

*****Draft*****

Testing Pico running freertos an pshell

06/06/22

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“git clone --recursive [git@github.com:develone/rp2040-freertos-project](https://github.com/git@github.com:develone/rp2040-freertos-project) -b dev”

“cd rp2040-freertos-project”

“mkdir build”

“cd build”

“cmake ..”

“make”

lsusb

Bus 002 Device 001: ID 1d6b:0003 Linux Foundation 3.0 root hub

Bus 001 Device 006: ID 046d:c534 Logitech, Inc. Unifying Receiver

Bus 001 Device 005: ID 0403:6001 Future Technology Devices International, Ltd FT232 Serial (UART) IC

Bus 001 Device 004: ID 058f:6254 Alcor Micro Corp. USB Hub

Bus 001 Device 003: ID 2e8a:000a Raspberry Pi Pico

Bus 001 Device 002: ID 2109:3431 VIA Labs, Inc. Hub

Bus 001 Device 001: ID 1d6b:0002 Linux Foundation 2.0 root hub

Note: The picotool command needs to be run with sudo or as root. Also export PICOTOOL=/home/devel/picotool/build/ This can be setup with “. Ultibo_Projects/picoultibo.sh”

picotool info --bus 1 --address 3 -f -a

The device was asked to reboot into BOOTSEL mode so the command can be executed.

Program Information

name: test-read-crc16

features: UART stdin / stdout
USB stdin / stdout

binary start: 0x10000000

binary end: 0x1002662c

Fixed Pin Information

0: UART0 TX

1: UART0 RX

Build Information

sdk version: 1.3.0
pico_board: pico
boot2_name: boot2_w25q080
build date: Jun 3 2022
build attributes: Release

