

Note that the power on the Pico's USB connector is sourced out.

J1 usage: Normally jumper between pins 2-3 (+5V to VBUS). If standalone (debugging), connect an external cable to pins 1-2.

A USB HID is connected through an OTG USB cable. The power to the HID is through J1. Supported HID's are keyboards and mice.

Interfacing between 3V3 and 5V TTL is done using open collectors. Adding the pull-ups will decrease speed-up low-high O.C. recovery.

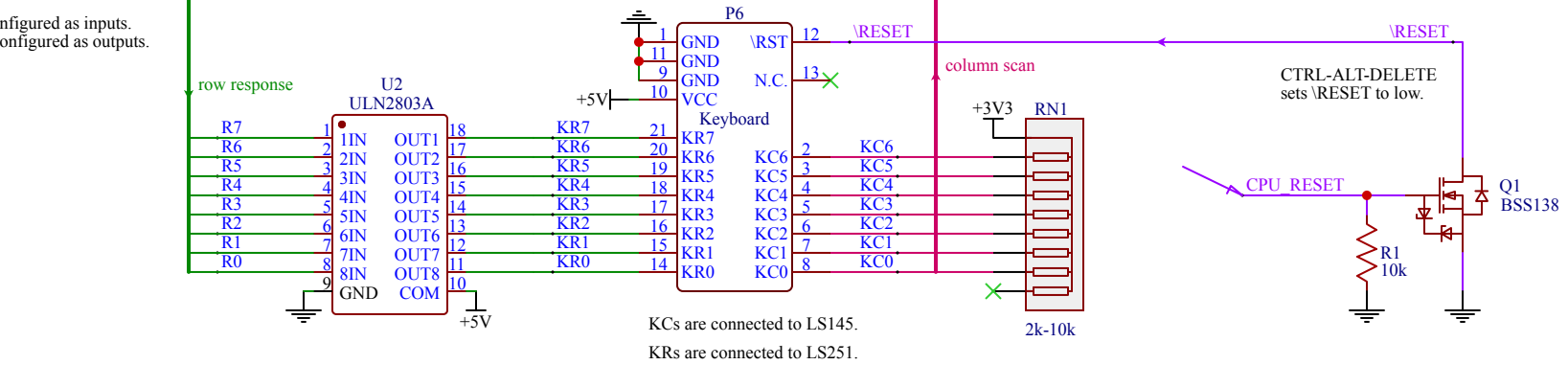
RP2040 has two cores where TinyUSB runs on the first core.

The second core is dedicated to column scan / row response. It runs a loop where the KC bits are mapped to the KR bits. The KC/KR matrix occupies 128 bytes of memory. The response time is max 200 ns with RP2040 running at 125 MHz. The RP2040 can be overclocked up to 400 MHz (which is not needed).

Debugging is done using SWD. Wiring setup:

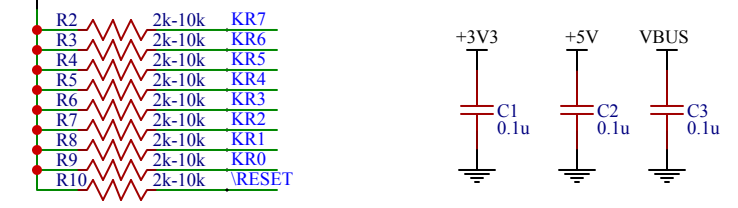
- connect J2 (SWD) and J3 (UART0) to Pico probe
- if standalone, connect power to J1 pins 1-2
- if connected to Galaksiija, install a jumper between J1 pins 2-3

GP0-GP6 are configured as inputs.
GP7-GP15 are configured as outputs.



KCs are connected to LS145.
KRs are connected to LS251.

Optional pull-ups 2k-10k
(to decrease turn-on/off delay time of O.C.)



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