Agilent Technologies

Errata Notice

This document contains references to "Centellax." Please note that the test and measurement product portfolio once owned by Centellax, Inc. is now part of Agilent Technologies. For more information about these products and support, go to **www.agilent.com/find/bert-news**.

TR2P1A Datasheet

1.5 - 12.5 Gb/s Error Detector
Remote Rx Head

Product Highlights

- 1.5-12.5 Gb/s range of operation
- PRBS 7, 10, 15, 23, 31
- Differential or single-ended input
- Fully programmable input parameters
- Compact Size
- Compatible with PCB12500 Parallel Channel BERT

TR2P1A Error Detector Head

The TR2P1A Error Detector is designed to configure the PCB12500 as a bit error rate tester (BERT).

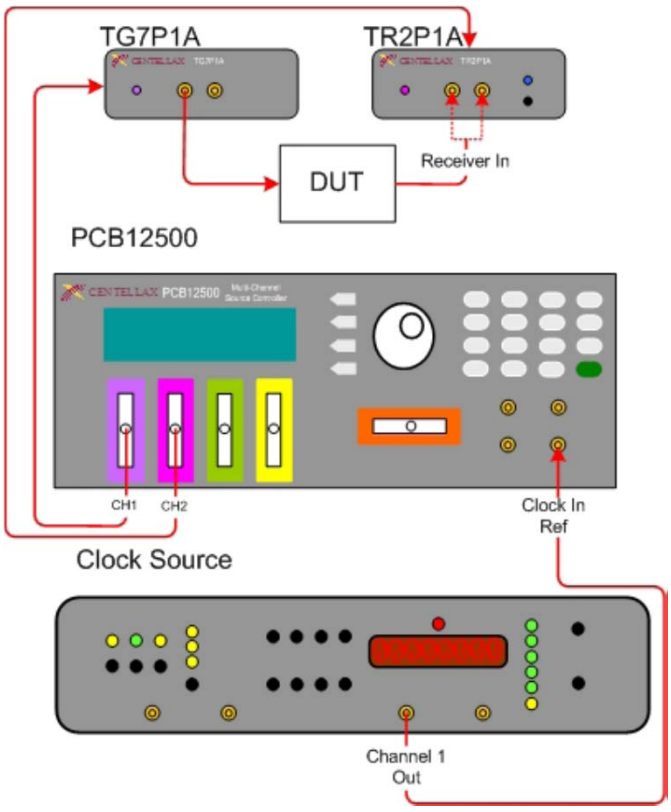
Each head connects to the PCB12500 controller through a 1 m cable. This allows it to be located near the signal connection points in the device under test, minimizing cable loss.

The modular architecture allows you to purchase only the heads your application requires. No need to spend more on unused output or input channels.

