

STM32F091VCT6 Pin Connections

Microcontroller Pin List (U1):

- VDD
- VDDIO2
- VDD
- VDDIO
- VBAT
- VDDA
- NRST
- COL7
- COL8
- TFT_TX
- TFT_RX
- MCU_TX2
- MCU_RX2
- RELAY1
- RELAY3
- BOOTLD_TXD
- BOOTLD_RXD
- SWDIO
- SWCLK
- MCU_DTR1
- MCU_DSR1
- FLASH_SCLK
- FLASH_MISO
- FLASH_MOSI
- GP_SW2
- GP_SW1
- CAN_RX
- CAN_TX
- MCU_TX4
- MCU_RX4
- COL5
- COL6
- ROW5
- ROW6
- BOOT0
- VSSA
- VSS
- VSS
- VSS
- VSS

External Components:

- Resistors:** R1 (10k), R2 (10k)
- Capacitors:** C1 (100nF), C2 (100nF), C3 (100nF), C4 (100nF), C5 (100nF)
- Switches:** S1, S2
- Ground:** GND

Boot Modes:

- Bootloader: BOOT0 = 1
- Normal Operation: BOOT0 = 0

Additional Pin List (Right):

- PC0
- PC1
- PC2
- PC3
- PC4
- PC5
- PC6
- PC7
- PC8
- PC9
- PC10
- PC11
- PC12
- PC13
- PC14-OSC32_IN
- PC15-OSC32_OUT
- PD0
- PD1
- PD2
- PD3
- PD4
- PD5
- PD6
- PD7
- PD8
- PD9
- PD10
- PD11
- PD12
- PD13
- PD14
- PD15
- PE0
- PE1
- PE2
- PE3
- PE4
- PE5
- PE6
- PE7
- PE8
- PE9
- PE10
- PE11
- PE12
- PE13
- PE14
- PE15
- PFG-OSC_IN
- PFI-OSC_OUT

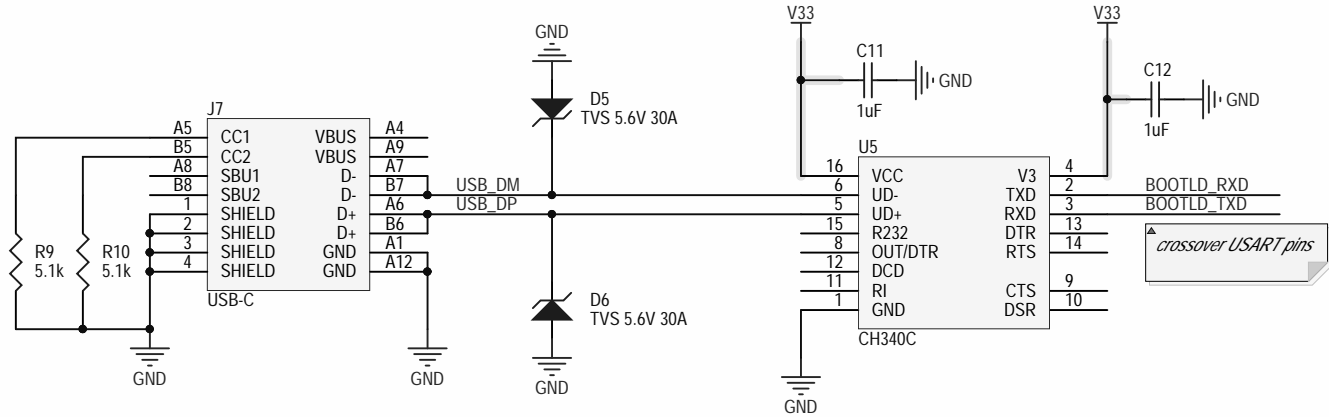
Additional Pin List (Left):

- COL1
- COL2
- COL3
- COL4
- MCU_DTR2
- MCU_DSR2
- ROW2
- ROW3
- ROW4
- RIGHT_SW4
- RIGHT_SW3
- RIGHT_SW2
- RIGHT_SW1
- GP_SW4
- GP_SW3
- FLASH_CS
- MCU_DTR4
- MCU_DSR4
- RELAY2
- LEFT_SW4
- LEFT_SW3
- LEFT_SW2
- LEFT_SW1
- CAN_SDOWN
- CAN_STDBY
- ROW1
- MCU_TX1
- MCU_RX1
- MCU_TX3
- MCU_RX3
- MCU_DTR3
- MCU_DSR3
- ROW7
- ROW8