Device Information

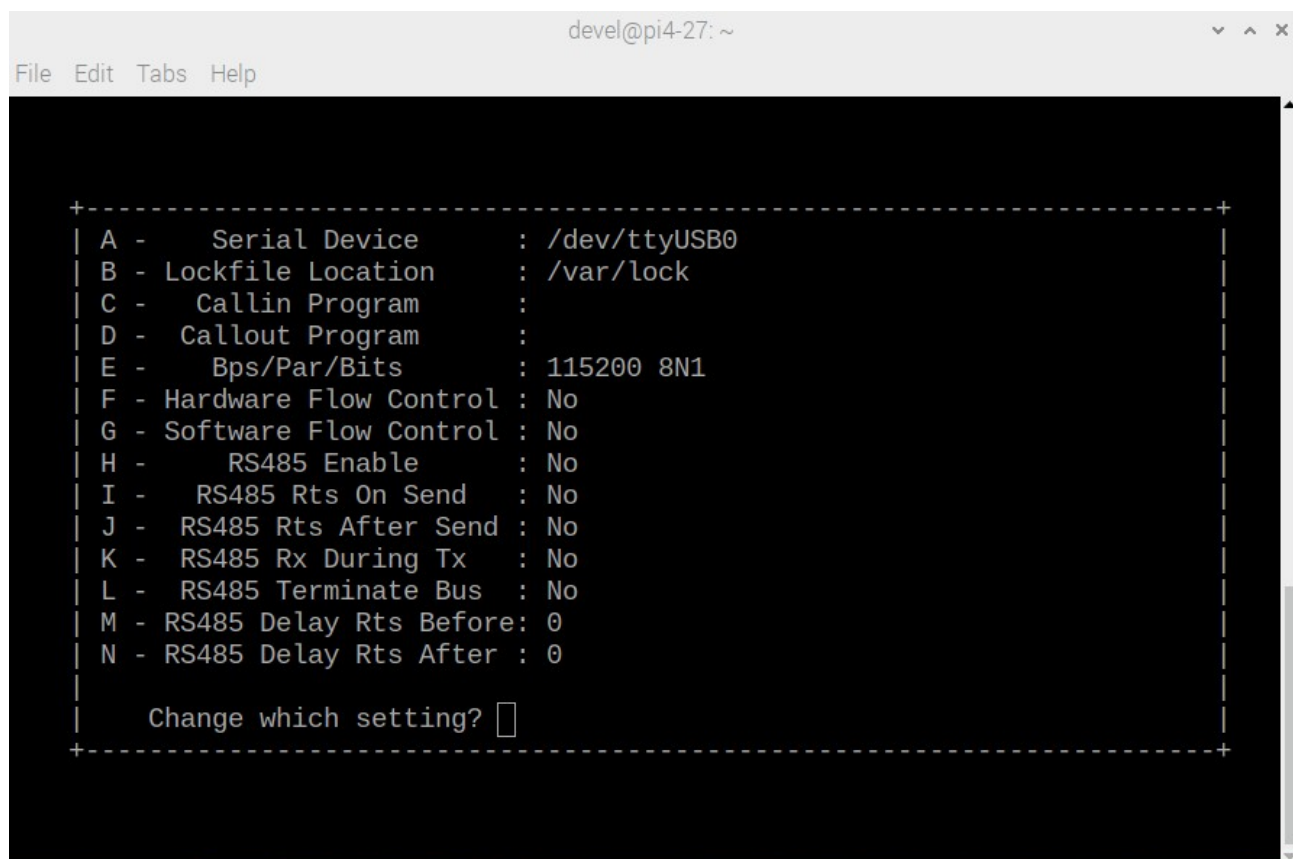
flash size: 2048K
ROM version: 2

The device was asked to reboot back into application mode.

Programmed the pico with the following command.

```
openocd -f interface/raspberrypi-swd.cfg -f target/rp2040.cfg -c "program  
test-read-crc16/test-read-crc16.elf verify reset exit"
```

In a shell running “minicom -s”



The screenshot shows a terminal window titled "devel@pi4-27: ~". The window contains the minicom help menu, which is a list of settings and their current values, enclosed in a dashed box. The settings are as follows:

A	-	Serial Device	:	/dev/ttyUSB0
B	-	Lockfile Location	:	/var/lock
C	-	Callin Program	:	
D	-	Callout Program	:	
E	-	Bps/Par/Bits	:	115200 8N1
F	-	Hardware Flow Control	:	No
G	-	Software Flow Control	:	No
H	-	RS485 Enable	:	No
I	-	RS485 Rts On Send	:	No
J	-	RS485 Rts After Send	:	No
K	-	RS485 Rx During Tx	:	No
L	-	RS485 Terminate Bus	:	No
M	-	RS485 Delay Rts Before	:	0
N	-	RS485 Delay Rts After	:	0

Below the list, it says "Change which setting?" followed by a cursor.

The help menu

```
File Edit Tabs Help
This is free software, and you are welcome to redistribute it
under certain conditions. See LICENSE file for details.

console on UART (detected 24 rows, 80 columns)

enter command, hit return for help

32 /:
    cd - change directory
    cp - copy file
format - format the filesystem
    get - get file (xmodem)
    ls - list directory
mkdir - create directory
mount - mount filesystem
    mv - rename file or directory
    put - put file (xmodem)
    q - quit
    rm - remove file or directory
status - filesystem status
unmount - unmount filesystem
    vi - vi editor

/: █
```

/: mount
6 mount mount filesystem
mounted
/:

vi f1.txt

Using mousepad on RPi4B 8Gb wrote 5 lines of text

```
File Edit Tabs Help
abcdefghijklmnopqrstuvwxyz0123456789
abcdefghijklmnopqrstuvwxyz0123456789
abcdefghijklmnopqrstuvwxyz0123456789
abcdefghijklmnopqrstuvwxyz0123456789
abcdefghijklmnopqrstuvwxyz0123456789
```

This was pasted in a vi f1.txt

[illegible]

Esc :

W

Esc :

q

185 f1.txt

```
-rw-r--r-- 1 devel devel 184 Jun  4 07:29 o1.txt
```

The file was downloaded from pico to RPi4

```
get f1.txt
```

CtrlAS

The download loaded is padded after the 5 lines of text.

