

TIDA00891 - Test Results

1. GENERAL

1.1. PURPOSE

1.1.1. To provide detailed instructions for testing TIDA-00891 USB TypeC™ Plug to USB Type-A Receptacle SS MUX with UFP Controller Reference Design module.

1.2. SCOPE

1.2.1. This document describes the steps required to perform a general testing TIDA-00891 USB TypeC™ Plug to USB Type-A Receptacle SS MUX with UFP Controller Reference Design functional test.

1.3. REFERENCE DOCUMENTATION

- 1.3.1. Schematic TIDA-00891 SCH.DSN
- 1.3.2. Assembly TIDA-00891 PCB.brd
- 1.3.3. TIDA-00891 User's Guide.pdf

1.4. MATERIALS

- Type-C cable.

1.5. DEFINITIONS

- 1.5.1. USB – Universal Serial Bus.
- 1.5.2. EVM – Evaluation Module.
- 1.5.3. REV – Revision.
- 1.5.4. UFP– Upstream Facing Port.
- 1.5.5. DFP– Downstream Facing Port.

2. EQUIPMENT

- 3220UFP-DGLEVM.
- 3220DFP-DGLEVM.
- USB3 capable host Type-A receptacle port.
- USB3 capable host Type-C receptacle port.
- Type-A USB UFP device.
- Type-C to Type-A adaptor.

3. EQUIPMENT SETUP

3.1. USB Connection Test.

- 3.1.1. Connect the TIDA-00890 to a USB3 Type-A port.
- 3.1.2. Connect TIDA-00891 to the DFP dongle via a USB Type-C™ cable.
- 3.1.3. Upon connection, the green (D2) and orange (D7) LEDs should illuminate.
- 3.1.4. Connect a USB3 device to the USB Type-A of the TIDA-00891. The device plugged in should enumerate.

The figure below describes an example configuration. Two test configurations are possible.

Configuration 1 shows the TIDA-00891 connected to a legacy USB host through a TIDA-00890 with a USB Type-C™ port.

Configuration 2 shows USB host with a USB Type-C™ connector connected to the TIDA-00891.

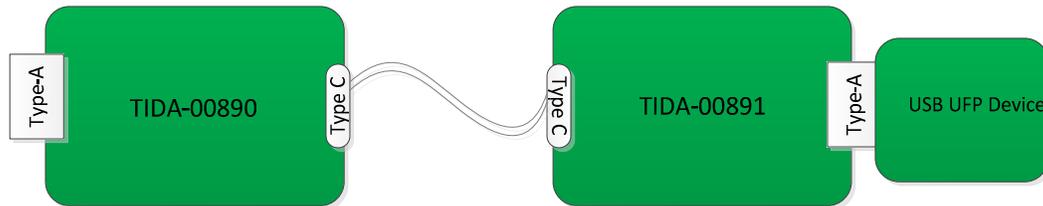


Figure 1. Test Configuration 1 with a USB Type-C™ DFP dongle

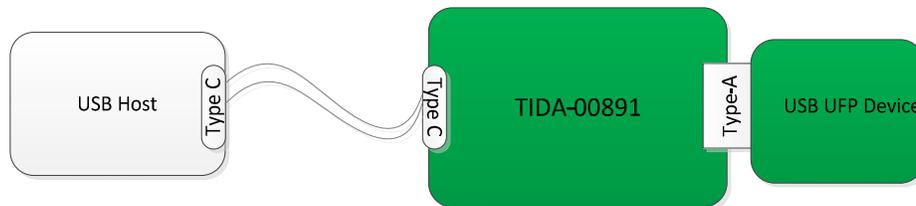


Figure 2 .Test Configuration 2 with a USB Type-C™ Host

4. PROCEDURE

- 4.1. Check USB3 connection through **USB view** or **device manager** of the USB Host system. **MUST** verify connection is SUPER in both USB Type-C connection orientations.