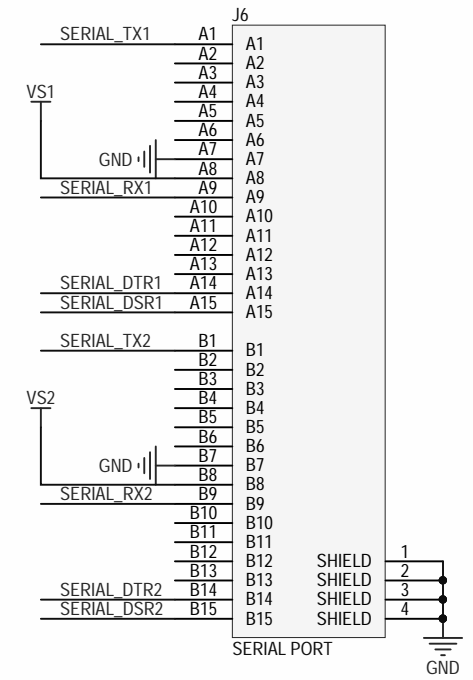
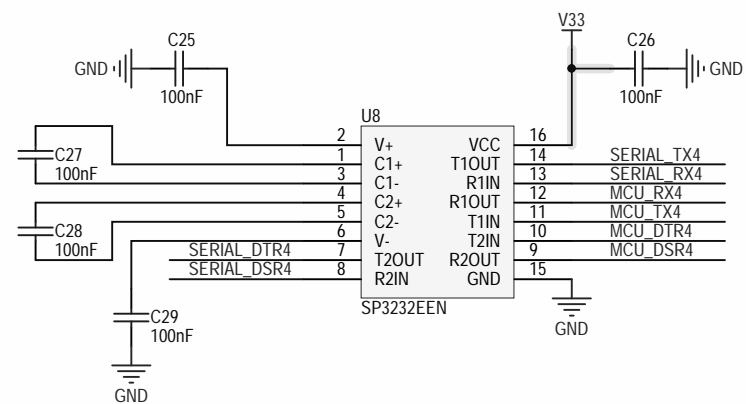
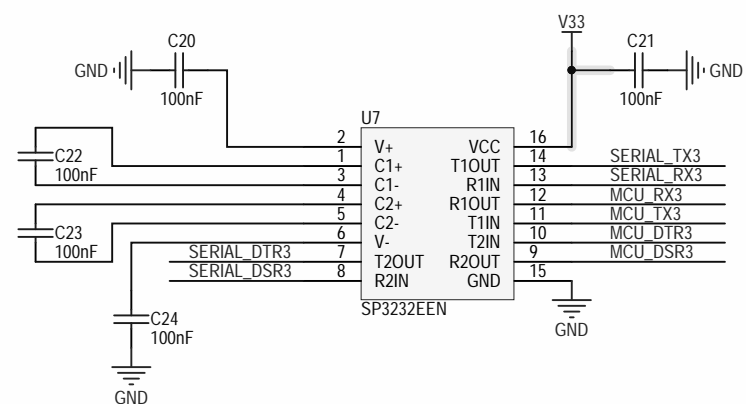
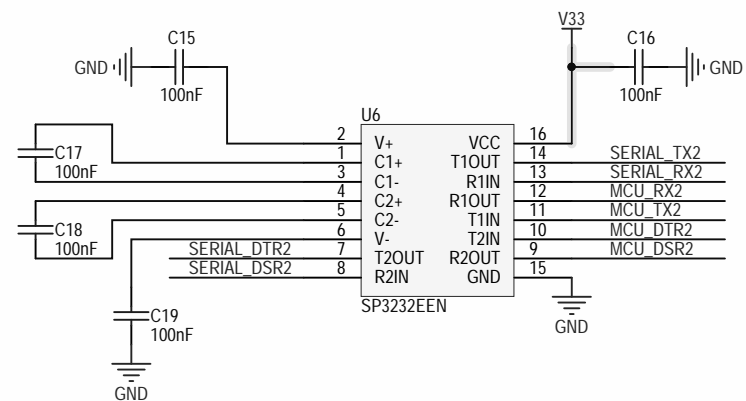
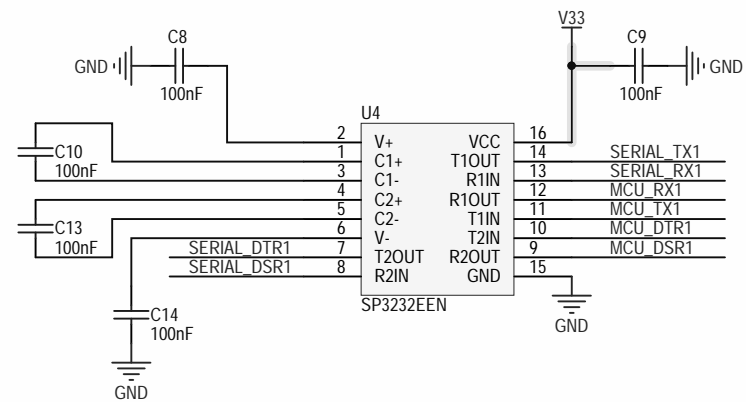
The diagram illustrates the following peripheral connections:

