

\*\*\*\*\*Default\*\*\*\*\*

**repo rp2040-rp2350-freertos**  
**repo is for both the RP2040 & RP2350**  
**supporting Raspberry Pi repo <https://github.com/raspberrypi/FreeRTOS-Kernel.git>**  
**01/14/24**

\*\*\*\*\*Default\*\*\*\*\*

### build-steps-notes

Several env variables need to be setup

```
export PICO_SDK_PATH=/home/devel/pico2/pico-sdk
export FREERTOS_KERNEL_PATH=/home/devel/pico2/freertos-lib/FreeRTOS-Kernel
export PICO_EXTRAS_PATH=/home/devel/pico-extras
export PIPELINEC_REPO="$HOME/PipelineC"
export OSS_CAD_SUITE=$HOME/oss-cad-suite/
export PICTOOL_FETCH_FROM_GITHUB=/home/devel/pico2/BUILT_PICOTOOL
```

Starting from git@github.com:develone/rp2040-freertos-project.git dev branch Uses FreeRTOS-Kernel  
from Raspberry Pi repo <https://github.com/raspberrypi/FreeRTOS-Kernel.git>

steps for using repo <https://github.com/develone/rp2040-rp2350-freertos.git>  
devel@pi5-90:~/rp2350-freeRTOS/build \$ echo \$FREERTOS\_KERNEL\_PATH  
/home/devel/pico2/freertos-lib/FreeRTOS-Kernel

```
cd pico2
git clone https://github.com/develone/rp2040-rp2350-freertos.git
cd FreeRTOS-Kernel
cd ..
git clone https://github.com/develone/pico-sdk.git -b my-2.1.0
cd pico-sdk
git submodules update --init
cd ../BUILT_PICOTOOL/
git clone https://github.com/raspberrypi/picotool.git
mkdir build
cd build
cmake ../
sudo make install
cd ~/
git clone https://github.com/develone/rp2040-rp2350-freertos.git
cd ~/rp2040-rp2350-freertos
./compile-rp2350.sh
or
./compile-rp2350.sh
mkdir build-rp2040
find . -name *.uf2 | wc
37    37   1614
```

\*\*\*\*\*

```
mkdir build-rp2350
cd build-rp2350
cmake .. -DPICO_BOARD=pico2 -DPICO_PLATFORM=rp2350
```

```
make
or
make VERBOSE=1 > make_output.txt 2>&1
cd build-rp2040
cmake .. -DPICO_BOARD=pico -DPICO_PLATFORM=rp2040
make
or
make VERBOSE=1 > make_output_rp2040.txt 2>&1
```

This repo is for both the RP2040 & RP2350

## **hello\_freertos1**

Welcome to minicom 2.8

OPTIONS: I18n

Port /dev/ttyUSB0, 10:08:42

Press CTRL-A Z for help on special keys

Running on RP2350

Starting FreeRTOS on core 0:

Hello from worker count=0

Hello from main task count=0

blink\_task starts

Hello from main task count=1

## **hello\_freertos2**

Welcome to minicom 2.8

OPTIONS: I18n

Port /dev/ttyUSB0, 09:58:54

Press CTRL-A Z for help on special keys

Running on RP2040

Starting FreeRTOS SMP on both cores:

Hello from worker count=0

worker is on core 0

main task is on core 0

Hello from main task count=0

blink\_task starts

blink task is on core 1

Hello from main task count=1

## **2tasks**

Welcome to minicom 2.8

OPTIONS: I18n

Port /dev/ttyUSB0, 07:19:04

Press CTRL-A Z for help on special keys

Running on RP2350

LED is ON!

LED is OFF!

LED is ON!

LED is OFF!

LED is ON!

LED is OFF!

LED is ON!

LED is OFF!

## **Scheduling**

Welcome to minicom 2.8

OPTIONS: I18n

Port /dev/ttyUSB0, 06:55:44

Press CTRL-A Z for help on special keys

Running on RP2350

Task 2 is currently running

Task 1 is currently running

Task 2 is currently running

Task 1 is currently running

Task 2 is currently running

Task 1 is currently running

Task 2 is currently running

Task 1 is currently running

Task 2 is currently running

Task 1 is currently running

## **Mutex**

Running on RP2350

11111111

22222222

11111111

22222222

11111111

22222222

11111111

22222222

11111111

22222222

11111111

## **pico-littlefs-examples-0-1-2**

**example0.uf2**

devel@pi5-90:~ \$ minicom myusb0

format (N/y) ?

FS: blocks 64, block size 4096, used 2

Boot count: 1

File size (should be 4) : 4

## **example1.uf2**

devel@pi5-90:~ \$ minicom myusb0

Hit any key

File list

.

..

boot\_count

End of list

Creating 32 files

File list

.

..

11086282596.tst

11131774259.tst

11134519721.tst

11159678392.tst

11255903633.tst

11410932295.tst

1154866954.tst

11573908997.tst

11629436278.tst

11646566880.tst

11734980231.tst

11746841065.tst

11874488172.tst

11885772828.tst

11904406061.tst

11932629191.tst

12062972839.tst

12129434355.tst

12147260458.tst

1282962927.tst

1293130104.tst

1382971559.tst

152650143.tst

1569326942.tst

1642008697.tst

1735430261.tst

1758014368.tst

1777190218.tst

1780581502.tst

1821919613.tst

1921421196.tst

1989347765.tst

boot\_count

End of list

FS: blocks 64, block size 4096, used 2

Renaming 32 files

File list

.  
..  
21086301339.tst  
21131773644.tst  
21134533206.tst  
21159706183.tst  
21255894638.tst  
21410982328.tst  
2154921717.tst  
21573850618.tst  
21629472393.tst  
21646551583.tst  
21734954360.tst  
21746817558.tst  
21874498707.tst  
21885758435.tst  
21904349650.tst  
21932618552.tst  
22062977112.tst  
22129422604.tst  
22147248085.tst  
2282940432.tst  
2293089415.tst  
2382947672.tst  
252666208.tst  
2569361057.tst  
2642038150.tst  
2735394186.tst  
2758029919.tst  
2777127093.tst  
2780551553.tst  
2821919874.tst  
2921385587.tst  
2989380682.tst  
boot\_count  
End of list  
FS: blocks 64, block size 4096, used 2  
Verifying then removing 32 files  
File list

.  
..  
boot\_count  
End of list  
FS: blocks 64, block size 4096, used 2  
Pass

### **example2.uf2**

Hit any key  
FS: blocks 64, block size 4096, used 2  
Creating 200K file  
FS: blocks 64, block size 4096, used 53  
reading 200K file

removing file

FS: blocks 64, block size 4096, used 2

Pass