4.0_keyboard

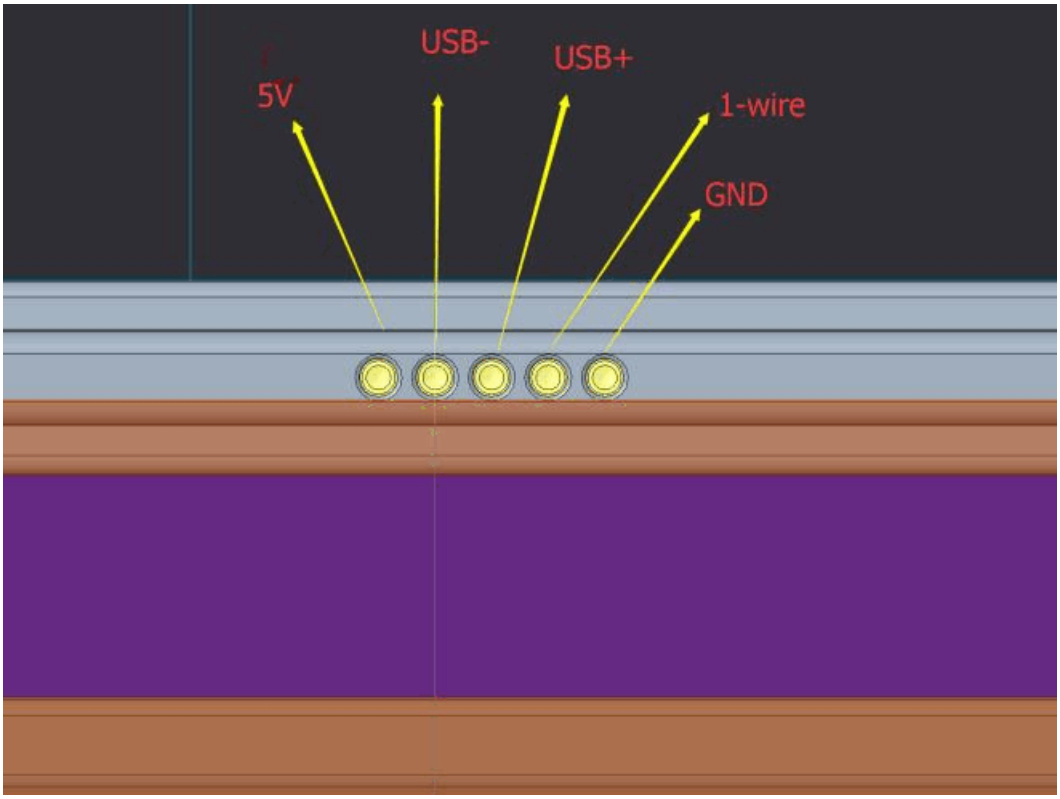
BT/USB Docking Keyboard Electronic Specifications

Basic features

- BT/USB dual modes, switches between two modes automatically
- BT should be compatible with Raspberry Pi 3B+
- Hardware connection will be pogo pins
- Operating system will be pi-top Polaris (Rasbian/linux based)
- Needs 100-200mAh battery, charging via pogo pins
- Pogo pins should contain 5V, USB-, USB+, GND, 1-wire(ID)
- The controller needs a single wire communication through pogo pin to system MCU
- LED indicators should include charging/BT paring/low power/mode(potentially)
- No external power button/charging port needed

Detail specifications

1. Pogo pin



- **5V:** From system to keyboard for charging.
- **USB pair:** For USB mode.
- **Single wire:** For system MCU can read keyboard's Bluetooth ID or MAC, any data can let system know which keyboard is connecting. So the OS can pair to the particular keyboard.

2. USB/BT Modes Swings
    - When dock pogo connects, keyboard switches to USB mode automatically, and the Bluetooth should stay on but no data transmitting.
    - When dock pogo disconnects, keyboard should start sending data to system back to use Bluetooth keyboard function, this should be seamless.
    - When dock pogo connects, keyboard should communicate with system via single wire pin, and send Bluetooth ID to system.
3. LED/Buttons Function
    - LED for charging status (battery low), BT pairing and potentially mode indicator.
    - Power button should be in keyboard matrix, when press power button, keyboard goes to deep sleep mode.
    - BT pairing button should be in keyboard matrix.
4. Power Saving
    - Keyboard should have active/idle/sleep/deep sleep modes.

FCC Warnning:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the
interference by one or more of the following measures:

• Reorient or relocate the receiving antenna.
• Increase the separation between the equipment and receiver.
• Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
• Consult the dealer or an experienced radio/TV technician for help.

Caution: Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1)This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable condition without restriction.