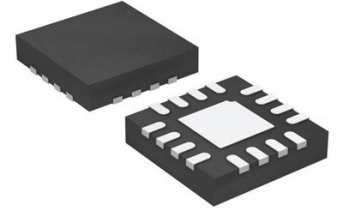


**Super Speed Type-C DRP Port Controller USB 3.1 3.3V/5V T/R  
30-Pin WQFN EP**



Images are for reference only

[Inquiry](#)

**Manufacturer:** [Texas Instruments, Inc](#)

**Package/Case:** WQFN30

**Product Type:** Interface ICs

**RoHS:** RoHS Compliant/Lead free 

**Lifecycle:** Active

## General Description

## Key Features

USB Type-C Port Controller with Integrated 2:1 SuperSpeed Mux

Compatible to USB Type-C? Specifications

Supports USB 3.1 G1 and G2 up to 10 Gbps

Supports up to 15 W of Power Delivery with 3-A Current Advertisement and Detection

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 (Default, Mid, High)

V(BUS) Detection and VCONN Support for Active Cables

Audio and Debug Accessory Support

Supports for Try.SRC and Try.SNK DRP Modes

Configuration Control through GPIO and I2C

Low Active and Standby Current Consumptions

Industrial Temperature Range of -40 to 85°C

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Description

HD3SS3220 is a USB SuperSpeed (SS) 2:1 mux with DRP port controller. The device provides Channel Configuration (CC) logic and 5V VCONN sourcing for ecosystems implementing USB Type-C. The HD3SS3220 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 HD3SS3220, in DRP mode, alternates presenting itself as a DFP or UFP according to the Type-C specifications. The CC logic block monitors the CC1 and CC2 pins for pull-up or pull-down resistances to determine when a USB port has been attached and its port role. Once a USB port has been attached, the CC logic also determines the orientation of the cable and configures the USB SS mux accordingly. Finally, CC logic advertises or detects Type-C current mode – Default, Mid, or High in DFP and UFP modes respectively.

Excellent dynamic characteristics of the integrated mux allow switching with minimum attenuation to the SS signal eye diagram and very little added jitter. The device's switch paths deploy adaptive common mode voltage tracking resulting in identical channel despite different common mode voltage for RX and TX channels.

## Recommended For You

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**HD3SS3202RSVT**

Texas Instruments, Inc

WQFN-16

**HD3SS32201RNHR**

Texas Instruments, Inc

WQFN30

**HD3SS3415RUAR**

Texas Instruments, Inc

WQFN42

**TLV320AIC23BRHDR**

Texas Instruments, Inc  
QFN

**HD3SS3412RUAR**

Texas Instruments, Inc  
WQFN42

**HD3SS3220RNHR**

Texas Instruments, Inc  
WQFN30

**HD3SS3212RKSRQ1**

Texas Instruments, Inc  
VQFN20

**HD3SS3412RUAT**

Texas Instruments, Inc  
WQFN-42

**HD3SS3202IRSVT**

Texas Instruments, Inc  
UQFN-16

**HD3SS3202IRSVR**

Texas Instruments, Inc  
UQFN-16

**ISO7221CHD**

Texas Instruments, Inc  
SOP-8

**TB5D2HD**

Texas Instruments, Inc  
SOP16

**TLV320AIC23BIRHDR**

Texas Instruments, Inc  
QFN28

**TLV320AIC23BRHD**

Texas Instruments, Inc  
QFN-28

**HD3SS3212RKSTQ1**

Texas Instruments, Inc  
VQFN20