

USB3.2 Gen1 Tx & Rx A-B Test Topologies

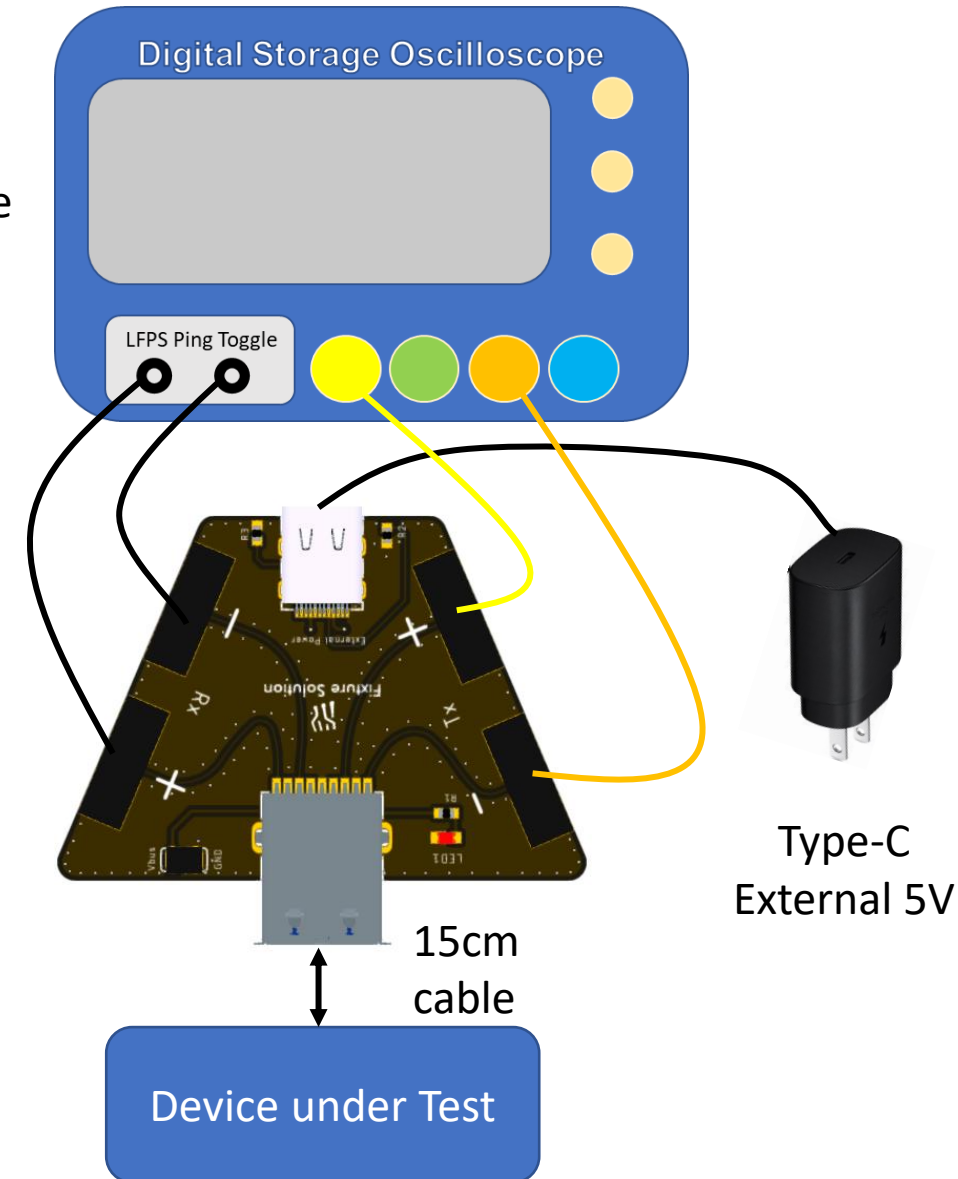
V08



USB3.2 Gen1 Device Upstream Tx

USB-IF Approved Scope

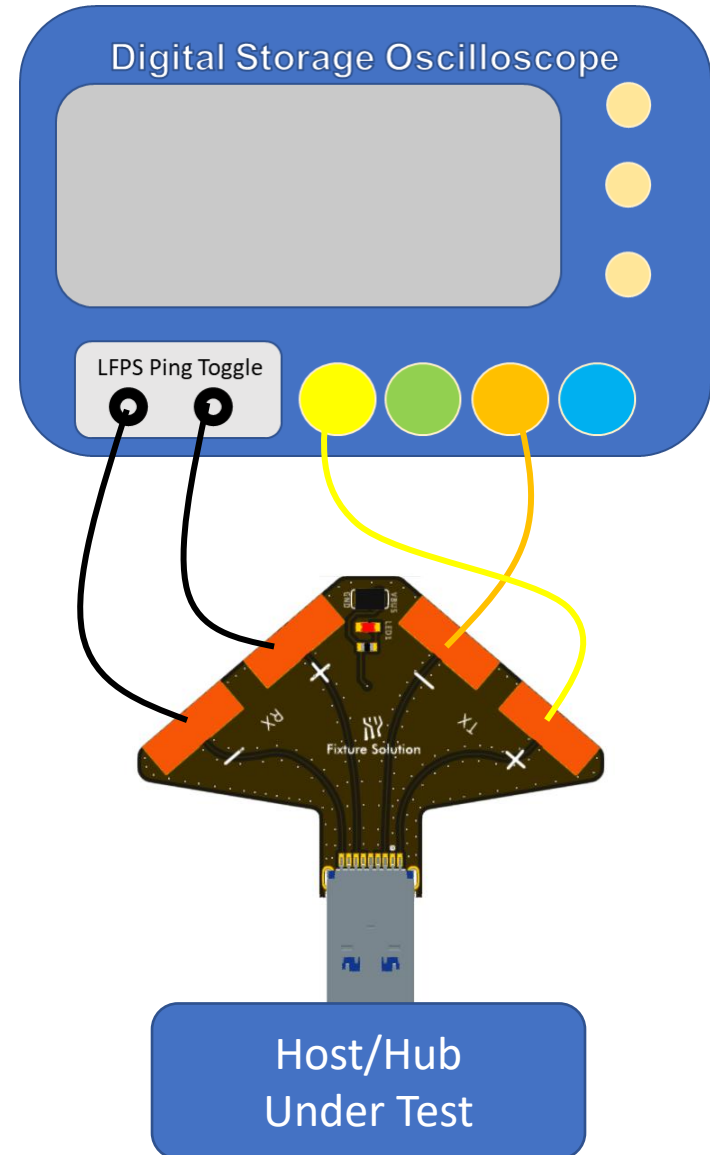
- 1) Use short channel device fixture
- 2) External power with Type-C and 5V (LED1 lighting on)
- 3) Use short 15cm cable between DUT and fixture, if DUT have captive cable directly connect to fixture
- 4) Connect the Tx pair with SMA to scope
- 5) Connect the Rx pair with SMA to LFPS toggle generator
- 6) Short channel measurement is done
- 7) USB-IF Approved Scope will embedded the required S-parameter (Std-B connector: 3m cable + 11"PCB; Micro-B: 1m Cable + 11"PCB; Tethered Std-A: 11"PCB) for the long channel