- SERIAL PORT 1:** SERIAL 1 connects to MCU RX1, MCU TX1, MCU DTR1, and MCU DSR1.
- SERIAL PORT 2:** SERIAL 2 connects to MCU RX2, MCU TX2, MCU DTR2, and MCU DSR2.
- SERIAL PORT 3:** SERIAL 3 connects to MCU RX3, MCU TX3, MCU DTR3, and MCU DSR3.
- SERIAL PORT 4:** SERIAL 4 connects to MCU RX4, MCU TX4, MCU DTR4, and MCU DSR4.
- RIGHT SIDE KEYBOARD:** RIGHT KEYBOARD connects to RIGHT_SW1, RIGHT_SW2, RIGHT_SW3, and RIGHT_SW4.
- LEFT SIDE KEYBOARD:** LEFT KEYBOARD connects to LEFT_SW1, LEFT_SW2, LEFT_SW3, and LEFT_SW4.
- GP KEYBOARD:** GP KEYBOARD connects to GP_SW1, GP_SW2, GP_SW3, and GP_SW4.
- MAIN KEYBOARD:** MAIN KEYBOARD connects to ROW1-ROW8 and COL1-COL8.
- USB PORT:** USB connects to BOOTLD_RXD and BOOTLD_TXD.
- CAN BUS:** CAN connects to CAN_TX, CAN_RX, CAN_STDBY, and CAN_SDDOWN.
- STANDBY SHUTDOWN:** A dedicated connection for standby shutdown.
- POWER CONTROL:** POWER CONTROL connects to RELAY1, RELAY2, RELAY3, and RELAY4.
- DISPLAY PORT:** DISPLAY connects to TFT_RX and TFT_TX.

