

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

Manufacturer:	Texas Instruments, Inc	<input type="text" value="HD3SS3220IRNHR Image"/>
Package/Case:	WQFN30	Images are for reference only
Product Type:	Interface ICs	<input type="button" value="Inquiry"/>
RoHS:	RoHS Compliant/Lead free 	
Lifecycle:	Active	

General 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.

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

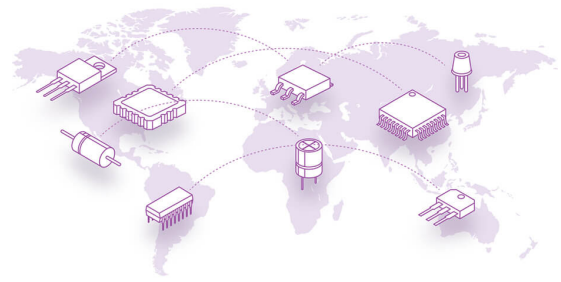
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Recommended For You

HD3SS3202RSVT

Texas Instruments, Inc

UQFN-16

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

HD3SS3220IRNHT

Texas Instruments, Inc

WQFN30

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