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# 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.

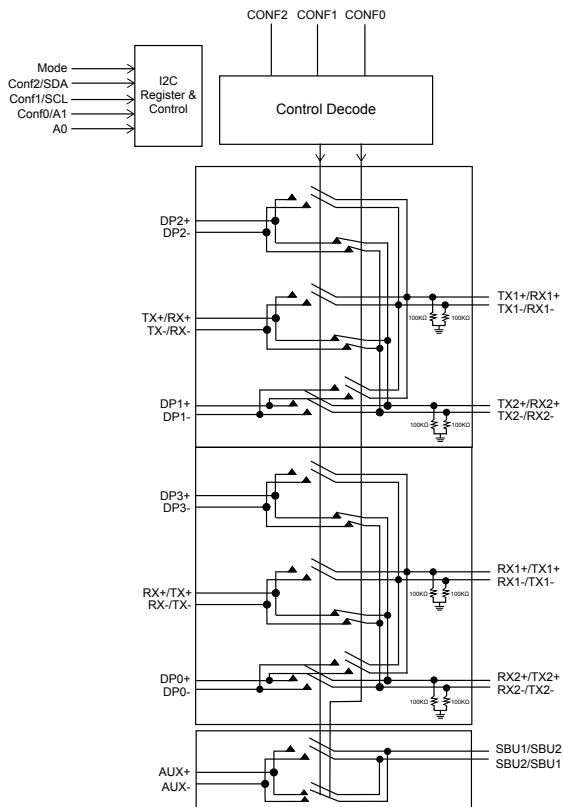
It multiplexes either 1 lane of USB3.0, 1 lane of USB3.0 and 2 channels of DP1.2 or 4 channels of DP1.2 to the USB Type C connector.

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 I<sup>2</sup>C 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

