



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**.

Welcome to the Centellax TR2P1A 12.5Gb/s Error Detector Quick Start Guide. This guide will help you identify the contents of the shipping package, perform a quick functional check of the product, and guide you on where to find more information and support for the TR2P1A.

The TR2P1A is shipped in a protective box with all the accessories required for operation. The shipping box contains:

- TR2P1A Remote RX Head



- Accessory kit, which includes the following for each TR2P1A:
 - (Qty 2) SMA Cables
 - (Qty 1) 50Ω 18GHz 1W SMA Male Terminations
- TR2P1A Quick Start Guide (this document)



The TR2P1A is designed to be used with the PCB12500 Parallel Channel BERT. For more information on the operation and features of the TR2P1A please refer to the PCB12500 Users Guide on the product webpage <http://www.centellax.com/products/testmeas/PCB12500>.

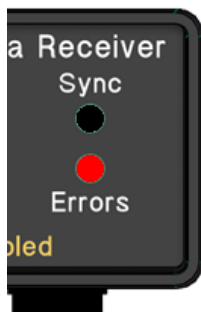
Technical Support information: support@centellax.com

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TR2P1A Indicators Quick Reference

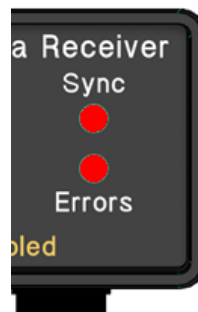


Three LED indicators are integrated into the TR2P1A front panel. These indicators are used to communicate the current status of the TR2P1A error detector. The combinations are shown below.



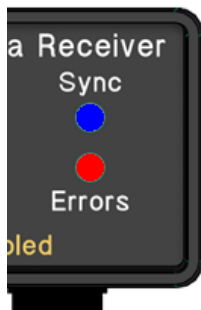
Sync- Unlit
Errors- Red
Status- NODATA

All-zeros or all-ones condition; no PRBS data is detected. BER measurements cannot be performed.



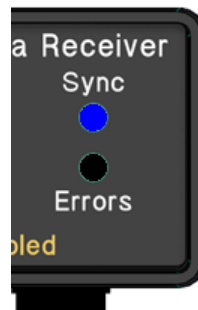
Sync- Red
Errors- Red
Status- NOSYNC

Data detected, but of unknown type; cannot synchronize. BER measurements cannot be performed.



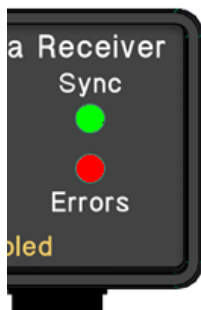
Sync- Blue
Errors- Red
Status- SYNC

Data detected and pattern synchronized; errors detected. BER measurement is possible.



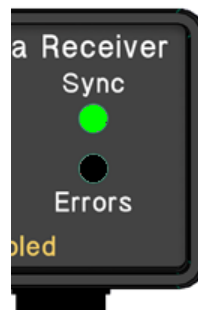
Sync- Blue
Errors- Unlit
Status- SYNC

Data detected and pattern synchronized; no errors detected. BER measurement is possible.



Sync- Green
Errors- Red
Status- MEASURING

BER measurement is running. Errors detected.



Sync- Green
Errors- Unlit
Status- MEASURING

BER measurement is running. No errors detected.

Unpacking

Carefully remove the TR2P1A from the case in an ESD-safe environment.

Important Notes

- Use ESD protection at all times when using the instrument
- Install the TR2P1A on a flat surface away from heat sources
- Use a 8 lbf-in (90 N-cm) torque wrench when attaching connectors

Installation

- 1 Plug the AC power cord into the PCB12500, rear panel power socket.
- 2 Plug the other end of the AC power cord into a suitable wall socket. (100-240V AC, 50/60Hz).
- 3 Connect the PCB12500 to a clock source as shown in Figure 1.

