

USB3.2 Gen2 Tx & Rx A- μ B Test Topologies

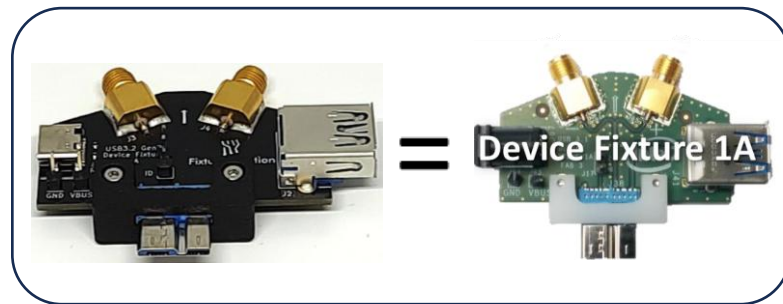
V2



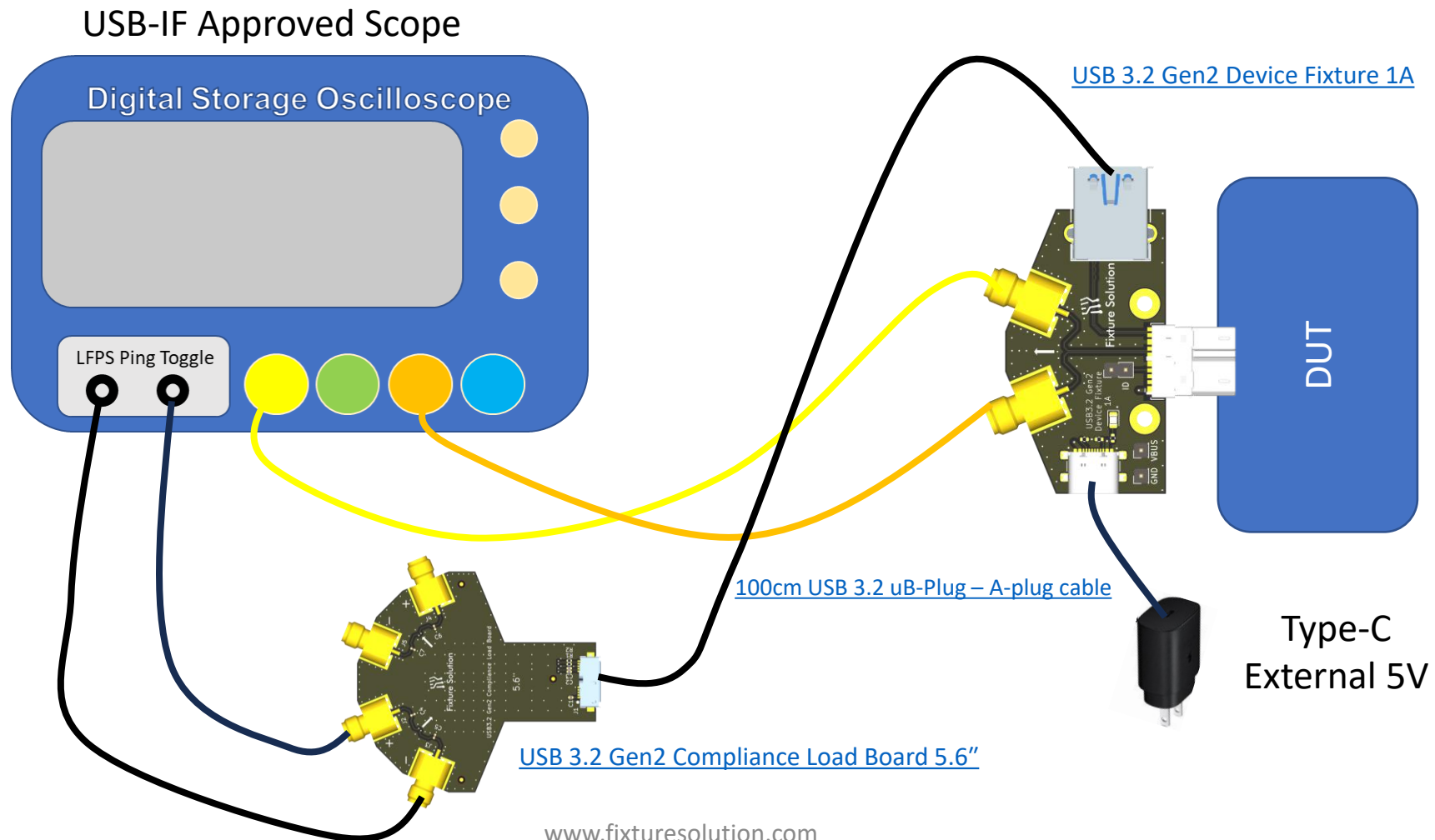
Fixture Solution

USB3.2 Gen2 Device Upstream Tx (μ B)

