

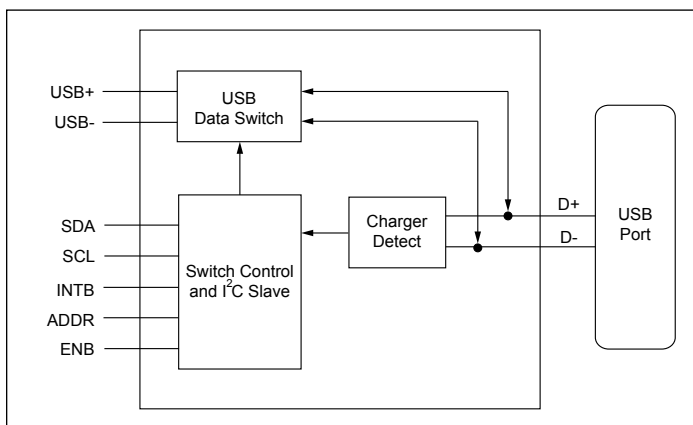
# PI3USB9201

## Dual-Role USB Charging-Type Detector

### Features

- Host Mode – SDP/CDP/DCP
  - USB Device Plug-in and Unplug Detection in SDP/CDP modes
  - Support USB Switch Pass-through for Mouse/Keyboard Wake up
- Client Mode USB Charging-type detection
  - Battery Charging 1.2 SDP/CDP/DCP
  - Proprietary 1A/2A/2.4A Modes
- Differential Bi-Directional USB Switches
- Wide Bandwidth: 2GHz
- 1MHz I2C Interface for Control and Communication with Pin Selection of up to Four Slave Addresses
- Shutdown Mode of <math><1\mu\text{A}</math> Current Consumption
- Wide Power Supply Range : 2.7V – 5.5V
- Industrial Temperature Range: -40oC to 85oC
- Totally Lead-Free & Fully RoHS Compliant (Notes 1 & 2)
- Halogen and Antimony Free. “Green” Device (Note 3)
- Packaging (Pb-free & Green):
  - 12- contact, UQFN 2mm x2mm

### Block Diagram



### Description

PI3USB9201 is a dual-role BC1.2-compliance charging-type detector. It can be programmed to operate in host mode or client mode through I2C.

Particularly for USB-C application with bottom and top D+/- pins common at USB-C connector, when device attachment is detected by USB-C detector, which can program PI3USB9201 to perform BC1.2-compliance charging-type detections on D+/- connection.

When operating as a host, PI3USB9201 enables BC1.2 SDP/CDP/DCP advertisement to the attached USB devices. When operating as a client, PI3USB9201 starts BC1.2 detection to detect the attached host type. In both host mode and client mode, the detection results are reported through I2C to the controller.

The PI3USB9201 can operate over a temperature range of -40 to +85° in a tiny 12- contact QFN 2mm x2mm package.

### Applications

- Mobile Devices

### Ordering Information

Part Number	Package	Description
PI3USB9201ZTAEX	ZTA	12-Pin, 2x2mm (UQFN)

Notes:

1. No purposely added lead. Fully EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant.
2. See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
3. Halogen- and Antimony-free "Green" products are defined as those which contain <math><900\text{ppm}</math> bromine, <math><900\text{ppm}</math> chlorine (<math><1500\text{ppm}</math> total Br + Cl) and <math><1000\text{ppm}</math> antimony compounds.
4. E = Pb-free and Green
5. X suffix = Tape/Reel