USB-SERIAL TRANSCEIVER



SERIAL PORT

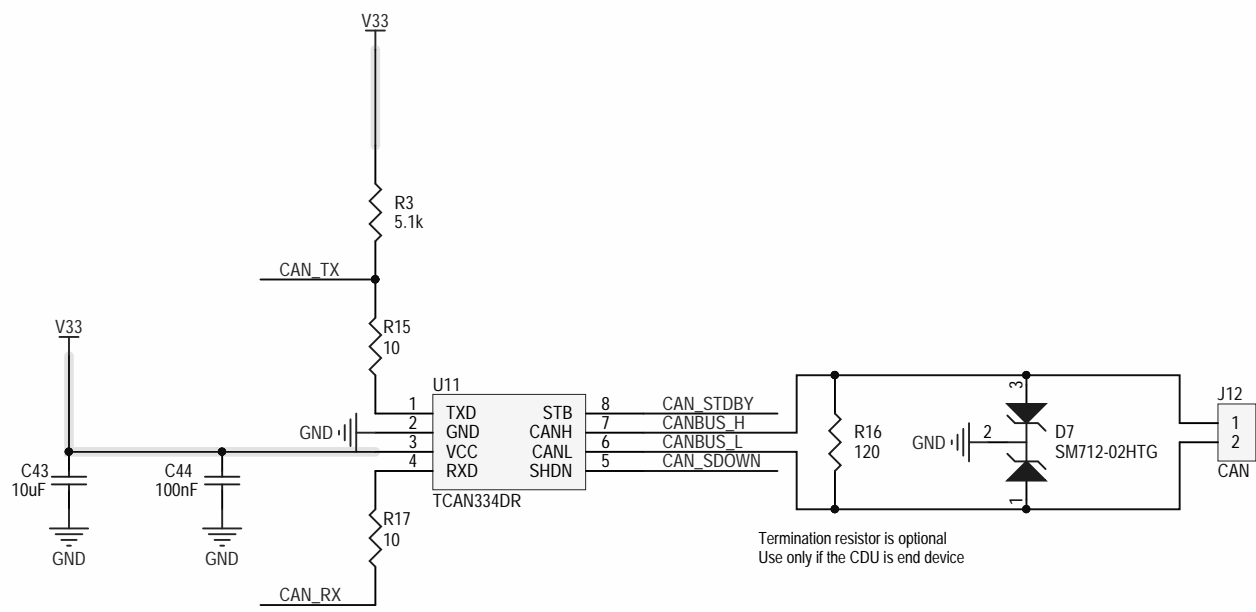


2KR XCEIVER
SERIAL PINS
1 - RS-232 In
9 - RS-232 Out

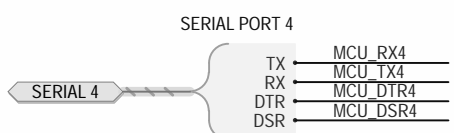
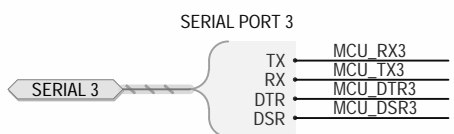
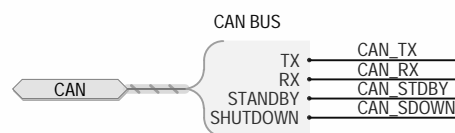
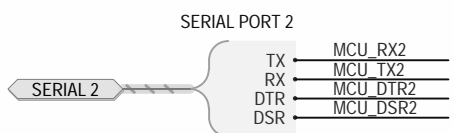
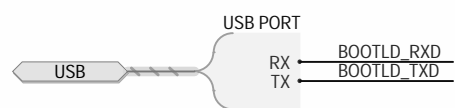
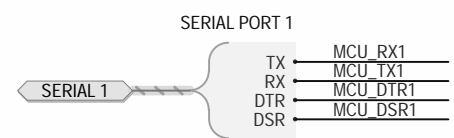
POWER PINS:
8 - DC Power II
7 - GND