- 1) Setup Topology based on [USB 3.1 Electrical Test Fixture Topology | USB-IF](#)
- 2) Covers TD.1.1, TD.1.4 (short and long channel), TD.1.5, TD.1.7 from [Electrical Compliance Test Specification for SuperSpeed USB 10 Gbps Rev. 1.0 | USB-IF](#)
- 3) Use [USB 3.2 Gen2 Device Fixture 1A](#)
- 4) For PING LFPS Toggle use [USB 3.2 Gen2 Compliance Load Board 5.6"](#)
- 5) [100cm USB 3.2 uB-Plug – A-plug cable](#)



USB3.2 Gen2 Device Upstream Tx (μ B)

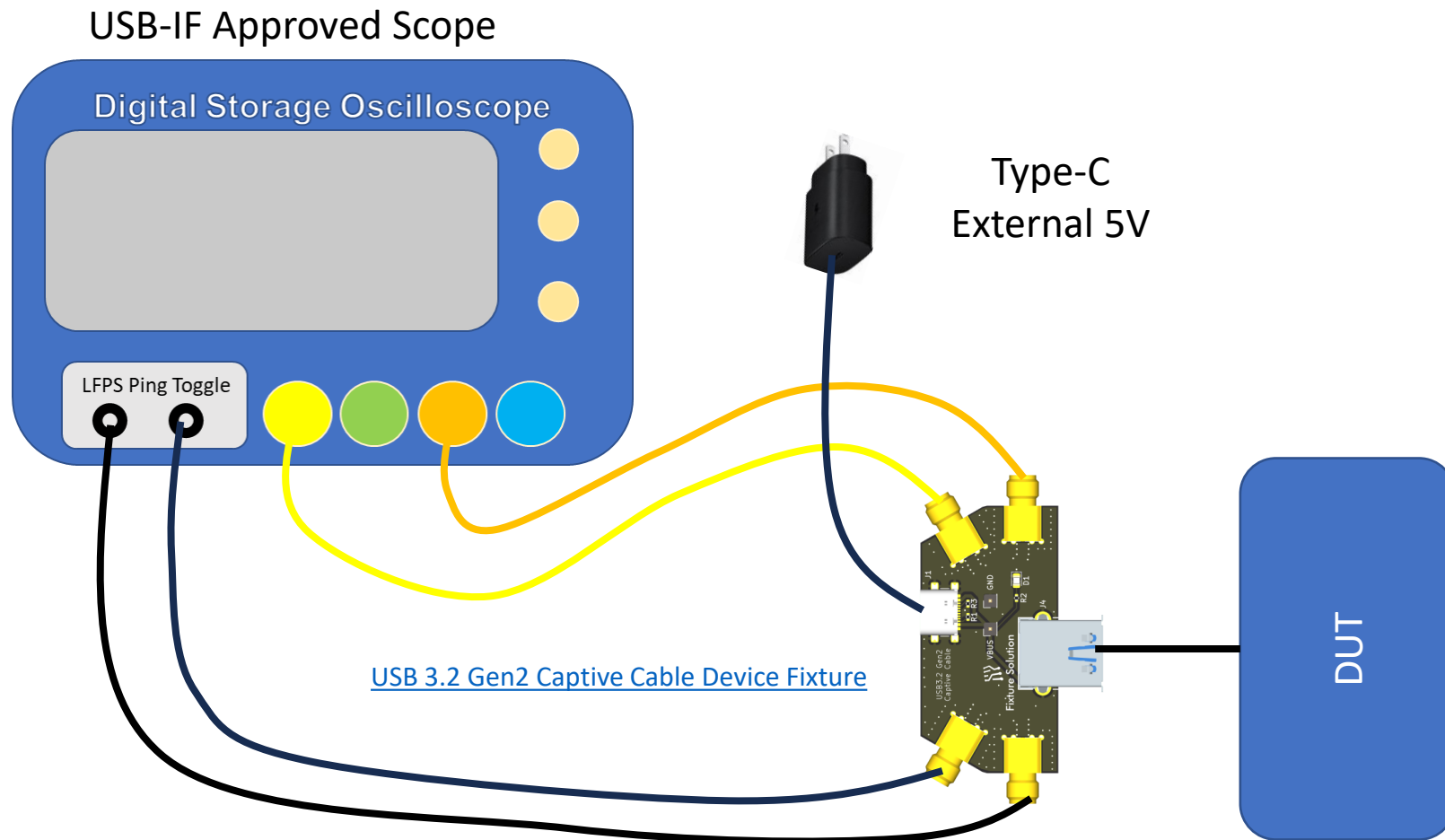


USB3.2 Gen2 Device Upstream Tx (Captive Aplug)

- 1) Setup Topology based on [USB 3.1 Electrical Test Fixture Topology | USB-IF](#)
- 2) Covers TD.1.1, TD.1.4 (short and long channel), TD.1.5, TD.1.7 from [Electrical Compliance Test Specification for SuperSpeed USB 10 Gbps Rev. 1.0 | USB-IF](#)
- 3) Use [USB 3.2 Gen2 Captive Cable Device Fixture](#)

