

PI3USB30532

3.3V, USB3.0/DP1.2 6:4 Matrix Switch

Description

Diodes Incorporated PI3USB30532 is a 6:4 differential channel bi-directional matrix switch solution for switching USB3.0 and/or DP1.2 signals through USB3.0 Type-C connector.

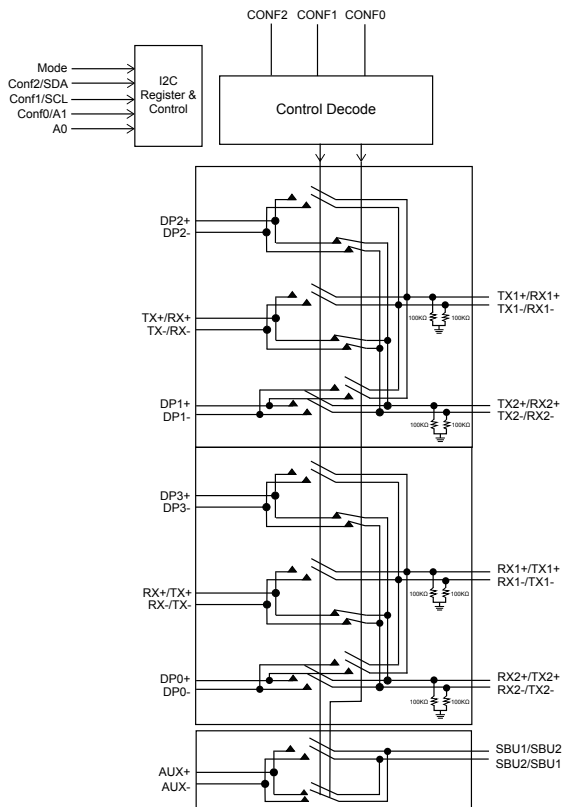
It multiplexes either 1 lane of USB3.0, 1 lane of USB3.0 and 2 channels of DP1.2 or 4 channels of DP1.2 to the USB Type C connector.

In addition, AUX± channels are also multiplexed to the Type C connector. PI3USB30532 offers excellent signal integrity for high-speed signals and low power dissipation. Insertion loss is -1.2dB and return loss is -21dB at 5Gb/s speed of USB3.0.

Applications

- Routing USB3.0 SuperSpeed and DP1.2 signals through the USB Type C Connector.
- Applications include Ultrabook, 2 in 1 Notebook, Tablet, Mobile Workstation, All In One PC, Monitor, Docking Station, Phone

Block Diagram



Features

- 6 Differential Channel to 2/4 Differential Channel Matrix Switch
- USB 3.0 5Gb/s Super Speed and DP 1.2 5.4Gb/s switching
- to USB Type-C connector
- Supports either pin control or I²C control to configure the mux
- Low insertion loss: -1.2dB @ 5Gb/s
- Return loss: -21dB @ 5Gb/s
- -3dB Bandwidth : 6GHz
- Multiplexes one of the following to USB Type C connector:
 - USB3.0 signal only
 - One lane of USB3.0 signal and 2 channels of DP1.2 or 4-channels of DP1.2 signal.
- With DP1.2 operating, AUX+ and AUX- are muxed to SBU pins. Max swing on SBU pins are from -0.35V to 3.95V
- 3.0V to 3.6V Power Supply.
- Industrial Temperature Range: -40°C to 85°C
- Packaging (Pb-free & Green):
 - 40- contact, TQFN(3 x6mm)

Application