14, 15 - Not connected

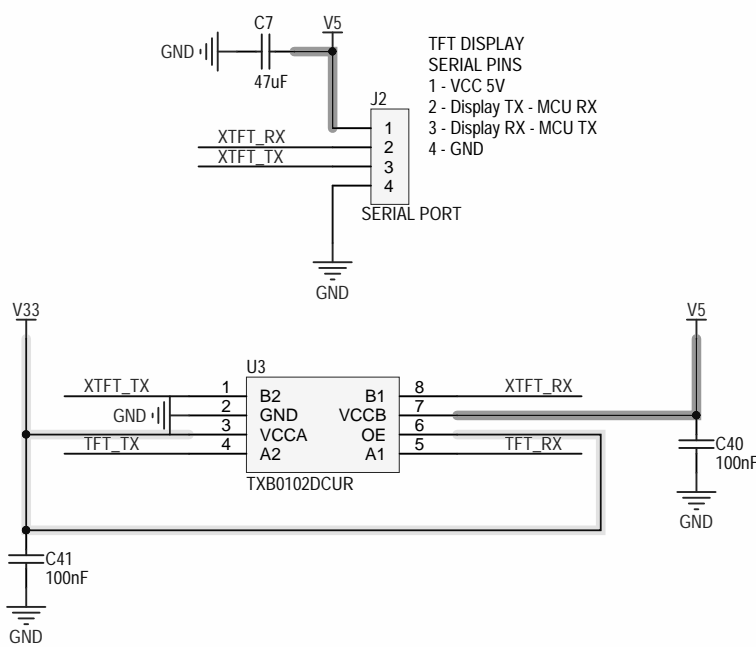
CAN TRANSCEIVER



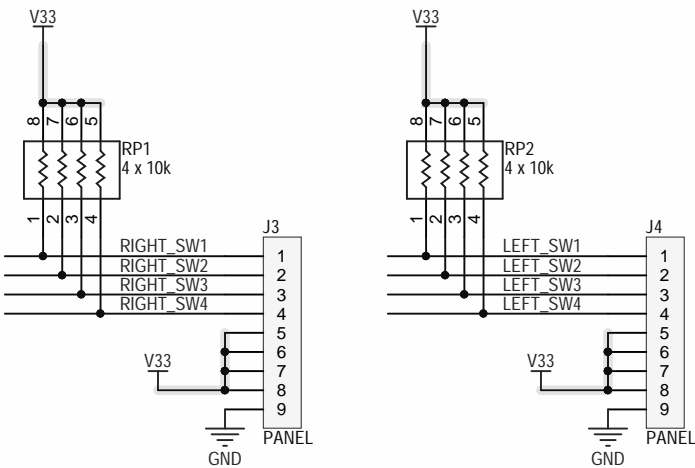
SHEET PORTS AND HARNESSSES



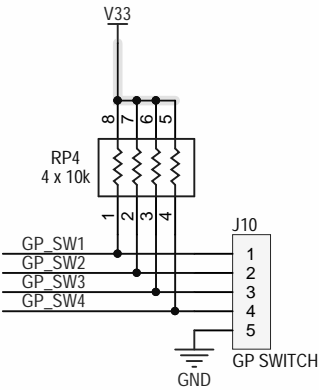
TFT DISPLAY PORT



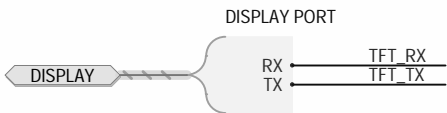
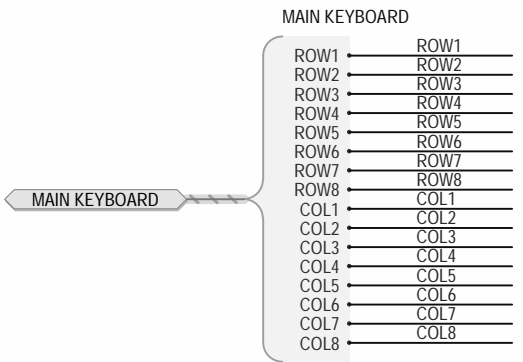
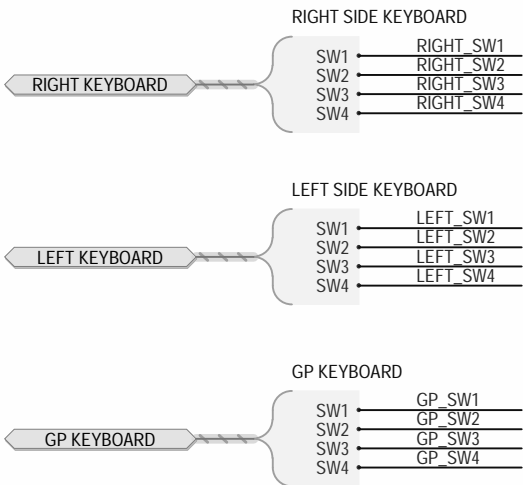
PANEL INTERFACES