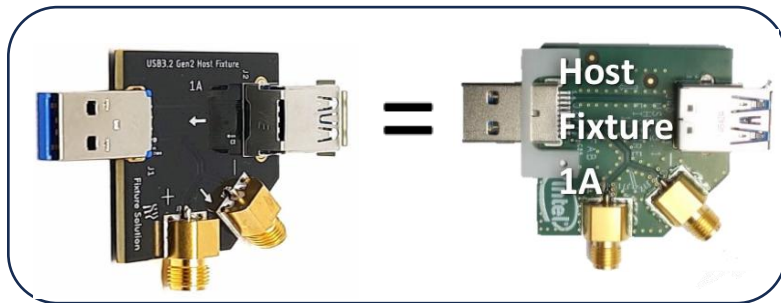


USB3.2 Gen2 Device Upstream Tx (Captive Aplug)



USB3.2 Gen2 Host/Hub Downstream Tx (A-receptacle)

- 1) Setup Topology based on [USB 3.1 Electrical Test Fixture Topology | USB-IF](#)
- 2) Covers TD.1.1, TD.1.4 (short and long channel), TD.1.5, TD.1.7 from [Electrical Compliance Test Specification for SuperSpeed USB 10 Gbps Rev. 1.0 | USB-IF](#)
- 3) Use [USB 3.2 Gen2 Host Fixture 1A](#)
- 4) For PING LFPS Toggle use [USB 3.2 Gen2 Compliance Load Board 5.6"](#)
- 5) [100cm USB 3.2 uB-Plug – A-plug cable](#)



USB3.2 Gen2 Host/Hub Downstream Tx (A-receptacle)

USB-IF Approved Scope

Digital Storage Oscilloscope

LFPS Ping Toggle

[USB 3.2 Gen2 Compliance Load Board 5.6"](#)

[100cm USB 3.2 uB-Plug – A-plug cable](#)

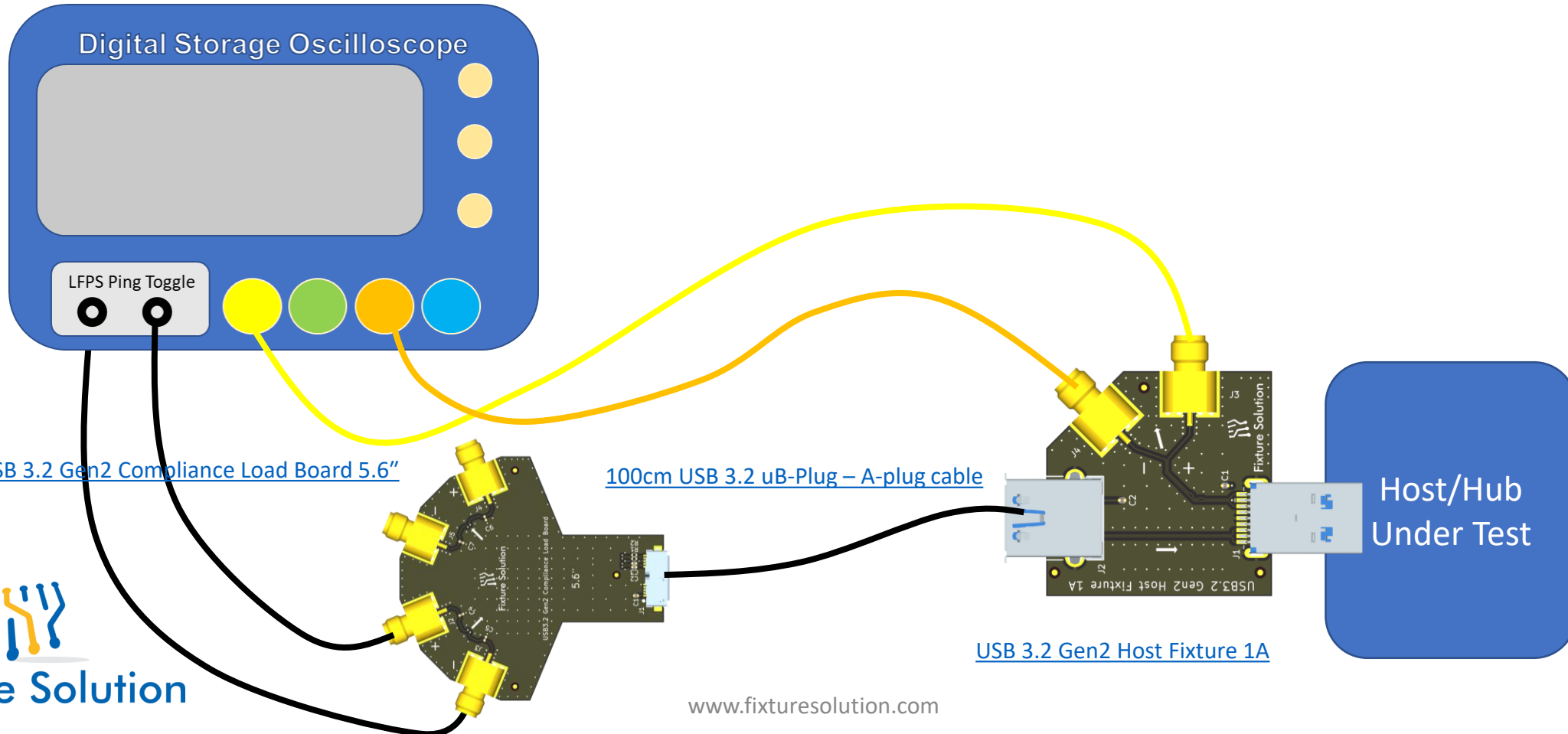
[USB 3.2 Gen2 Host Fixture 1A](#)

