## Pico CBUS shields – build information

This repo contains two CBUS shield designs for the Raspberry Pi Pico.

CBUS is a messaging scheme that runs over CAN bus. For CAN-only usage, the optional switch and LEDs can be omitted.

# Bill of materials

Both designs use the same components, only the layout differs.

|  |  |  |  |
| --- | --- | --- | --- |
| **Part** | **Description** |  | **Package** |
| IC1 | MCP2515 | CAN controller | 18 pin DIL |
| IC2 | MCP2562 | CAN transceiver | 8 pin DIL |
| IC3 | 78L05\*\* | Voltage regulator | TO92 |
| D1,2,3 | 3mm LED |  |  |
| D4 | 1N5817 |  | DO-41 |
| Y1 | 16MHz crystal |  | HC49 |
| C1, C4 | 100nF ceramic |  | 2.5mm |
| C2, C3 | 22pF ceramic |  | 2.5mm |
| C5 | 10uF elect. or tant |  | 2.5mm |
| C6 | 1uF ceramic |  | 2.5mm |
| R1, R2, R3 | 1K resistor |  | 1/4W |
| S1 | DTS-3 | Tactile switch |  |
| Sockets, headers & connectors as required |  |  |  |

\*\* or L4931 for higher current capacity.

# Planning

Select pin headers according to your requirements, e.g. depending whether you intend to mount the Pico above or below. The Pico could be mounted using a cut-up 40-pin DIL socket for a lower profile.

CAN bus connectors are 4-way 3.5mm terminal blocks, either fixed or pluggable.

# Assembly

No special instructions.

Select pin headers according to your requirements, i.e. depending whether you intend to mount the Pico above or below.

CAN bus connectors are 4-way 3.5mm terminal blocks.