Schematic Review Form

TUSB1064 RSW

Pin #	Name	Info	Violations	*Description*
1	NC	NC		No connect pin. Leave open.
2	DPEQ1	Pullup/pulldown options		DisplayPort Receiver EQ. This along with DPEQ0 will select the DisplayPort receiver equalization gain.
3	SSEQ1	Pullup/pulldown options		Along with SSEQ0, sets the USB receiver equalizer gain for downstream facing SSTXP/N
4,5	SSRX	Routed off page through 0.1uF capacitors		Differential output for USB3.1 downstream facing port.
6,20,28	VCC	VCC		3.3-V Power Supply
7,8	SSTX	Routed off page	Make sure there are 0.1uF capacitors between TUSB1064 and USB host	Differential input for USB3.1 downstream facing port.
9,10	TX1	Routed to TX1 through 220nF capacitors		Differential input for DisplayPort or differential output for USB3.1 upstream facing port.
11	EQ0	Pullup/pulldown options		This pin along with EQ1 sets the USB receiver equalizer gain for upstream facing RX1 and RX2 when USB used. Up to 11 dB of EQ available

12,13	RX1	Routed to RX1 through 470nF capacitors	Change capacitors to 330nF.	Differential input for DisplayPort or USB3.1 upstream facing port
14	EQ1	Pullup/pulldown options		This pin along with EQ0 sets the USB receiver equalizer gain for upstream facing RX1 and RX2 when USB used.
15,16	RX2	Routed to RX2 through 470nF capacitors	Change capacitors to 330nF.	Differential input for DisplayPort or USB 3.1 upstream facing port.
17	I2C_EN	Pulldown (I2C disabled)		I2C Programming Mode or GPIO Programming Select. 0 = GPIO mode (I2C disabled) R = TI Test Mode (I2C enabled at 3.3 V) F = I2C enabled at 1.8 V 1 = I2C enabled at 3.3 V
18,19	TX2	Routed to TX2 through 220nF capacitors		Differential input for DisplayPort or differential output for USB3.1 upstream facing port.
21	FLIP/SCL	Routed to PD controller GPIO		When I2C_EN = '0' this is Flip control pin, otherwise this pin is I2C clock. When used for I2C clock pullup to I2C master's VCC I2C supply.
22	CTL0/SDA	1K pullup		When I2C_EN = '0' this is a USB3.1 Switch control pin, otherwise this pin is I2C data. When used for I2C data pullup to I2C master's VCC I2C supply
23	CTL1	1K pullup		DP Alt mode Switch Control Pin. When I2C_EN = '0', this pin will enable or disable DisplayPort functionality. Otherwise, when I2C_EN ≠ '0', DisplayPort functionality is enabled and disabled through I2C registers. L = DisplayPort Disabled. H = DisplayPort Enabled.

24	SBU1	Routed to SBU1 with 2M pulldown		SBU1. This pin should be DC coupled to the SBU1 pin on the Type-C receptacle. A 2-M ohm resistor to GND is also recommended.
25	SBU2	Routed to SBU2 with 2M pulldown		SBU2. This pin should be DC coupled to the SBU2 pin on the Type-C receptacle. A 2-M ohm resistor to GND is also recommended.
26	AUXp	Routed to DP MUX with 1M pullup option	Populate 1M pullup and add 0.1uF capacitor	DisplayPort AUX positive I/O connected to the DisplayPort sink through a AC coupling capacitor. In addition to AC coupling capacitor, this pin also requires a 1M resistor to DP_PWR(3.3 V). This pin along with AUXN is used by the TUSB1064 for AUX snooping and is routed to SBU1/2 based on the orientation of the Type-C.
27	AUXn	Routed to DP MUX with 1M pulldown option	Populate 1M pulldown and add 0.1uF capacitor	DisplayPort AUX negative I/O connected to the DisplayPort sink through a AC coupling capacitor. In addition to AC coupling capacitor, this pin also requires a 1M resistor to GND. This pin along with AUXP is used by the TUSB1064 for AUX snooping and is routed to SBU1/2 based on the orientation of the Type-C.
29	EN	Pullup to VCC		Device Enable, when I2C_EN = '0'. Device disable function not used when I2C_EN ≠ '0'. L = Device Disabled H = Device Enabled On rising edge of EN pin, the device will sample all 4-level inputs including the I2C_EN pin. EN pin will not reset the I2C registers
30,31	DP3	NC		DP Differential output for DisplayPort Lane 3
32	HPDIN	Routed to PD controller HPD		Hot Plug Detect. This pin is an input for Hot Plug Detect received from DisplayPort sink. When HPDIN is Low for greater than 2ms, all DisplayPort lanes are disabled while the AUX to SBU switch will remain closed

33,34	DP2	NC		DP Differential output for DisplayPort Lane 2.
35	DPEQ0/A1	Pullup/pulldown options		DisplayPort Receiver EQ. This along with DPEQ1 will select the DisplayPort receiver equalization gain. When I2C_EN ≠ '0', this pin will also set the TUSB1064 I2C address.
36,37	DP1	Routed to DP MUX through 0.1uF capacitor		DP Differential output for DisplayPort Lane 1
38	SSEQ0/A0	Pullup/pulldown options		Along with SSEQ1, sets the USB receiver equalizer gain for downstream facing SSTXP/N. When I2C_EN ≠ '0', this pin will also set the TUSB1064 I2C address. If I2C_EN = “F”, then this pin must be set to “F” or “0”.
39,40	DP0	Routed to DP MUX through 0.1uF capacitor		DP Differential output for DisplayPort Lane 0

Comments