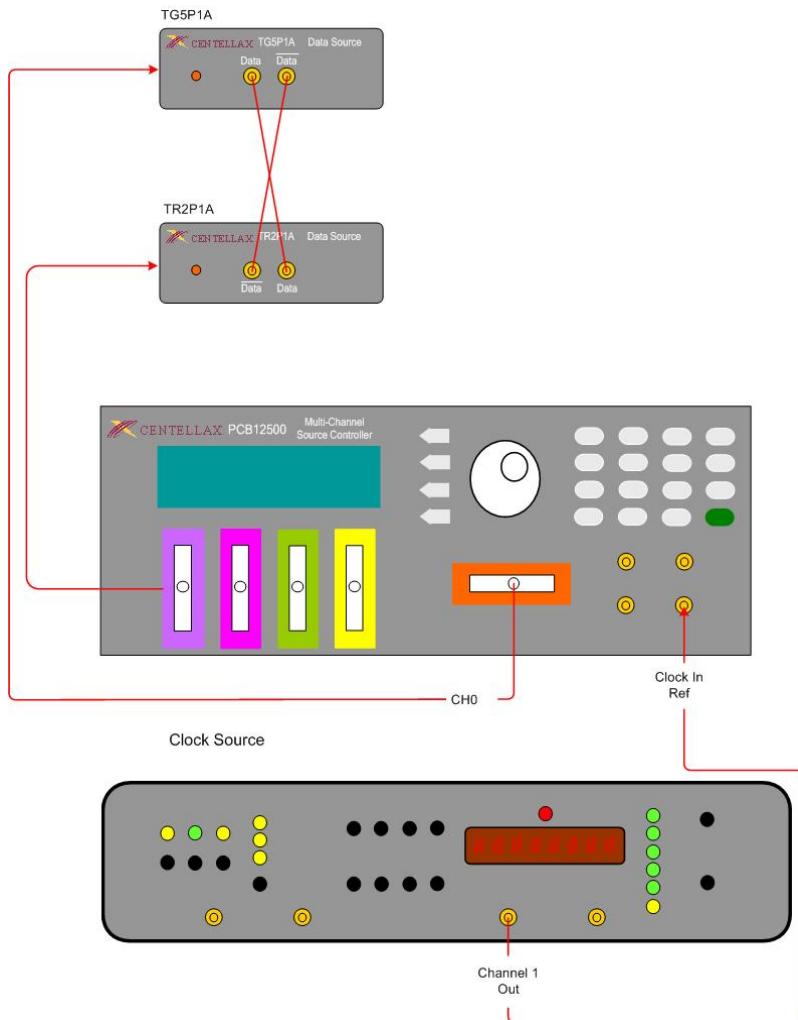


Figure 1. Installation setup

- 4 You will need a TG5P1A PRBS generator head for this installation test. Connect the TG5P1A to the reference channel (Ch. 0). If a TG5P1A is not available, use another PRBS generator in its place. Make sure the same clock source drives the PRBS generator as the PCB12500.
- 5 Connect the TR2P1A to channel 1.
- 6 On the keypad, press the number **0** to view the STAT (Status) menu settings for channel 0:

Pat Out:	OFF
Pat:	2 ⁷ -1
DatAmp:	+1.000 V
DatOf:	+0.000 V
DatTrm:	+0.000 V
DeEm:	00.0 dB
Xover:	050%
PatInv:	OFF
Dly:	+00000.000
Clk Output:	OFF
ClkAmp:	900 mV
ClkOf:	+0.000 V
ClkTrm:	+0.000 V

- 7 Position the arrow next to the **Pat Out** label on the PCB12500 Controller then press the softkey corresponding to the **EDIT** label.
- 8 Select **On** then press the softkey corresponding to the **EXIT** label to accept the change. This will turn on the data output. The channel ID LED of the TG5P1A should come on.
- 9 Set up the clock source as follows: Frequency 10GHz, Output Level 0dBm
- 10 On the keypad, press the number **1** to view the STAT (Status) menu settings for channel 1:

Err Det:	OFF
Pat:	2 ⁷ -1
T:	00010.000 S
DatThr:	+0.000 V
Dly:	+0000.000
ALL:	-0
BER:	0.000e0
Errs:	0.000e0
Bits:	0.000e0
Auto Align:	OFF
Dstep:	20 mUI
Astep:	0.020 mV
DatTrm:	+0.000 V

- 11 Position the arrow next to the **Err Det** label on the PCB12500 Controller then press the softkey corresponding to the **EDIT** label.
- 12 Select **On** then press the softkey corresponding to the **EXIT** label to accept the change. This will turn on the data output. The channel ID LED of the TR2P1A should come on.



- 13 Position the arrow next to the **Auto Align** label on the PCB12500 Controller then press the softkey corresponding to the **EDIT** label.
- 14 Select **On** then press the softkey corresponding to the **EXIT** label to accept the change. This will turn on the auto alignment.
- 15 Position the arrow next to the **BER** label on the PCB12500 Controller then press the softkey corresponding to the **RUN** label. **MEAS 000 000** should appear above **BER** and start counting. The **BER** and **Errs** should read **0.000e0**.