

MuntsOS Embedded Linux

Application Note #6: Free Pascal LED Flash Example

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Introduction

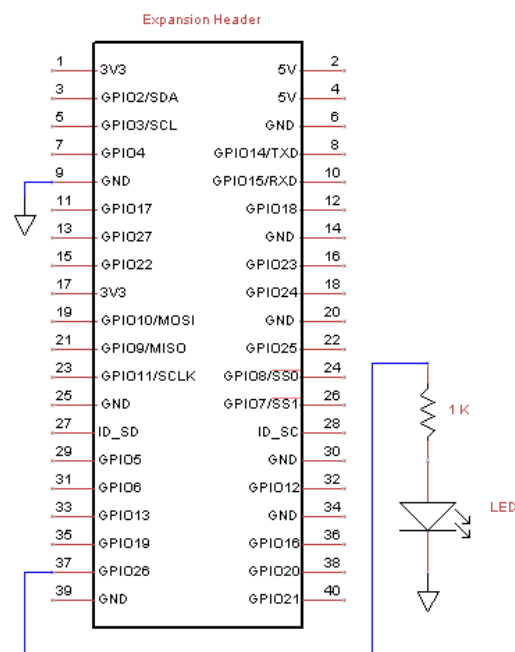
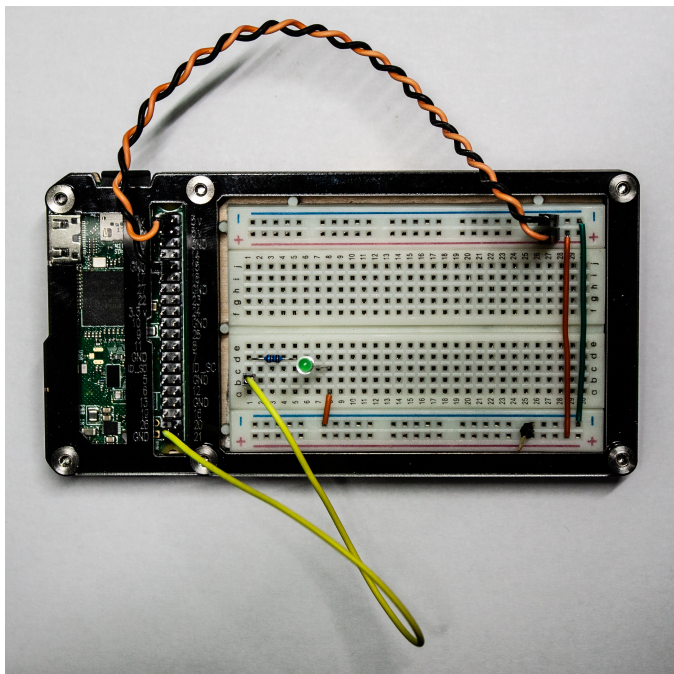
This application note describes how to create, build, and run a Free Pascal program to flash an LED on a target computer running **MuntsOS Embedded Linux**.

Prerequisites

The **MuntsOS Embedded Linux** software development environment must be installed on a Linux development computer ([AppNote #1](#) or [AppNote #2](#)).

MuntsOS Embedded Linux must be installed on the target computer ([AppNote #3](#)).

Test Platform Hardware



The test platform for the purposes of this application note consists of a [Raspberry Pi Zero 2 Wireless](#) mounted in a [Zebra Zero Plus Breadboard](#) case. The orange and black jumper wires connect +3.3V and GND on the Raspberry Pi expansion header to the breadboard power rails. The yellow jumper connects GPIO26 to a 1K ohm current limiting resistor and an LED.

Test Program Source Code

Available for download at: <http://git.munts.com/muntsos/doc/.blinky/blinky.pas>

```
PROGRAM blinky(input, output);

USES
    SysUtils,
    GPIO,
    GPIO_libsimpleio,
    RaspberryPi;

VAR
    LED : GPIO.Pin;

BEGIN
    Writeln;
    Writeln('MuntsOS Free Pascal LED Test');
    Writeln;

    { Configure a GPIO output to drive an LED }

    LED := GPIO_libsimpleio.PinSubclass.Create(GPIO26, Output, False);

    { Flash the LED forever (until killed) }

    Writeln('Press CONTROL-C to exit. ');
    Writeln;

    REPEAT
        LED.state := NOT LED.state;
        sleep(500);
    UNTIL False;
END.
```

Exercise

This example exercise demonstrates how to create a Free Pascal program project (outside of the **MuntsOS** code tree checkout), compile it, and run it on the test platform hardware.

Step 1: Prepare the **blinky** project:

```
mkdir $HOME/blinky
cd $HOME/blinky
wget http://git.munts.com/muntsos/doc/.blinky/Makefile.freepascal
mv Makefile.freepascal Makefile
wget http://git.munts.com/muntsos/doc/.blinky/blinky.pas
```

Step 2: Build the **blinky** project:

```
make BOARDNAME=RaspberryPiZero2W
```

Step 3: Copy **blinky** to the test platform:

```
scp blinky root@snoopy:.
```

Step 4: Run the test program on the test platform:

```
ssh root@snoopy
./blinky
```

The LED should begin flashing once a second, until you press **CONTROL-C**.