Host/Hub Under Test



Fixture Solution

www.fixturesolution.com

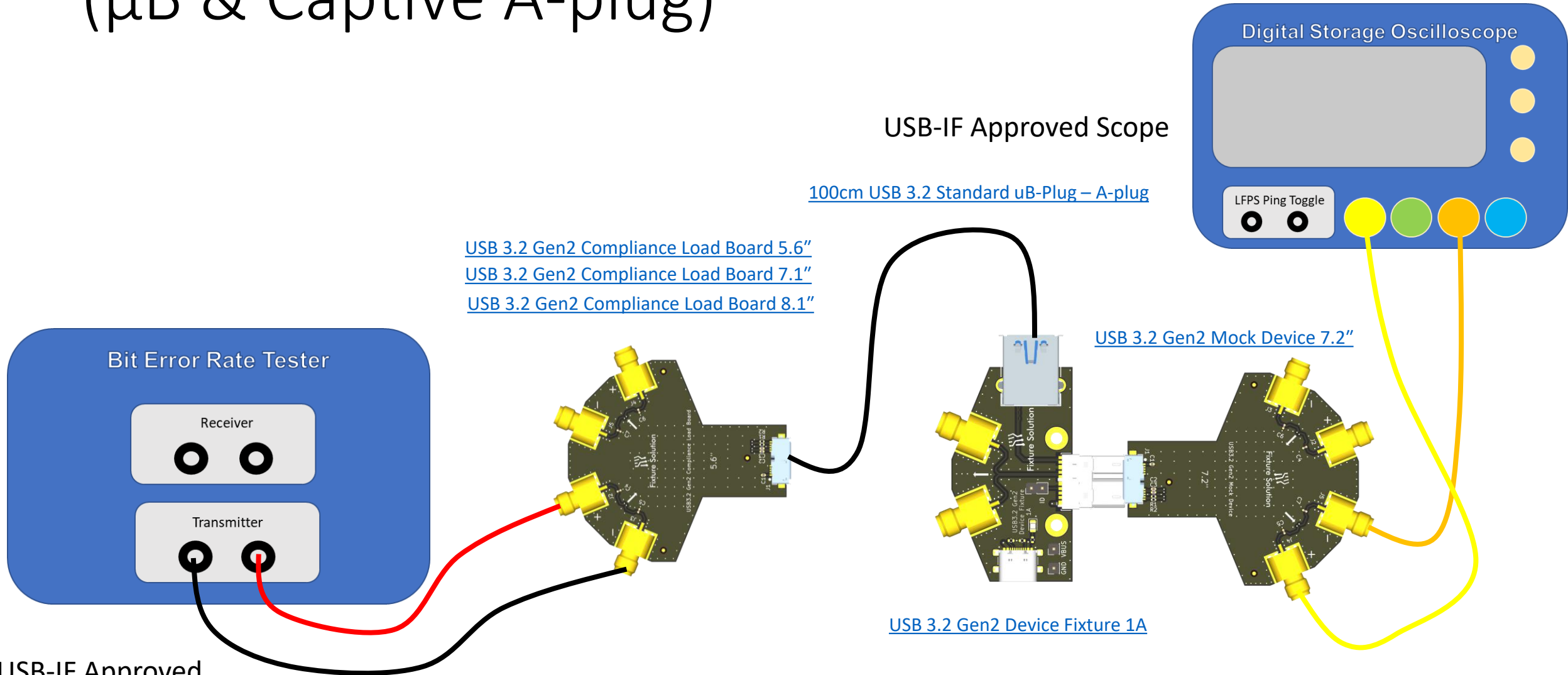


USB3.2 Gen2 Device Upstream Rx Test

- 1) Setup Topology based on [USB 3.1 Electrical Test Fixture Topology | USB-IF](#)
- 2) Covers TD.1.10 [Electrical Compliance Test Specification for SuperSpeed USB 10 Gbps Rev. 1.0 | USB-IF](#)
- 3) Use [USB 3.2 Gen2 Device Fixture 1A](#) (long channel)
- 4) Use [USB 3.2 Device Short Channel Fixture](#) (short channel)
- 5) Use [USB 3.2 Gen2 Mock Device 7.2"](#)
- 6) Required CLB:
 - 1) [USB 3.2 Gen2 Compliance Load Board 5.6"](#)
 - 2) [USB 3.2 Gen2 Compliance Load Board 7.1"](#)
 - 3) [USB 3.2 Gen2 Compliance Load Board 8.1"](#)
- 7) [100cm USB 3.2 Standard uB-Plug – A-plug](#)



