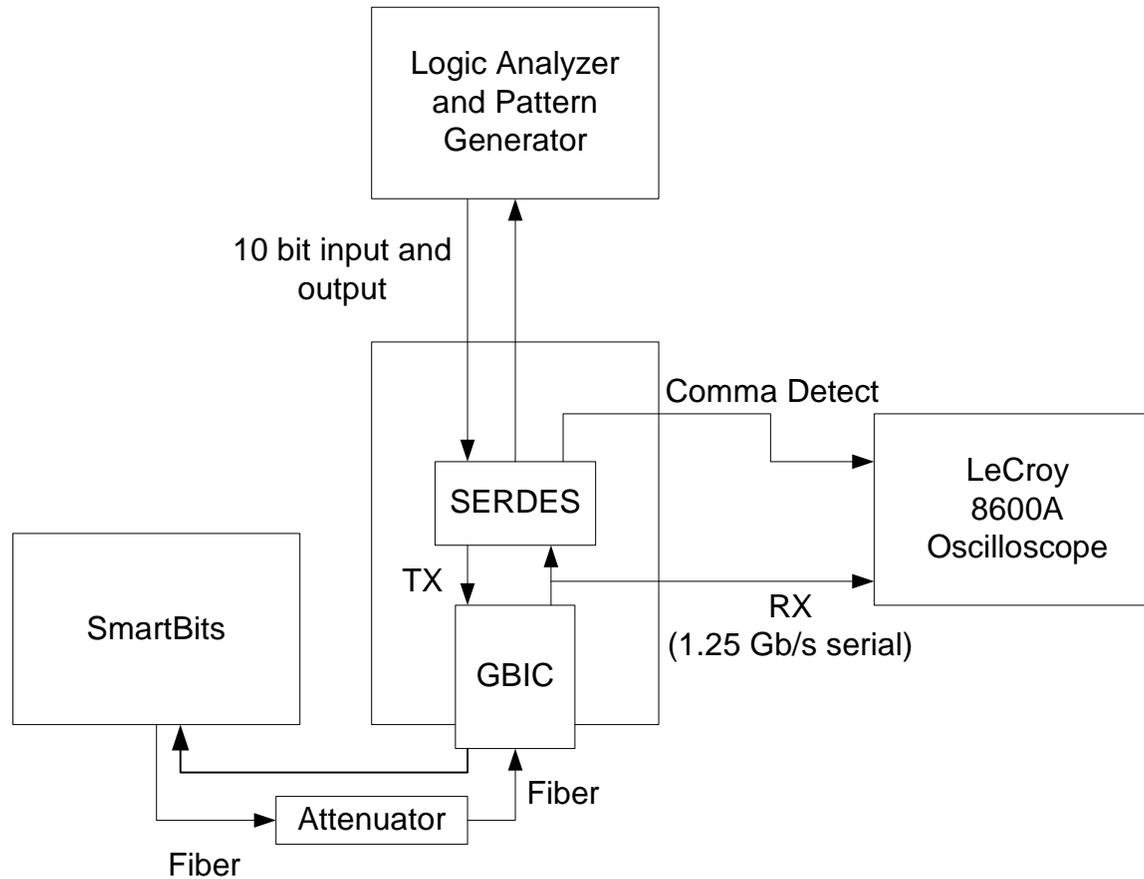# CDR lock time testing

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Definition

- Define CDR lock time: time from when signal reaches input of SERDES to when Comma Detect is asserted

Measurement Setup

Preliminary results

- Under normal operating conditions, CDR lock time averaged 80ns

- Under worst case BER conditions, CDR lock time averaged 80ns
  - When valid data was output from GBIC, CDR lock time was relatively constant regardless of BER
  - As BER grew higher, GBIC did not always output valid data to SERDES

Next Steps

- Need to try different GBICs with better performance and see if that makes a difference

- Different SERDES should be tested

- Think about testing from optical input instead of electrical