

Video and Control over USB-C

Contents

A. Overview	1
B. Video over USB-C	1
C. Differences between USB-C & Thunderbolt 3.....	1
D. Laptop Setup	2
E. Information about USB-C	2
F. Alternate Modes on USB Type C Connectors.....	2

A. Overview

This document explains the difference between Thunderbolt 3 and USB-C in order to get the best results with RTI video distribution products such as VXU-SC and VXP-82.

B. Video over USB-C

Thunderbolt 3 has now integrated a USB-C connector in order to provide consumers with a universal port with Thunderbolt 3 capabilities using a USB-C shaped port.

PCs, tablets or laptops with USB-C 3.1 will work only for control but don't transmit video.

The USB-C specification must include Thunderbolt or Display Port utilized with a compatible cable to transmit video via USB-C connectors

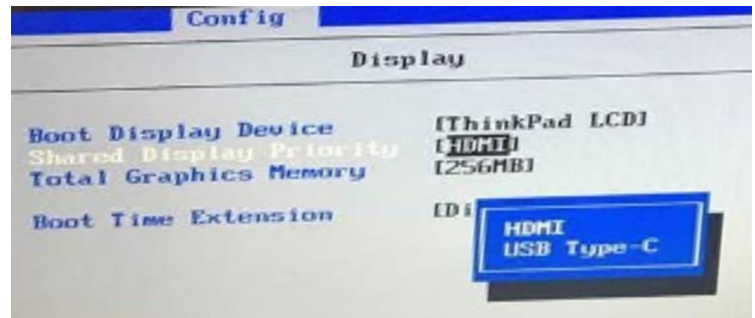
C. Differences between USB-C & Thunderbolt 3

The Thunderbolt 3 port has the same design as the USB-C port and has greater performance when it comes to speed and video quality. The current top version of USB-C Gen 2 is capable of speeds up to 10 Gbps while Thunderbolt 3 transmits video with 40Gbps supporting video content on two 4K displays or one 5K display at 60Hz.

D. Laptop Setup

Some laptops that support Video via USB-C in addition to an HDMI output port may require that the Video be enabled for either the USB-C or the HDMI port.

This setting can usually be found in BIOS but may be in other configuration settings of the OS.







E. Information about USB-C

[About USB-C](#)

[List of devices with video output over USB-C](#)

F. Alternate Modes on USB Type C Connectors

There are various alternate modes to transmit video over USB-C connectors / cables. These alternate modes can be identified by the logo next to the port.

Logo	Name	Protocol
	DisplayPort Alternate Mode	DisplayPort 1.4
	Mobile High-Definition Link (MHL) Alternate Mode	MHL 1.0, 2.0, 3.0 & Super MHL 1.0
	Thunderbolt Alternate Mode	Thunderbolt 3 , DisplayPort 1.2 , DisplayPort 1.4
	HDMI Alternate Mode	HDMI 1.4b