0177" legs (Digi-Key P/N:P200CACT-ND). The connection to test points is variable. Single probe resistor separation can vary between 0.05" and 0.3".

Cautions

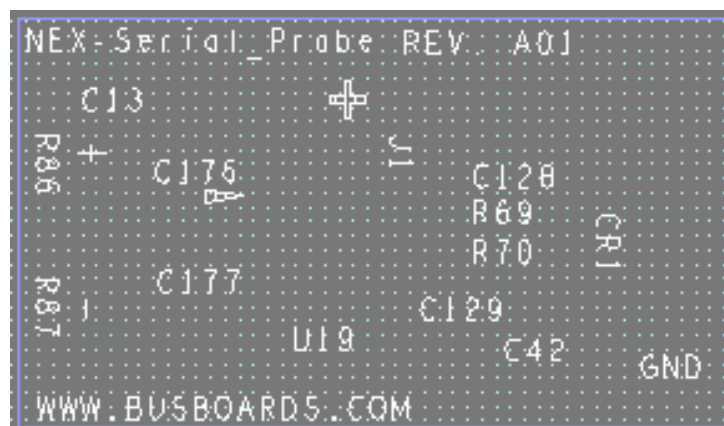
- To insure full speed operation, soldered down probe resistors should not have more than 0.1" axial lead exposed between the circuit board and the probe resistor
- Probes are static sensitive and must be handled accordingly
- Due to the connection resistors having small axial leads for easy installation, care must be taken to support the weight of the probe to prevent the probe from bending over and shorting against the board under test
- The NEX-SERIAL connects to a differential pair on a target. Therefore, it is important that each resistor be attached at the same distance from the source signals
- There must not be more than 4 ns of separation between any of the probes connected to a single bus.

Connection to the System Under Test

Connection is made by soldering down to two input resistors to the user circuit. Vias are an ideal location. The axial lead of the resistor that connects to the user circuit should be 0.1" or less to prevent reflections.