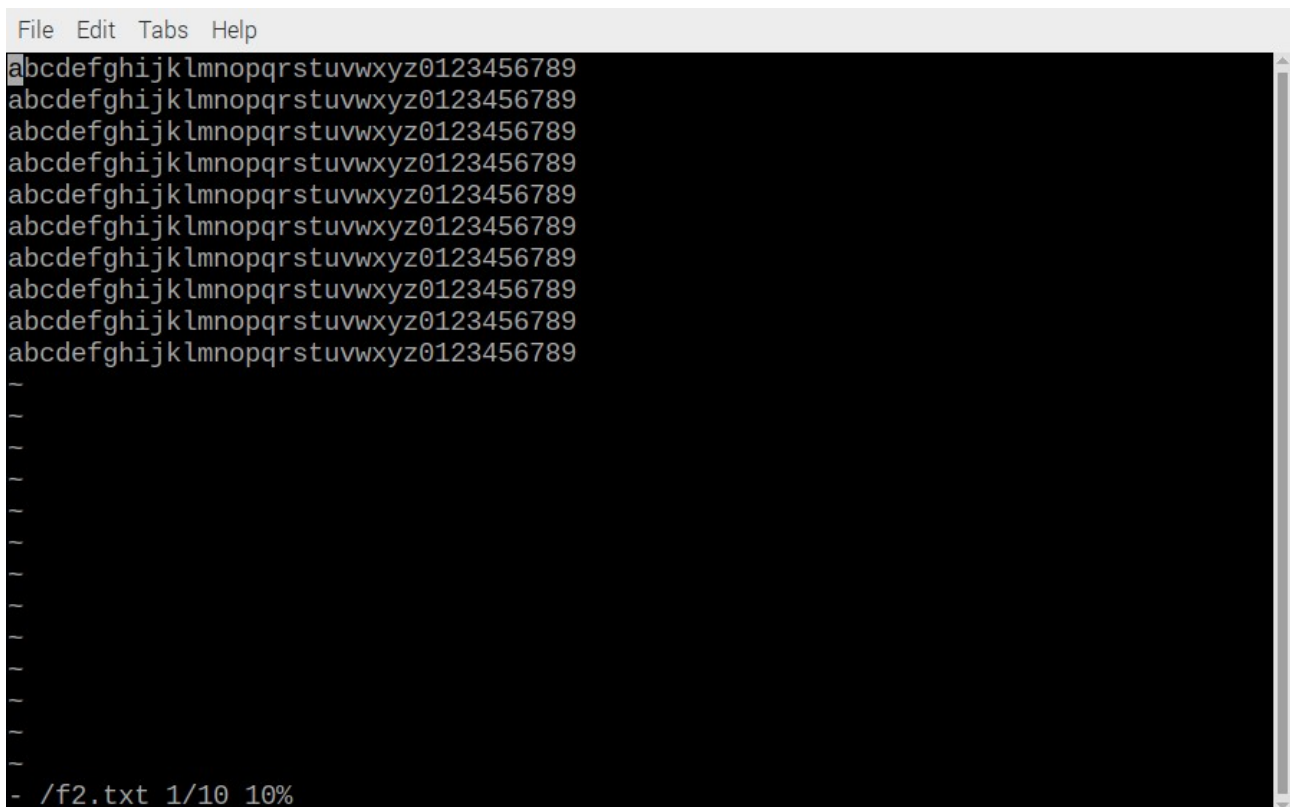
```

abcdefghijklmnopqrstuvwxyz0123456789
abcdefghijklmnopqrstuvwxyz0123456789
abcdefghijklmnopqrstuvwxyz0123456789
abcdefghijklmnopqrstuvwxyz0123456789
abcdefghijklmnopqrstuvwxyz0123456789
ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz
abcdefghijklmnopqrstuvwxyzABCDEFGHIJKLMNOPQRSTUVWXYZ

```

The file was downloaded from pico to RPi4

Using mousepad on RPi4B 8Gb wrote 10 lines of text
This was pasted in a vi f2.txt

A screenshot of a terminal window with a light gray title bar containing 'File Edit Tabs Help'. The main area is black with white text. The first 10 lines are 'abcdefghijklmnopqrstuvwxyz0123456789'. The 11th line is '~'. The 12th line is '~'. The 13th line is '~'. The 14th line is '~'. The 15th line is '~'. The 16th line is '~'. The 17th line is '~'. The 18th line is '~'. The 19th line is '~'. The 20th line is '~'. The status bar at the bottom shows '- /f2.txt 1/10 10%'.

```
File Edit Tabs Help
abcdefghijklmnopqrstuvwxyz0123456789
abcdefghijklmnopqrstuvwxyz0123456789
abcdefghijklmnopqrstuvwxyz0123456789
abcdefghijklmnopqrstuvwxyz0123456789
abcdefghijklmnopqrstuvwxyz0123456789
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abcdefghijklmnopqrstuvwxyz0123456789
abcdefghijklmnopqrstuvwxyz0123456789
abcdefghijklmnopqrstuvwxyz0123456789
~
~
~
~
~
~
~
~
~
~
- /f2.txt 1/10 10%
```

Esc :

w

Esc :

q

370 f2.txt

-rw-r--r-- 1 devel devel 369 Jun 4 07:29 /home/devel/o2.txt

get f2.txt

CtrlAS

The download loaded is padded after the 10 lines of text.

[illegible]