USB3.2 Gen2 Device Rx Calibration (μ B & Captive A-plug)



USB-IF Approved
Generator & BERT

USB3.2 Gen2 Device Rx Long Channel Jitter Tolerance test (μB)

USB-IF Approved
Generator & BERT

Bit Error Rate Tester

Receiver

Transmitter

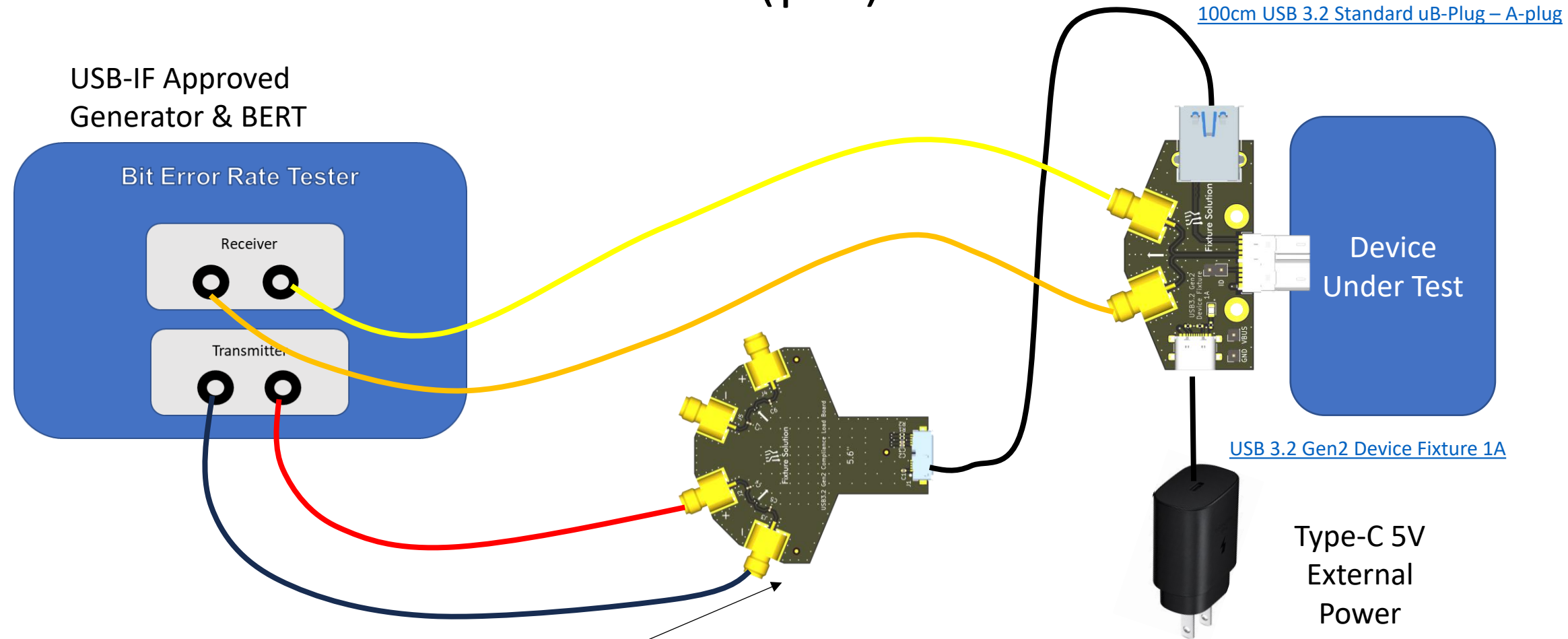
[100cm USB 3.2 Standard uB-Plug – A-plug](#)