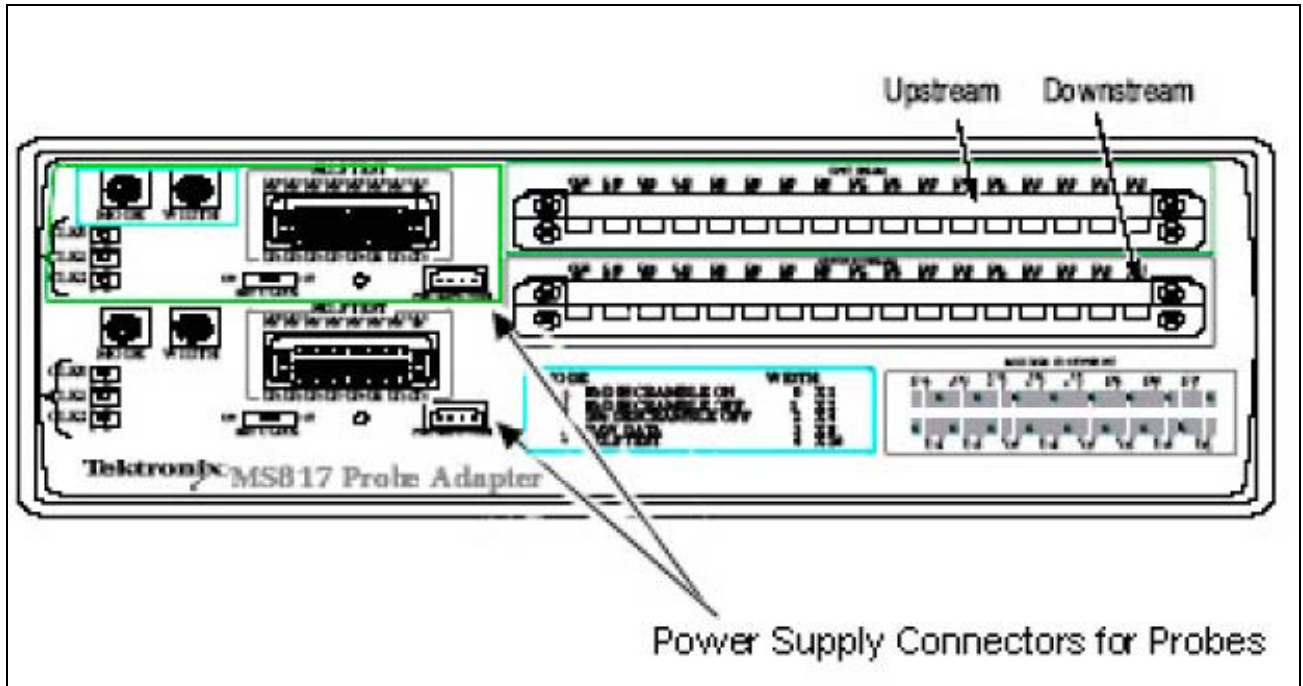


Silkscreen Front

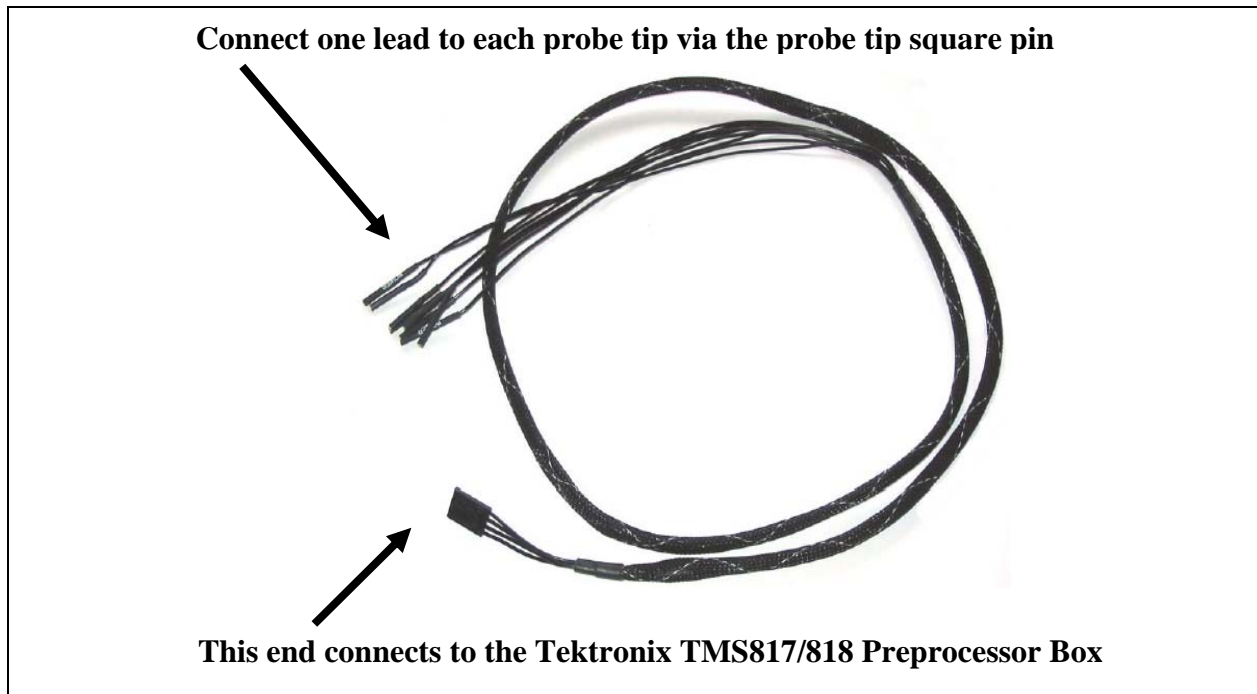


Power Supply Connection

Connect the power cable to the Tektronix box and slide one power supply power lead over the square pin on each NEX-SERIALPROBE you wish to use.



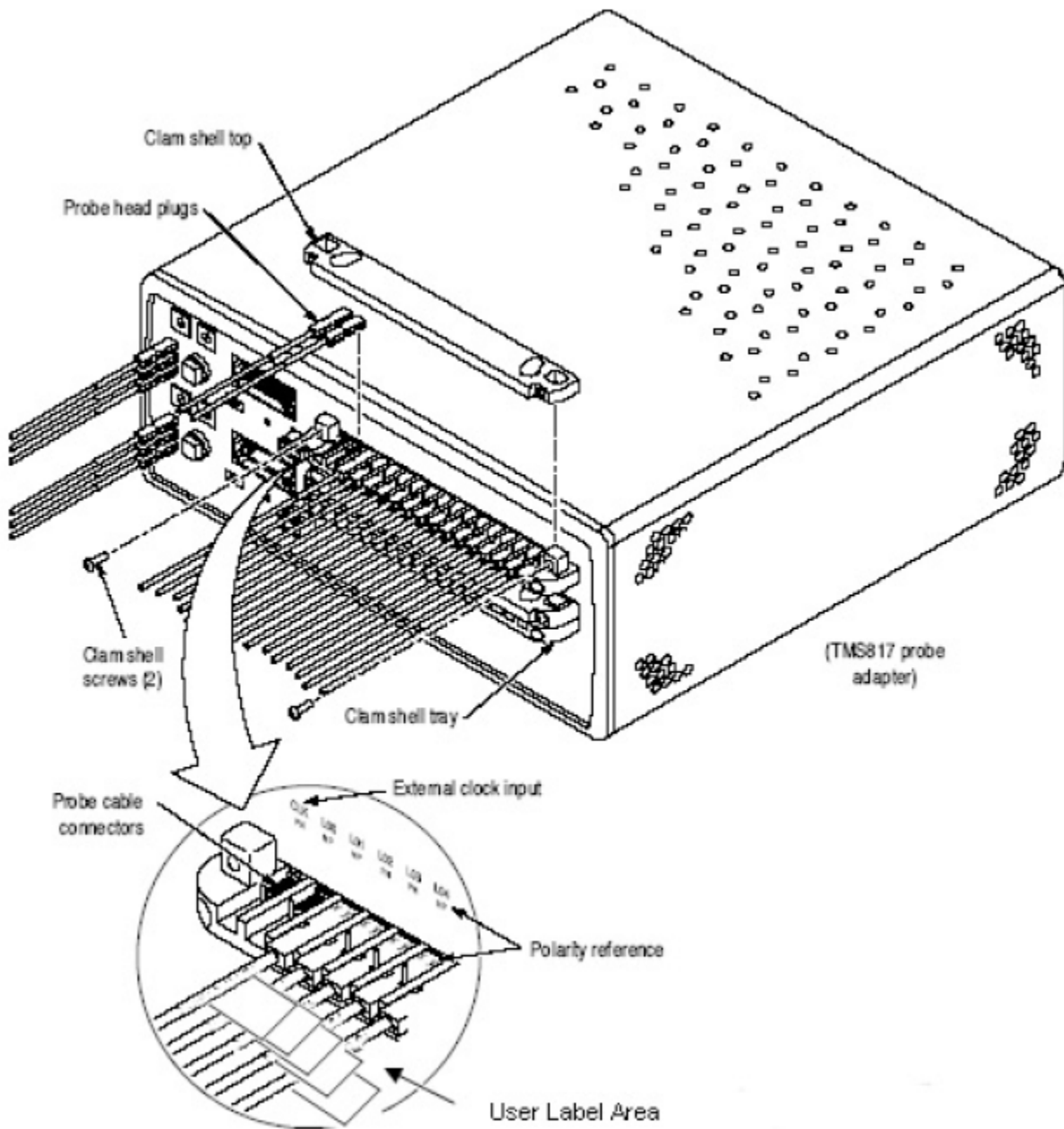
TMS817 front panel shows the two available power connectors



