USB side

VCC_TTL can be present before VBUS (when pin strip connector are connected without usb)
To avoi back supply, we use a load switch driven by VBUS.
FT232RNL is not suppliend in VCCIO until VBUS IS PRESENT

TTL side

Is not reliable to connect power led directly to VCC_TTL (duet to its voltage range)
I use VCC_TTL to turn on a NPN, and the light a led.
is ok if to turn on this led is both VCC_TTL and VBUS must be present

VCC_TTL can range from 1.8V to 5V

CBUS are normally three-state so I can refer the LEDs to VBUS

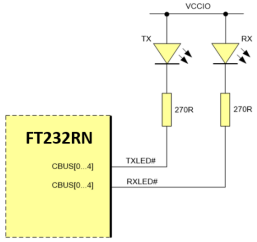

Figure 7.5 Dual LED Configuration

An example of using the FT232RN to drive LEDs is shown in Figure 7.5. In this application one of the CBUS pins is used to indicate transmission of data (TXLED#) and another is used to indicate receiving data (RXLED#). When data is being transmitted or received the respective pins will drive from tristate to low in order to provide indication on the LEDs of data transfer. A digital one-shot is used so that even a small percentage of data transfer is visible to the end user.

Mastupristi Circuitry	
Sheet: /	
File: usb_uart_1V8.kicad_sch	
Title: Usb/TTL 1.8V to 5V interface	
Size: A4	Date: 2025-03-28
KiCad E.D.A. 9.0.0	Id: 1/1
	Rev: 1