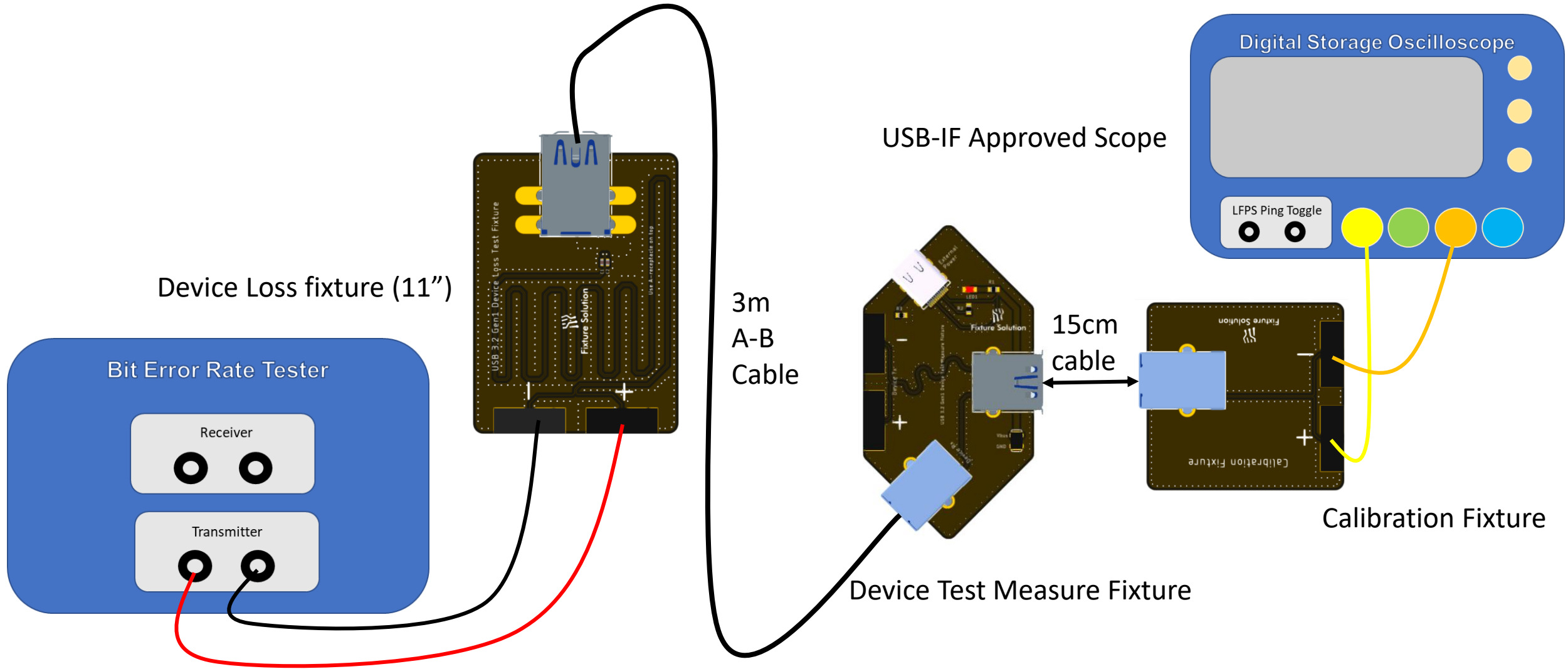
USB3.2 Gen1 Host/Hub Downstream Tx

USB-IF Approved Scope

- 1) Use short channel host fixture
- 2) Connect the Tx pair with SMA to scope
- 3) Connect the Rx pair with SMA to LFPS toggle generator
- 4) LED1 lighting on when Host/Hub Vbus is available
- 5) Short channel measurement is done
- 6) USB-IF Approved Scope will embedded the required S-parameter (Std-A connector : 3m cable + 5"PCB) for the long channel measurement