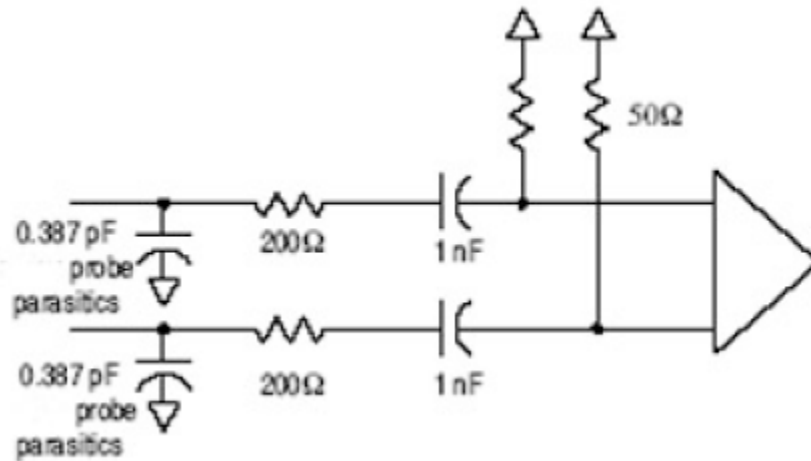
Single Channel User Definable Labels

The small square taps on each NEX-SERIALPROBE are supplied so that the user can add identification to each probe. Tektronix TMS817/818 inputs are Labeled Up-Stream/Down-Stream, L00-L15, with an NP or PN for polarity.

Suggested markings for easy reconnection are:
D03NP – Down-Stream, L03, polarity assignment.



Maximum Probe Loading



Mechanical Specification

Probe tip is 0.557" wide and 1" high.

Cable length is 48" (Both power and signal leads)

Does not include the connection resistors hanging over the edge of the circuit board.

Reference Documents

PCI Express Logic Analyzer Probing Design Guide for Tektronix Inc. Rev. 1.0, July 2003.

TMS817 & TMS818 PCI-Express Bus Support 071-1214-00

Probing Design Guide for NEX-SRIO

NEX-SRIO User Manual

Ordering / Contact Information

Part Numbers NEX-SERIALPROBE-2

1X upstream and down stream support. Includes 2 probes and power cables.

NEX-SERIALPROBE-8

4X upstream and down stream support. Includes 8 probes and power cables.

NEX-SERIALPROBE-16

8X upstream and down stream support. Includes 16 probes and power cables.

NEX-SERIALPROBE-32

16X upstream and down stream support. Includes 32 probes and power cables.

Please see the website or contact us for complete solutions.

Postal: Nexus Technology, Inc.
78 Northeastern Blvd. #2
Nashua, NH 03062

Telephone: 877-595-8116

Fax: 877-595-8118

Email: support@nexustechnology.com
quotes@nexustechnology.com
techsupport@nexustechnology.com

Website: www.nexustechnology.com

Placing an Order

Credit Card orders can be placed directly at 877-595-8116.

Purchase orders can be faxed to 877-595-8118.

Nexus Technology, Inc. reserves the right to make changes in design or specification at any time without notice. Nexus Technology, Inc. does not assume responsibility for use of any circuitry described. All trademarks are the property of their respective owners.