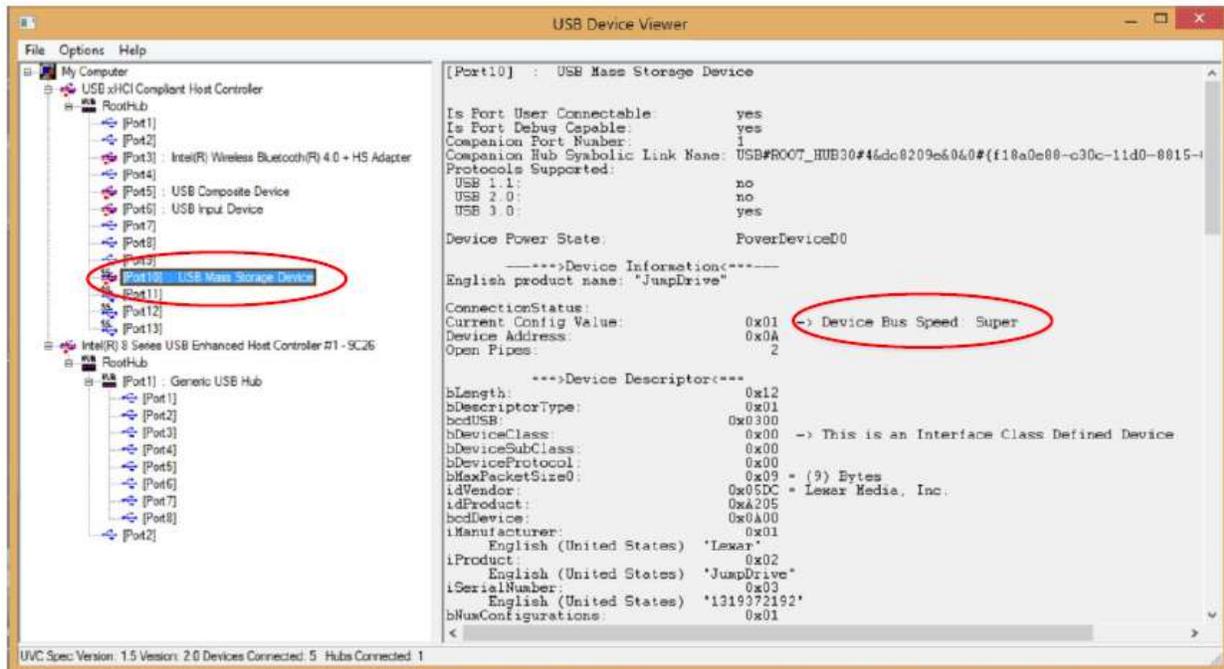


Figure 3. Checking USB connection Speed using USBVIEW

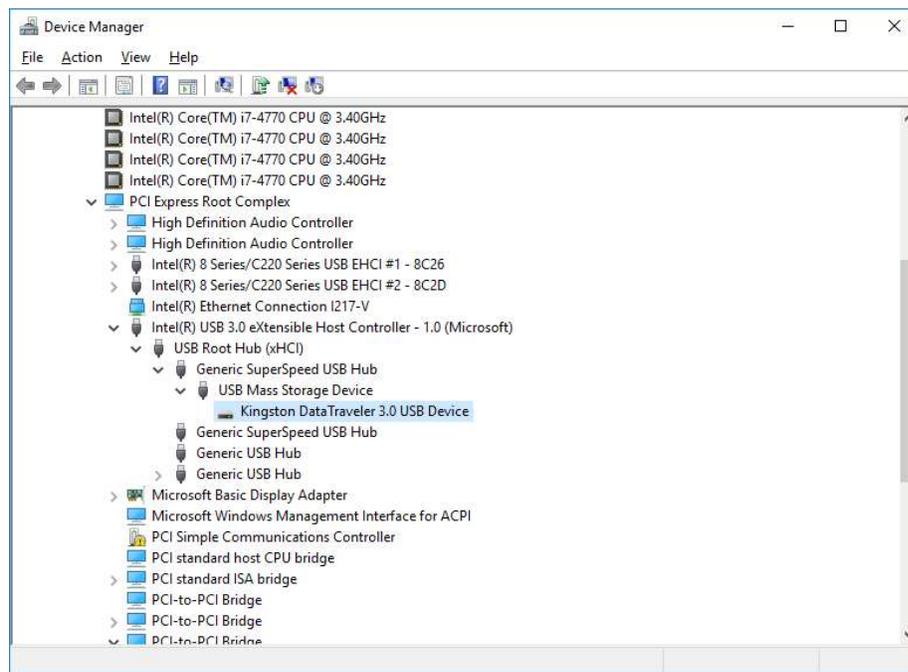


Figure 4. Checking USB connection using Device Manager

- 4.2. Connect a USB device to/through the Type-C receptacle port (J4) of the TIDA-00891 using either configuration described in Step 3.

- 4.3. Check USB2 connection through USB view or device manager of the USB Host System. Check USB2 connection in both USB Type-C orientations.



Figure 5. TIDA-00891 Test Setup example

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