

Schematic Review Form

Customer/Project

Pin #	Name	Info	Violations	Description
1	NC	NC, OK		No connect pin. Leave open.
2	DPEQ1	PUP and PDOWN options, OK		DisplayPort Receiver EQ. This along with DPEQ0 will select the DisplayPort receiver equalization gain.
3	SSEQ1	PUP and PDOWN options, OK		Along with SSEQ0, sets the USB receiver equalizer gain for downstream facing SSTXP/N
4,5	SSRX	Seems to be connected to HUB, with 100nF total between pin and UB. OK		Differential output for USB3.1 downstream facing port.
6,20,28	VCC	1x 22uF, 3x 1uF, 3x 100nF, OK		3.3-V Power Supply
7,8	SSTX	Seems to be connected to HUB, with 100nF total between pin and UB. OK		Differential input for USB3.1 downstream facing port.
9,10	TX1	see E2E to confirm proper pinout.		Differential input for DisplayPort or differential output for USB3.1 upstream facing port.
11	EQ0	PUP and PDOWN options, OK		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	see E2E to confirm proper pinout.		Differential input for DisplayPort or USB3.1 upstream facing port
14	EQ1	PUP and PDOWN options, OK		This pin along with EQ0 sets the USB receiver equalizer gain for upstream facing RX1 and RX2 when USB used.
15,16	RX2	see E2E to confirm proper pinout.		Differential input for DisplayPort or USB 3.1 upstream facing port.
17	I2C_EN	PUP to 3.3V, in I2C mode		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	see E2E to confirm proper pinout.		Differential input for DisplayPort or differential output for USB3.1 upstream facing port.
21	FLIP/SCL	In I2C mode, PUP to 3.3V, OK		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	In I2C mode, PUP to 3.3V, OK		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	controlled by, and I2C_INT-UFP. Always high by default, OK		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	OK			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	OK			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	from pin to 1M PUP, to 100nF cap, to output type C connector	This is incorrect, this needs to feed into the SoC and be retransmitted. or you		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	from pin to 1M PDOWN, to 100nF cap, to output type C connector	This is incorrect, this needs to feed into the SoC and be retransmitted. or you		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	Always on, OK			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, test point connection			DP Differential output for DisplayPort Lane 3
32	HPDIN	Coming from TYPE-C out, to HUB and to part, OK			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, test point connection			DP Differential output for DisplayPort Lane 2.
35	DPEQ0/A1	PUP and PDOWN options, OK			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	Goes to TYPE-C conn out, OK			DP Differential output for DisplayPort Lane 1
38	SSEQ0/A0	PUP PDOWN, OK			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	Goes to TYPE-C conn out, OK			DP Differential output for DisplayPort Lane 0

Comments