USB3.2 Gen1 Device Rx Calibration



USB-IF Approved
Generator & BERT

USB3.2 Gen1 Device Rx Long Channel Jitter Tolerance test

USB-IF Approved
Generator & BERT

Bit Error Rate Tester

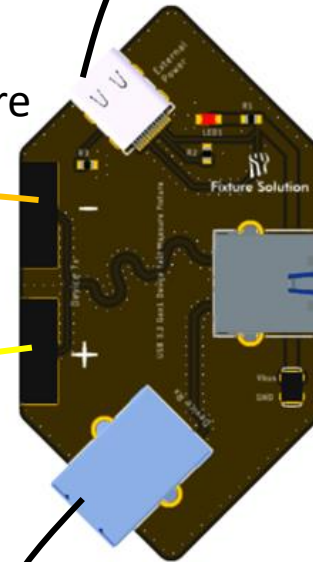
Receiver



Transmitter



Device Test Measure Fixture

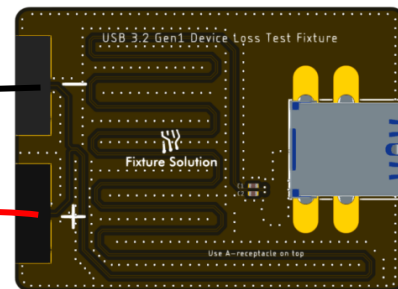


15cm
cable

Device
Under Test

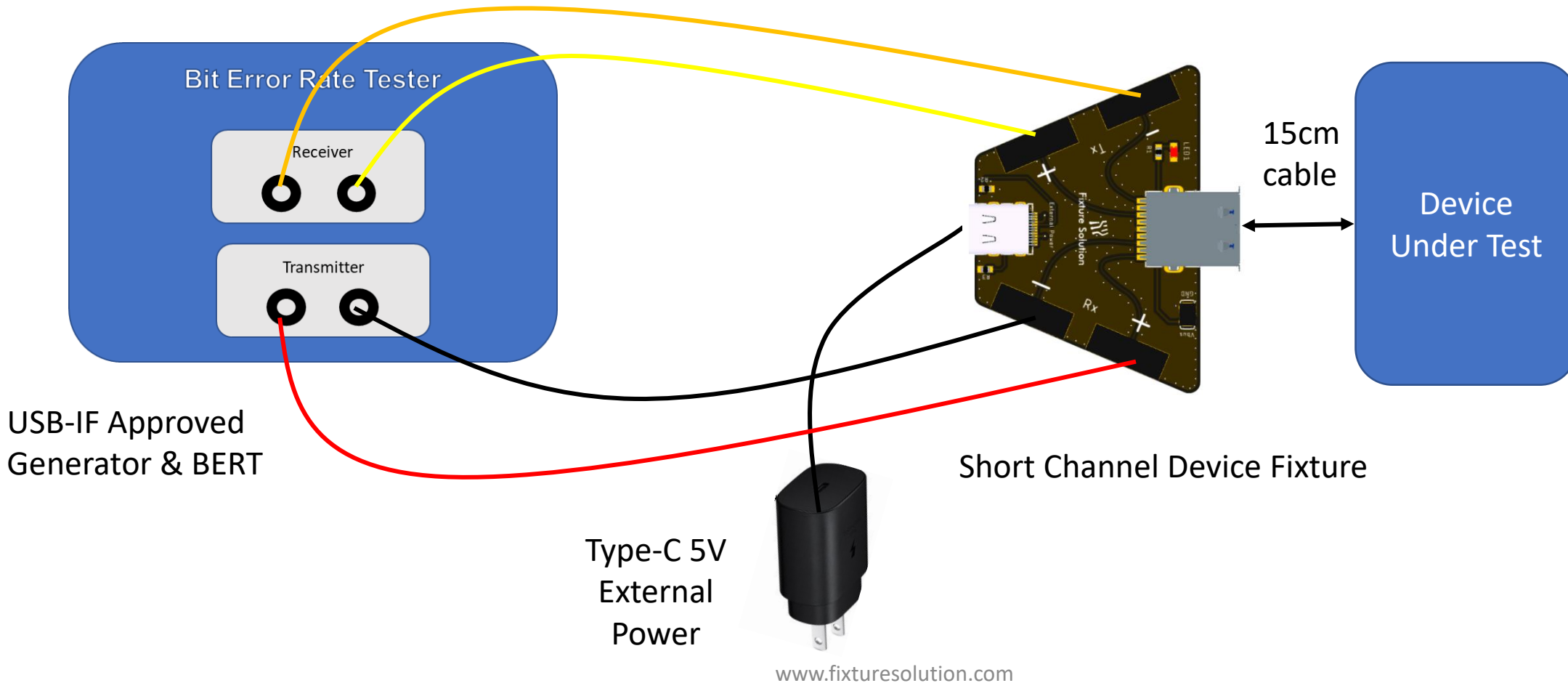
Type-C 5V
External
Power

Device Loss fixture (11")