Device
Under Test

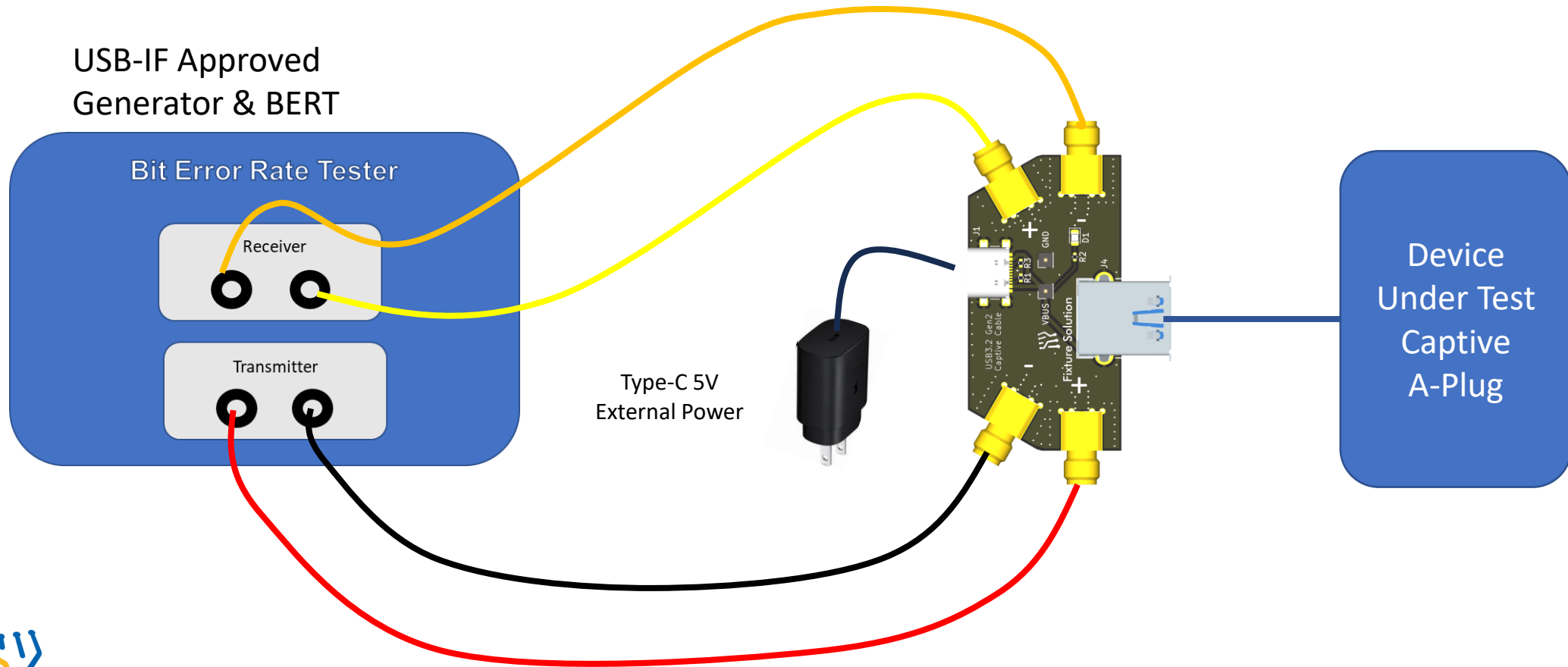
[USB 3.2 Gen2 Device Fixture 1A](#)

Type-C 5V
External
Power

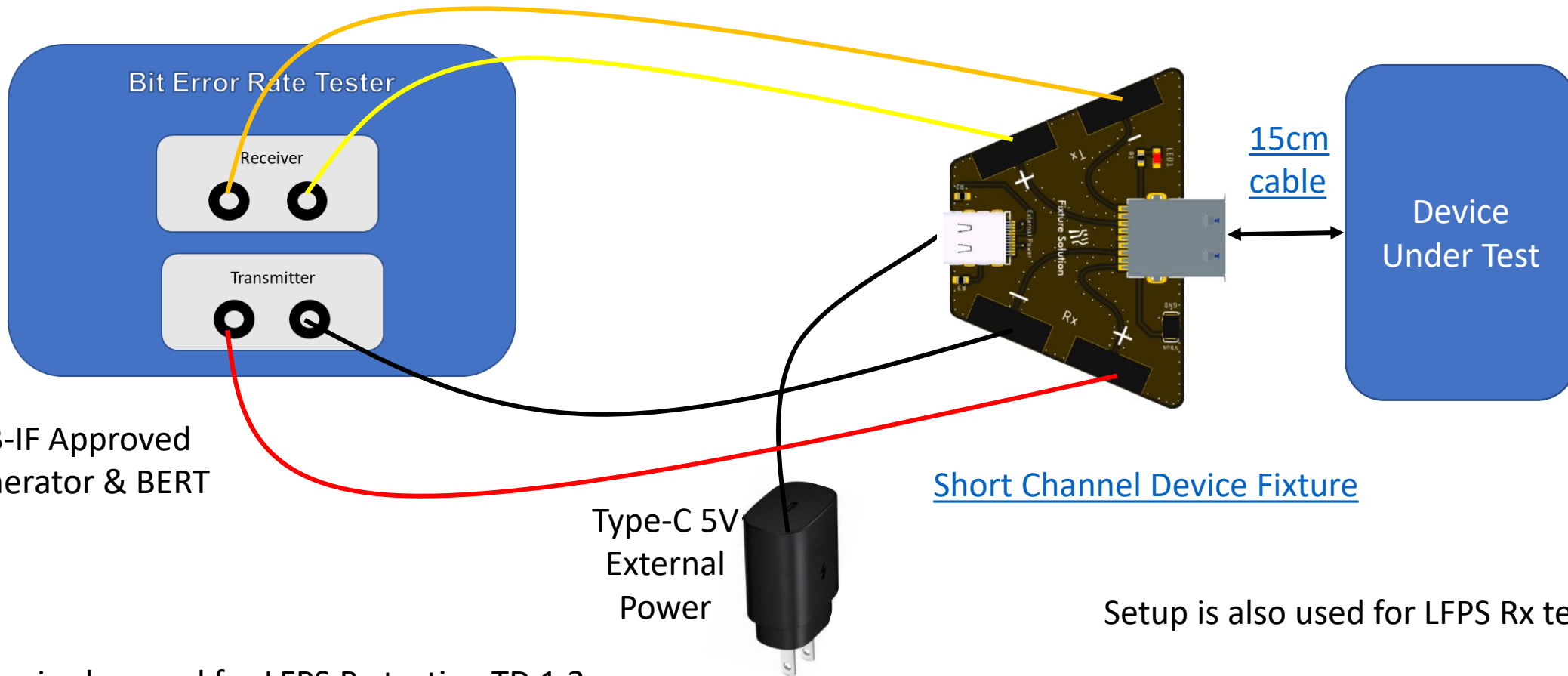
Depending on calibration results use
[5.6"](#), [7.1"](#) or [8.1"](#) CLB