CENTELLAX
SIGNAL INTEGRITY MEASUREMENT

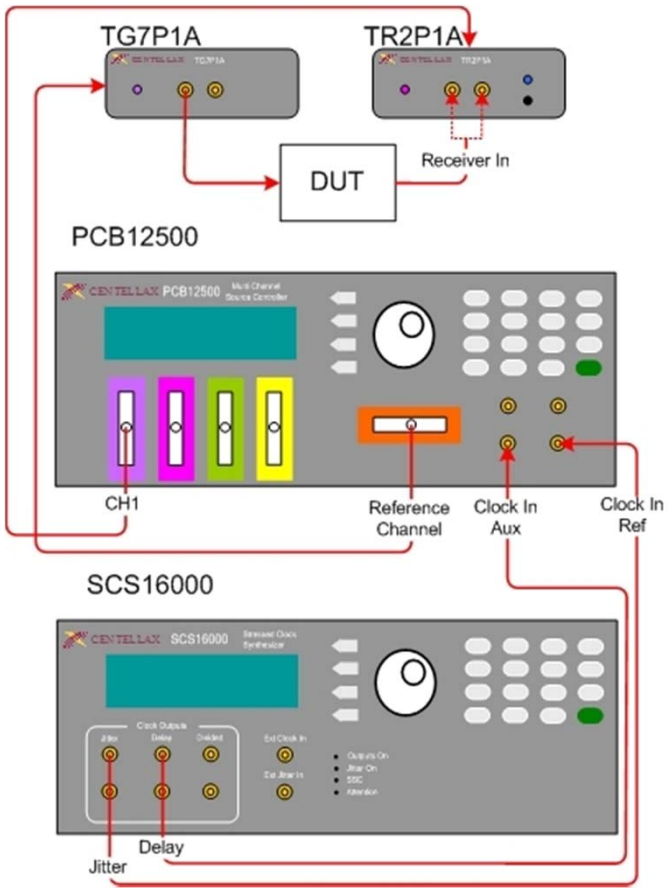
Typical Measurement System Setups

Bit Error Rate (BER) Measurements



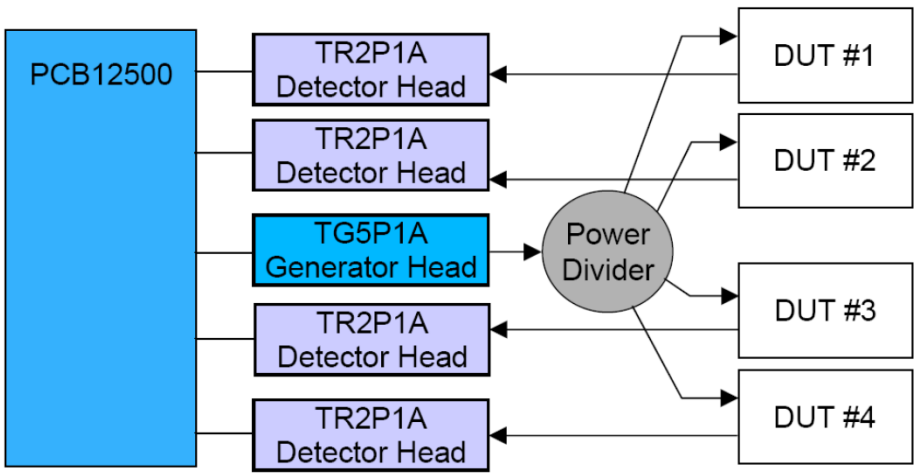
This setup is used for performing bit error rate (BER) measurements using the TR2P1A Error Detector.

Jitter Tolerance Testing



This setup is used for jitter tolerance testing and receiver characterization.

Parallel Testing Single Lane Devices



Systems based on the PCB12500 for parallel testing of multiple devices are cost effective and simple to implement. Configurations based on a single system allow implementation of 2 independent channels of serial BERT, up to 5 independent pattern generators, or single shared pattern source with 4 independent error detectors.

Specifications

TR2P1A Error Detector Head	
Signal Configuration	Differential or Single-Ended mode
Data Line Coding	Non-Return to Zero (NRZ)
Data Rate	1.5 to 12.5 Gb/s[1]
Patterns	PRBS2^n-1, n=7, 10, 15, 23, 31
Input Amplitude	0.1 to 2.0 V, single ended
Threshold Adjustment	-1.0 V to +1.0 V in 1 mV steps
Termination Voltage	-2.0 V to +2.0 V in 5 mV steps
Delay Range	±1,000 UI in 1 mUI steps[1]
Autoalign	Set optimum 0/1 threshold and data delay Search step size range
Threshold	5 to 20 mV in 1 mV steps
Delay	5 to 20 mUI in 1 mUI steps
Error Threshold	1E-6 to 1E-12
BER Measurement Period	0 to 99,999.999 seconds in 1 msec steps
BER Results	Bit Error Rate, Error Count, Bit Count, Measurement Seconds
Phase Margin	0.6 UI @ 10 Gb/s, 2^{31}-1 PRBS
Connectors	2.92 mm female

[1]Timing parameter determined by PCB12500

Physical and Environmental

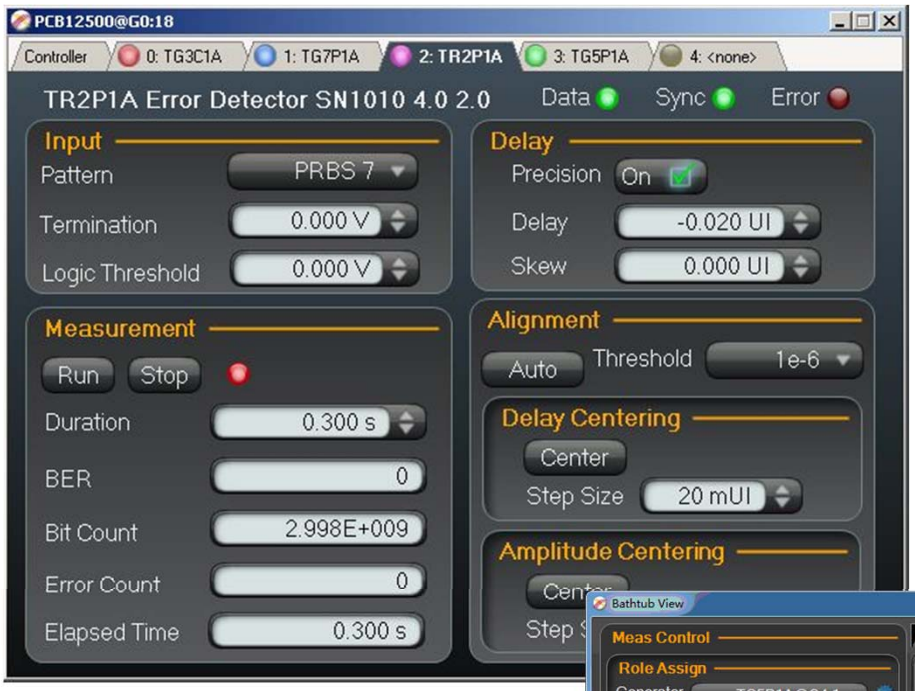
Temperature: Operating, (Non-Operating)	+10º to +40º C, (-40º to +70º C)
Dimensions (*Height, Width, and Depth)*	33 mm (1.3 in) x 72 mm (2.8 in) x 130 mm (5.1 in)
Weight	0.38 kg (13.4 oz)