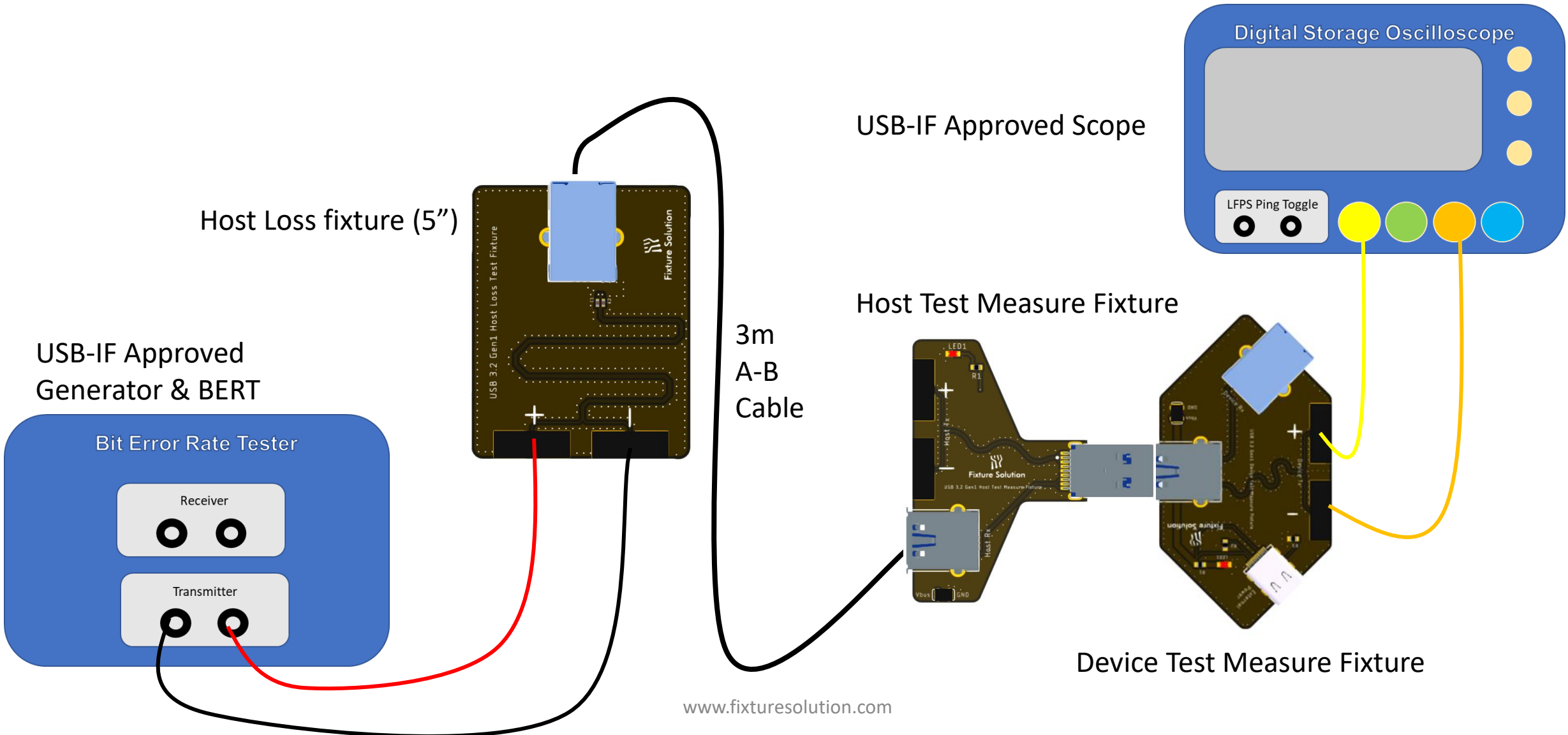


- 3m A-B Cable -> DUT with Std B-Receptacle
- 1m A-B Cable -> DUT with micro B-Receptacle
- 15cm A-B Cable -> DUT have captive cable

