SB10: Centellax TG1B1-A Optical Fiber Test Setup

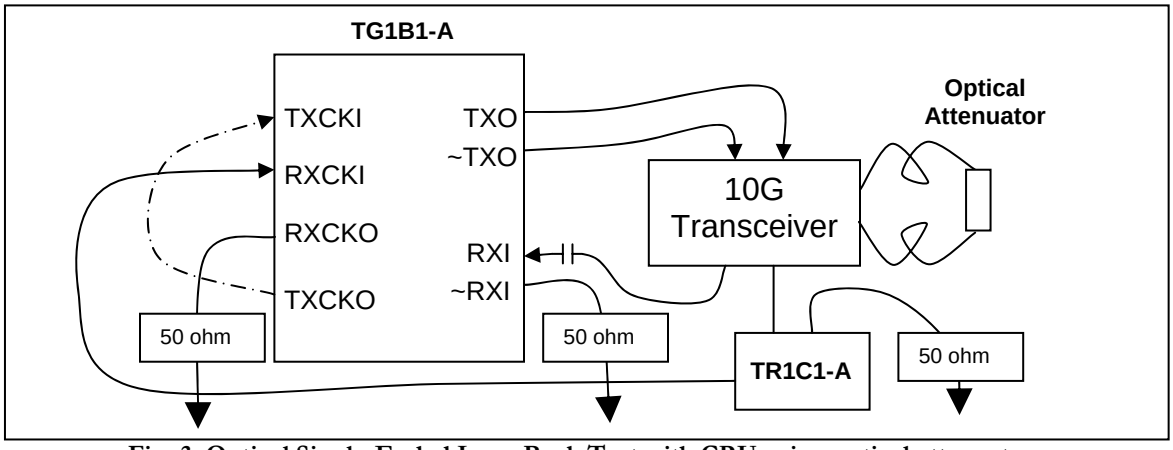

Fig. 3 Optical Single-Ended Loop Back Test with CRU using optical attenuator

BERT, TG1B1-A, along with CRU, TR1C1-A, has been tested with 30km of fiber loop, shown in figure 1 and 2. Due to the limitation of 10G transceiver capability, 40km fiber loop experiment did not pass the error free test. The experiment with 30km fiber loop was done the period of 6700sec with PRBS 23.

The above experiment was repeated using an optical attenuator in place of 30km fiber loop. (shown in figure 3) The maximum attenuation allowed for error free operation was 8dB.

30km fiber spool has an attenuation of 6.5dB. 40km fiber has a loss of 8.5dB. For it is shown from the experiment, figure 3, with the optical attenuator that the maximum attenuation allowed for 10G transceiver used is 8dB, it confirms that you can use BERT with CRU for a longer fiber loop testing as long as the optical transceiver can tolerate the loss over the fiber optical cable.