USB3.2 Gen2 Device Rx Long Channel Jitter Tolerance test (Captive Aplug)



USB3.2 Gen2 Device Rx Short Channel Jitter Tolerance test



USB-IF Approved
Generator & BERT

Type-C 5V
External
Power

Short Channel Device Fixture

Setup is also used for LFPS Rx testing TD.1.2

Setup is also used for LFPS Rx testing TD.1.2

USB3.2 Gen2 Host/Hub Downstream Rx Test

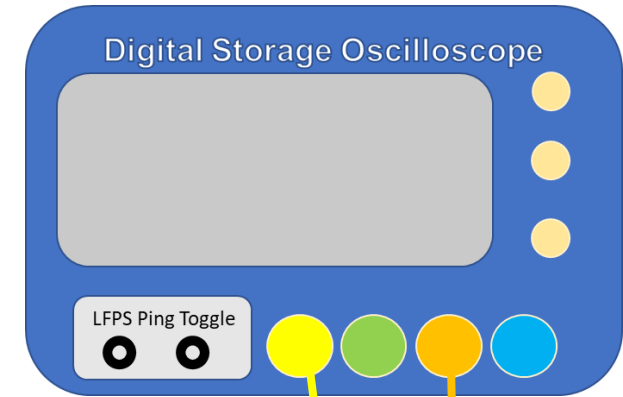
- 1) Setup Topology based on [USB 3.1 Electrical Test Fixture Topology | USB-IF](#)
- 2) Covers TD.1.10 [Electrical Compliance Test Specification for SuperSpeed USB 10 Gbps Rev. 1.0 | USB-IF](#)
- 3) Use [USB 3.2 Gen2 Host Fixture 1A](#) (long channel)
- 4) Use [USB 3.2 Host Short Channel Fixture](#) (short channel)
- 5) Use [USB 3.2 Gen2 Mock Host 7.2"](#)
- 6) Required CLB:
 - 1) [USB 3.2 Gen2 Compliance Load Board 5.6"](#)
 - 2) [USB 3.2 Gen2 Compliance Load Board 7.1"](#)
 - 3) [USB 3.2 Gen2 Compliance Load Board 8.1"](#)
- 7) [100cm USB 3.2 Standard uB-Plug – A-plug](#)



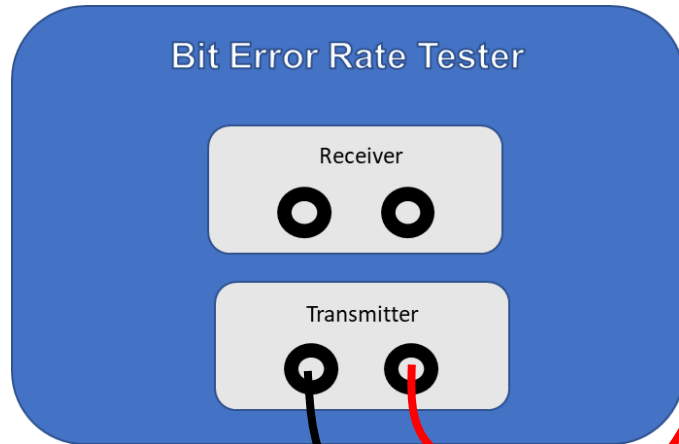


USB3.2 Gen2 Host/Hub Downstream Rx Calibration (A-receptacle)

USB-IF Approved Scope



- [USB 3.2 Gen2 Compliance Load Board 5.6"](#)
- [USB 3.2 Gen2 Compliance Load Board 7.1"](#)
- [USB 3.2 Gen2 Compliance Load Board 8.1"](#)



[USB 3.2 Gen2 Host Fixture 1A](#)