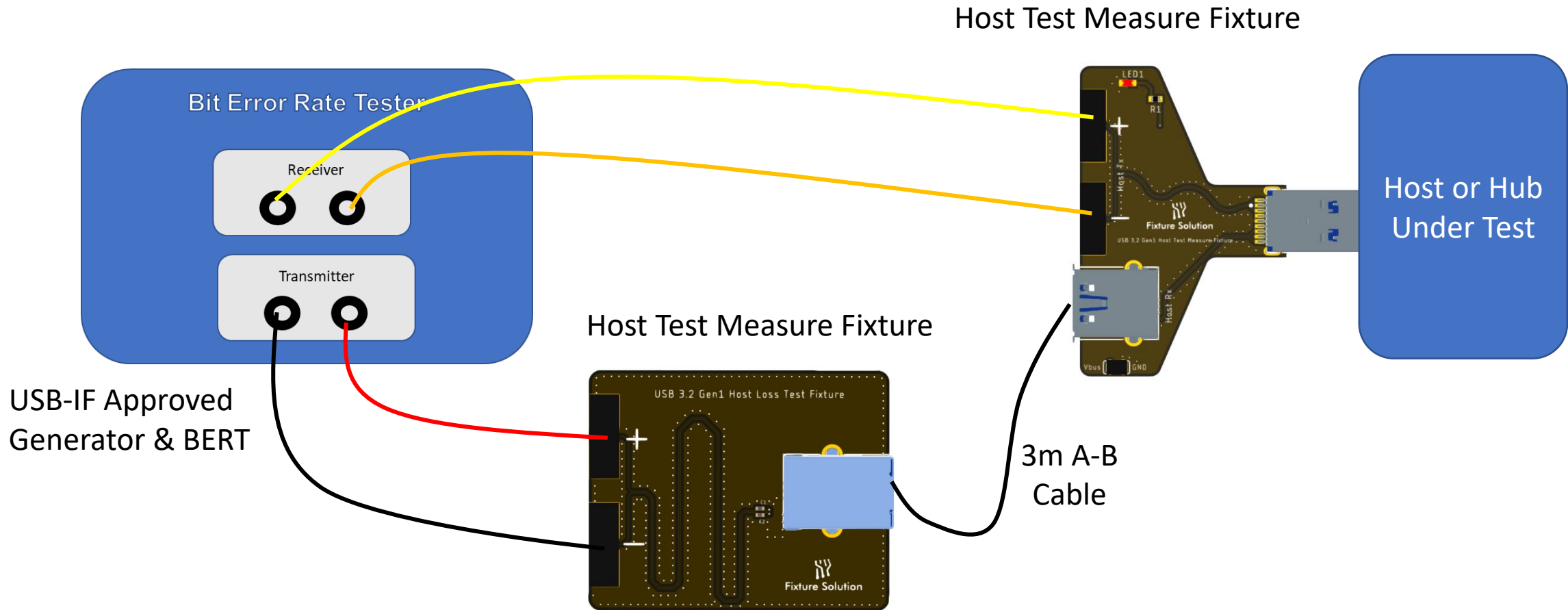
USB3.2 Gen1 Device Rx Short Channel Jitter Tolerance test



USB3.2 Gen1 Host/Hub Rx Calibration



USB3.2 Gen1 Host/Hub Rx Long Channel Jitter Tolerance test



USB3.2 Gen1 Host Rx Short Channel Jitter Tolerance test