Compliance

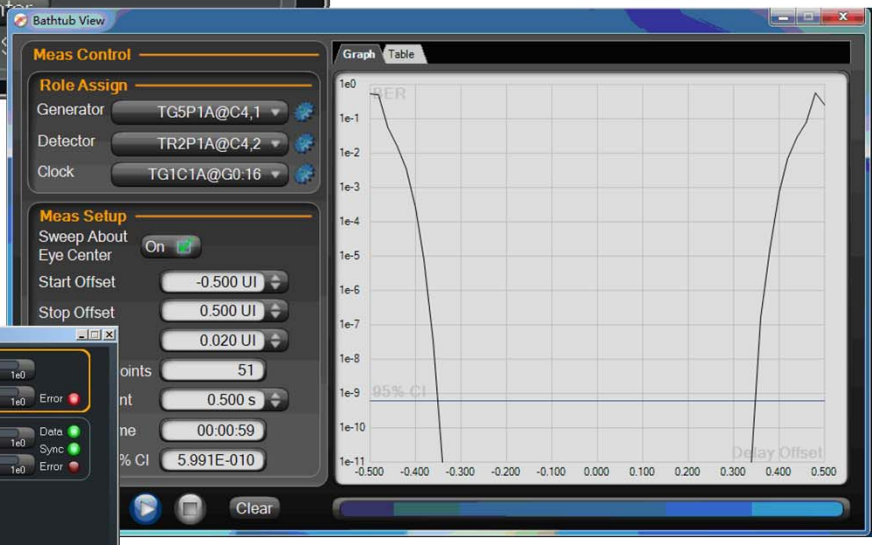
EMC
Complies with:
European EMC Directive 2004/108/EC, IEC/EN 61326, CISPR 11 Group 1 Class A, AS/NZS CISPR 11, ICES/NMB-001

Centralized control

The Centellax Signal Integrity Studio (SIS) application provides customers the ability to control multiple Centellax instruments through a Windows-based Graphical User Interface (GUI).



Set up is easy using the Signal Integrity Studio application. For repetitive testing, setups can be stored and recalled at a later time.



The results view shows composite BER along with the performance of the individual lanes. Bar graphs give a quick indication of any lane specific problems without the need to look at the individual BER numbers.

View the BER measurement-based Bathtub, or horizontal slice through the eye as seen by the TR2P1A. Viewing the Bathtub is useful for examining transmitted signals, and can be used for comparing the width of the eye opening in different conditions. For example, users can quickly view how crosstalk aggressors affect a transmitted signal by comparing the width of the resulting Bathtub with and without the presence of aggressors.

Ordering Information

Product Code	Description
TR2P1A	**1.5-12.5Gb/s Error Detector Remote Rx Head**

TR2P1A includes: 2ea. cable, 12.7 cm (5 in) SMA-M to SMA-M, 1 ea. terminator, 50Ω, 18 GHz SMA-M, printed Quick Start Guide, standard 1 year warranty

Warranty and Calibration Services

-OPT300	**1 Year Warranty Extended to 3 Years**
-OPT301	**1 Year Warranty Extended to 5 Years**
-OPT320	**Centellax Calibration – Per Incident**
-OPT321	**Annual Centellax Calibration for 3 Years**
-OPT322	**Annual Centellax Calibration for 5 Years**

More Information

For additional information, to schedule a product demonstration, or to request a quote, contact your local authorized Centellax Distributor or:

Centellax Sales Department
Tel: 1-866-522-6888
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