


## Configuration Channel Logic and Port Control USB 2.0/USB 3.1 5V T/R 12-Pin X2QFN



Images are for reference only

[Inquiry](#)

<b>Manufacturer:</b>	<a href="#">Texas Instruments, Inc</a>
<b>Package/Case:</b>	X2QFN12
<b>Product Type:</b>	Interface ICs
<b>RoHS:</b>	RoHS Compliant/Lead free 
<b>Lifecycle:</b>	Active

### General Description

The TUSB321 device enables USB Type-C ports with the configuration channel (CC) logic needed for Type-C ecosystems. The TUSB321 device uses the CC pins to determine port attach and detach, cable orientation, role detection, and port control for Type-C current mode. The TUSB321 device can be configured as a downstream facing port (DFP), upstream facing port (UFP) or a dual role port (DRP) making it ideal for any application.

The TUSB321 device when configured as a DRP alternates configuration as a DFP or UFP according to the Type-C Specifications. The CC logic block monitors the CC1 and CC2 pins for pullup or pulldown resistances to determine when a USB port has been attached, the orientation of the cable, and the role detected. The CC logic detects the Type-C current mode as default, medium, or high depending on the role detected. VBUS detection is implemented to determine a successful attach in UFP and DRP modes.

The device operates over a wide supply range and has low-power consumption.

## Key Features

USB Type-C? Specification 1.1

Backward Compatible with USB Type-C Specification 1.0

Supports Up to 3 A of Current Advertisement through dedicated Current Mode pin

Mode Configuration

Host Only – DFP (Source)

Device Only – UFP (Sink)

Dual Role Port –DRP

Channel Configuration (CC)

Attach of USB Port Detection

Cable Orientation Detection

Role Detection

Type-C Current Mode advertisement and detection (Default, Medium, High)

VBUS Detection

VCONN Support for Active Cables

Cable Detection and Direction Control for External Switches

Supply Voltage: 4.5 V to 5.5V

Low Current Consumption

All trademarks are the property of their respective owners.

## Recommended For You

---

### **TUSB2077APTR**

Texas Instruments, Inc

LQFP48

### **TUSB1002RGER**

Texas Instruments, Inc

QFN

### **TUSB1105RTZR**

Texas Instruments, Inc

WQFN-16

### **TUSB211QRWBRQ1**

Texas Instruments, Inc

X2QFN-12

### **TUSB4041IPAPRQ1**

Texas Instruments, Inc

HTQFP-64

### **TUSB1210BRHBR**

Texas Instruments, Inc

VQFN32

### **TUSB212QRWBRQ1**

Texas Instruments, Inc

X2QFN12

### **TUSB319IDRFRQ1**

Texas Instruments, Inc

WSON8

### **TUSB1211A1ZRQ**

Texas Instruments, Inc

BGA

**TUSB4020BIPHP**

Texas Instruments, Inc

TQFP48

**TUSB1105RGTR**

Texas Instruments, Inc

VQFN16

**TUSB8020BPHP**

Texas Instruments, Inc

TQFP48

**TUSB1002AIRGET**

Texas Instruments, Inc

VQFN-24

**TUSB3210PM**

Texas Instruments, Inc

QFP64

**TUSB214IRWBT**

Texas Instruments, Inc

X2QFN-12