

*****Default*****

Testing outdated repo pico-tflmicro
forked from <https://github.com/raspberrypi/pico-tflmicro>
<https://github.com/develone/pico-tflmicro-090222>

hello_world
magic_wand
09/15/22

*****Default*****

On 08/29/22
Starting with <https://github.com/develone/tflite-micro>
python3 tensorflow/lite/micro/tools/project_generation/create_tflm_tree.py \
-e hello_world \
-e micro_speech \
-e magic_wand \
-e person_detection \
/tmp/tflm-tree

*In pico-tflmicro the cpp files were in src/tensorflow/lite/micro/rp2
now in src/tensorflow/lite/micro/pico.*

Step 2: Customize Logging and Timing Function for your Platform

Replace the following files with a version that is specific to your target platform:

*debug_log.cc
micro_time.cc
system_setup.cc*

*new file: ../src/tensorflow/lite/micro/pico/debug_log.cc
new file: ../src/tensorflow/lite/micro/pico/micro_time.cc*

*diff ../src/tensorflow/lite/micro/pico/micro_time.cc ../../pico-tflmicro/src
/tensorflow/lite/micro/rp2/micro_time.cpp*

```
31c31
< uint32_t ticks_per_second() { return kClocksPerSecond; }
---
> int32_t ticks_per_second() { return kClocksPerSecond; }
33c33
< uint32_t GetCurrentTimeTicks() {
---
> int32_t GetCurrentTimeTicks() {
```

git clone [git@github.com:develone/pico-tflmicro-090222.git](https://github.com/develone/pico-tflmicro-090222.git)

cd pico-tflmicro-090222/

git clone [git@github.com:develone/pico-sdk.git](https://github.com/develone/pico-sdk.git)

cd pico-sdk/

git submodule update --init

cd ..

mkdir build

cd build

export PICO_SDK_PATH=../pico-sdk/

cmake -DPICO_BOARD=pico ..

Using PICO_SDK_PATH from environment ('../pico-sdk/')

PICO_SDK_PATH is /home/devel/xx/pico-tflmicro-090222/pico-sdk

Defaulting PICO_PLATFORM to rp2040 since not specified.

Defaulting PICO platform compiler to pico_arm_gcc since not specified.

-- Defaulting build type to 'Release' since not specified.

PICO compiler is pico_arm_gcc

-- The C compiler identification is GNU 8.3.1

-- The CXX compiler identification is GNU 8.3.1

-- The ASM compiler identification is GNU

-- Found assembler: /usr/bin/arm-none-eabi-gcc

Build type is Release

PICO target board is pico.

Using board configuration from

/home/devel/xx/pico-tflmicro-090222/pico-sdk/src/boards/include/boards/pico.h

-- Found Python3: /usr/bin/python3.9 (found version "3.9.2") found components: Interpreter

TinyUSB available at /home/devel/xx/pico-tflmicro-090222/pico-sdk/lib/tinyusb/src/portable/raspberrypi/rp2040; enabling build support for USB.

cyw43-driver available at /home/devel/xx/pico-tflmicro-090222/pico-sdk/lib/cyw43-driver

lwIP available at /home/devel/xx/pico-tflmicro-090222/pico-sdk/lib/lwip

-- Configuring done

-- Generating done

-- Build files have been written to: /home/devel/xx/pico-tflmicro-090222/build

make

***openocd -f interface/raspberrypi-swd.cfg -f target/rp2040.cfg -c "program
examples/magic_wand/gesture_output_handler_test.elf verify reset exit"
gesture_output_handler_test***

Set your path for openocd with the following script.

. Ultibo_Projects/picoultibo.sh

***/home/devel/ultibo/core:/home/devel/qemu-6.2.0-rpios/bin:/home/devel/local/openocd/bin:/home/
devel/picotool/build:/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin:/usr/local/games:/
usr/games***

https://github.com/develone/my-projects-docs/blob/master/pico/hello_work_tfl.pdf

```
File Edit Tabs Help
Port /dev/ttyUSB0, 16:47:09

Press CTRL-A Z for help on special keys

Testing TestCallability
WING:
*           *           *
*       *   *   *       *
*   *   *   *   *   *
*       *       *   *
*   *   *       *   *
*       *       *
RING:
      *
    *   *
  *       *
*           *
*       *
*   *   *
*       *
  *       *
    *   *
      *
SLOPE:
      *
```

2nd set of outputs

```
File Edit Tabs Help

RING:
  *
 *
*   *
*   *
*   *
 *   *
  *
  *

SLOPE:
  *
 *
 *
 *
 *
 *
 *
* * * * * * * *

1/1 tests passed
---ALL TESTS PASSED---
```

```
openocd -f interface/raspberrypi-swd.cfg -f target/rp2040.cfg -c "program
examples/magic_wand/magic_wand_test.elf verify reset exit"
```

```
File Edit Tabs Help

Welcome to minicom 2.8

OPTIONS: I18n
Port /dev/ttyUSB0, 18:04:13

Press CTRL-A Z for help on special keys

Testing LoadModelAndPerformInference
1536
1/1 tests passed
---ALL TESTS PASSED---
```

```
openocd -f interface/raspberrypi-swd.cfg -f target/rp2040.cfg -c "program
examples/magic_wand/gesture_accelerometer_handler_test.elf verify reset exit"
```

File Edit Tabs Help

Welcome to minicom 2.8

OPTIONS: I18n

Port /dev/ttyUSB0, 17:55:08

Press CTRL-A Z for help on special keys

Testing TestSetup

Testing TestAccelerometer

2/2 tests passed

---ALL TESTS PASSED---