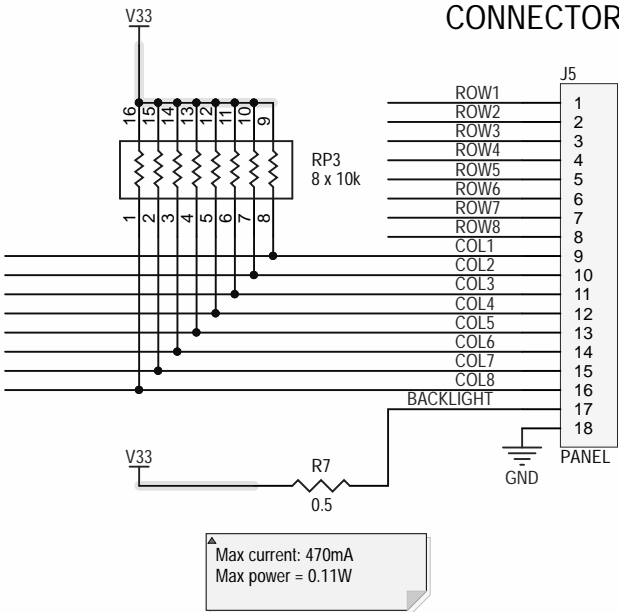
GENERAL PURPOSE SWITCHES

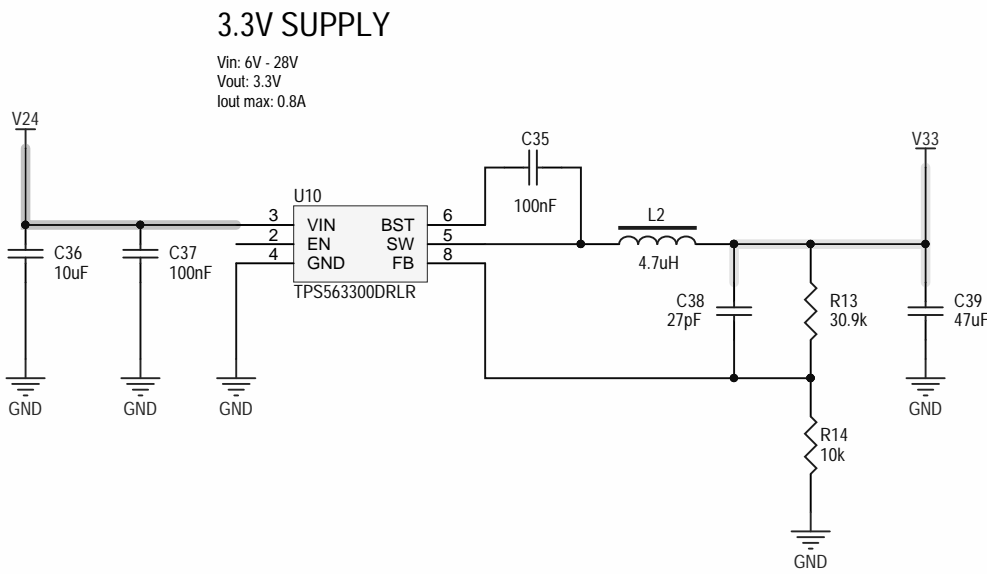
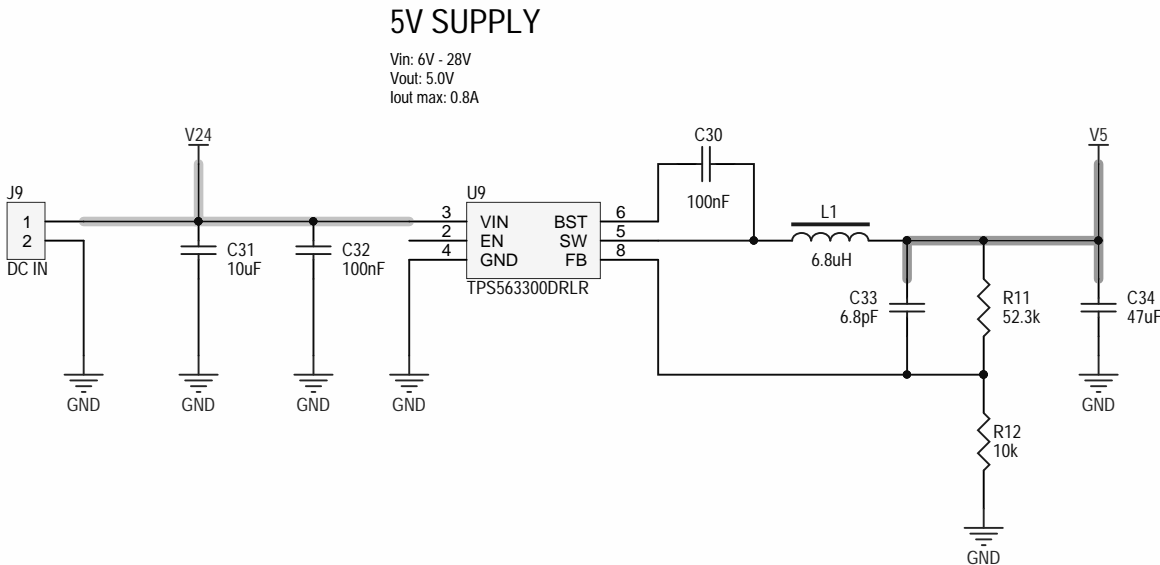


SHEET PORTS AND HARNESSSES



MAIN KEYBOARD CONNECTOR





SHEET PORTS AND HARNESSES

