MuntsOS Embedded Linux

Application Note #14: BASIC LED Flash Example

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Introduction

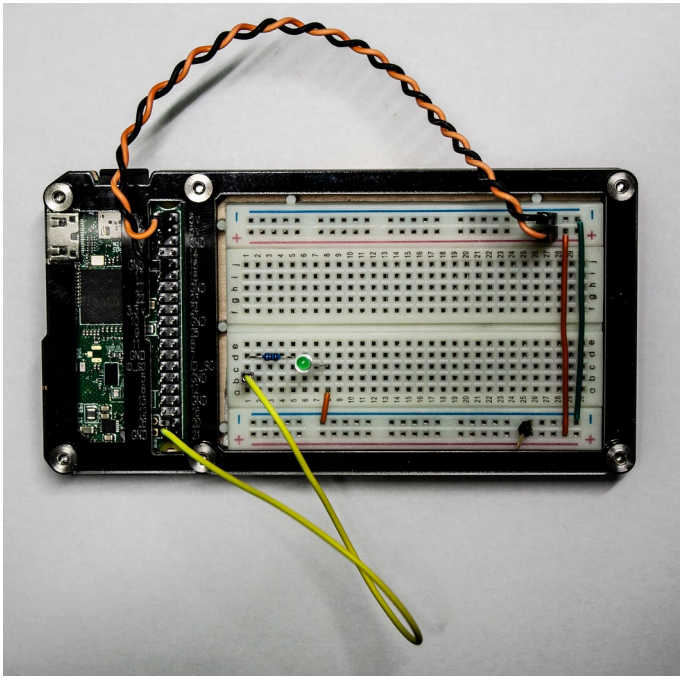
This application note describes how to run a BASIC program using ***MY-BASIC*** (https://github.com/paladin-t/my_basic) to flash an LED on a target computer running ***MuntsOS Embedded Linux***.

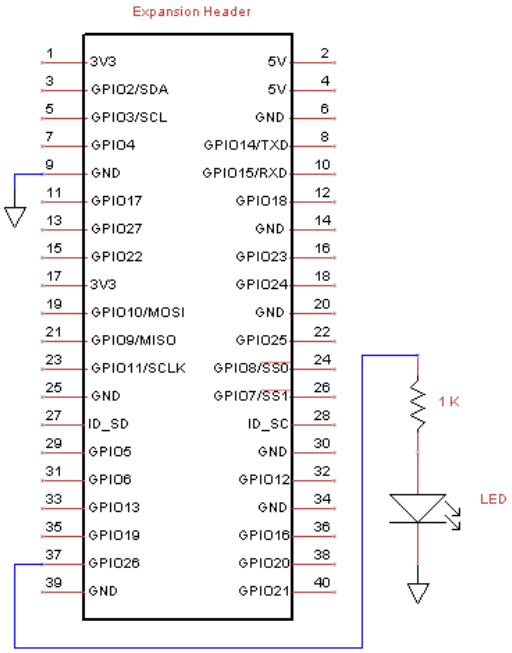
Prerequisites

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

The ***MY-BASIC*** interpreter MuntsOS extension package **`mybasic-muntsos-RaspberryPi1.deb`** must be installed on the target computer.

Test Platform Hardware





The test platform for the purposes of this application note consists of a Raspberry Pi Zero 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 jumber connects **`GPIO26`** to a 1 K ohm current limiting resistor and an LED.

Test Program Source Code

Available for download at: http://git.munts.com/muntsos/doc/.blinky/blinky.bas

```
print "MuntsOS LED Test";;

' Open the GPIO output

fd = libsimpleio.gpio_open(0, 26, 1, 0)

' Flash the LED

while true
  libsimpleio.gpio_write(fd, NOT libsimpleio.gpio_read(fd))
  delay(500000)
wend
```

Exercise

This example exercise demonstrates how to create a ***MY-BASIC*** program and run it on the test platform hardware.

Step1: Download the source program **`blinky.bas`**:

```
wget http://git.munts.com/muntsos/doc/.blinky/blinky.bas
```

Step 2: Copy **`blinky.bas`** to the test platform:

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

Step 3: Run the test program on the test platform:

```
ssh root@snoopy
basic blinky.bas
```

The LED should begin flashing once a second.