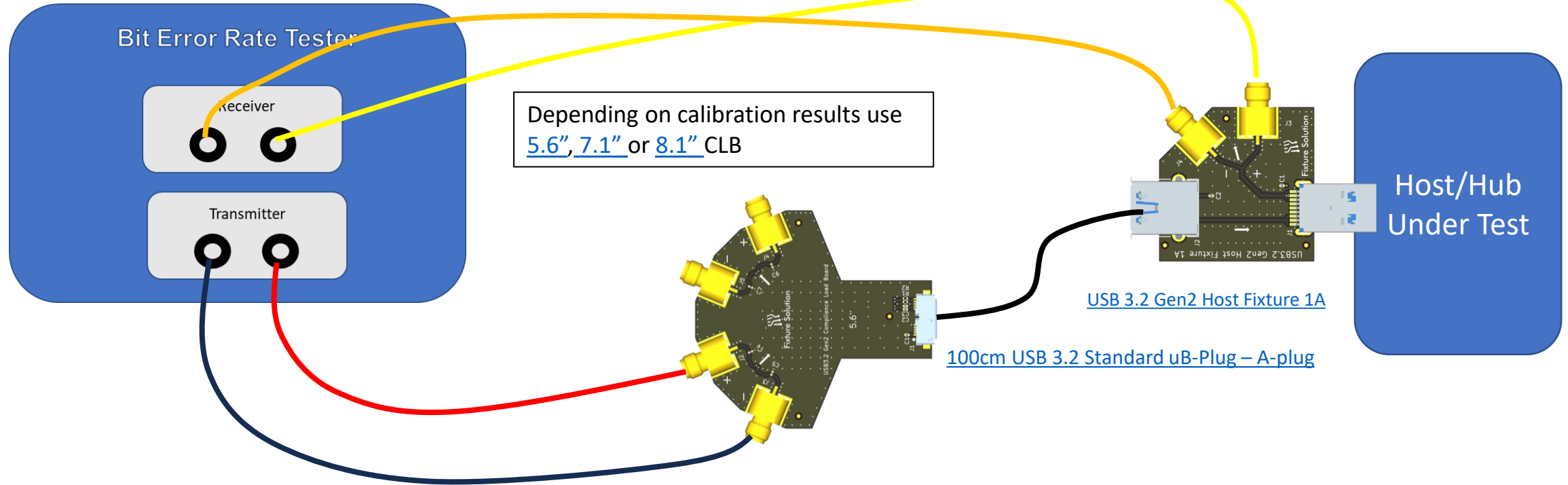
[100cm USB 3.2 Standard uB-Plug – A-plug](#)

[USB 3.2 Gen2 Mock Host 7.2"](#)

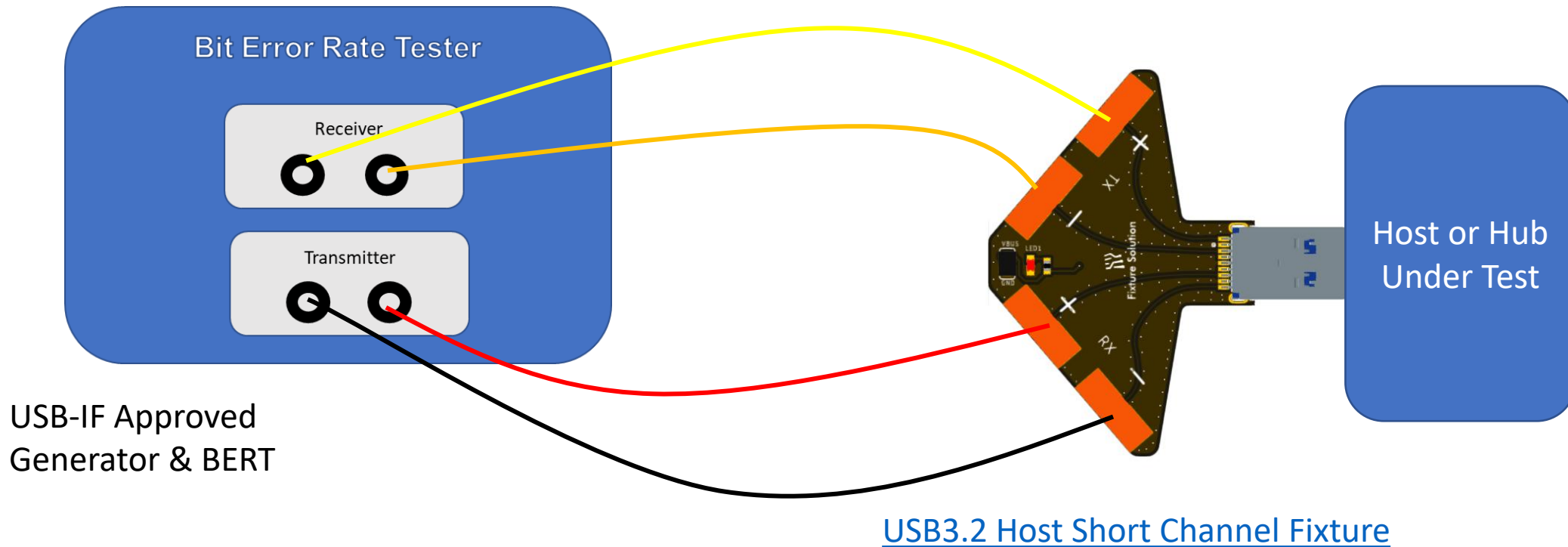
USB-IF Approved Generator & BERT

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

USB-IF Approved
Generator & BERT



USB3.2 Gen2 Host Rx Short Channel Jitter Tolerance test



Setup is also used for LFPS Rx testing TD.1.2