

Unit ExtEncoder

Example

Acquisition of external encoder and meter values

The diagram shows a Scratch-style block structure. A 'Setup' block contains 'extencoder_0' and 'Init device I2C address' with a value of '0x59'. A 'Loop' block contains three 'print' blocks. The first 'print' block concatenates 'encoder: ' with 'extencoder_0' and 'Get encoder pulse count value'. The second 'print' block concatenates 'meter: ' with 'extencoder_0' and 'Get meter pulse count value'. The third 'print' block concatenates 'string meter ' with 'extencoder_0' and 'Get string meter pulse count value'.

```
from m5stack import *
from m5ui import *
from uiflow import *
import unit

setScreenColor(0x222222)
extencoder_0 = unit.get(unit.EXT_ENCODER, unit.PORTA)

extencoder_0.init_i2c_address(0x59)
while True:
    print((str('encoder:') + str((extencoder_0.get_encoder_value()))))
    print((str('meter:') + str((extencoder_0.get_meter_value()))))
    print((str('string meter') + str((extencoder_0.get_str_meter_value()))))
    wait_ms(2)
```

API

The diagram shows a single Scratch-style block: 'extencoder_0' and 'Init device I2C address' with a value of '0x59'.

```
extencoder_0.init_i2c_address(0x59)
```

- Create an ExtEncoderUnit object

The diagram shows a single Scratch-style block: 'extencoder_0' and 'Get device firmware version'.

```
print(extencoder_0.get_firmware_status())
```

- Retrieve the firmware version of the ExtEncoderUnit object

extencoder_0 ▾ Get encoder pulse count value

```
print(extencoder_0.get_encoder_value())
```

- Get the encoder pulse count value

extencoder_0 ▾ Get meter pulse count value

```
print(extencoder_0.get_meter_value())
```

- Get the meter value of the ExtEncoderUnit object. Unit: millimeters

extencoder_0 ▾ Get perimeter value

```
print(extencoder_0.get_perimeter_value())
```

- Get the circumference of the ExtEncoderUnit object. Unit: millimeters

extencoder_0 ▾ Get pulse per cycle value

```
print(extencoder_0.get_pulse_value())
```

- Get the pulses per revolution value

extencoder_0 ▾ Get string meter pulse count value

```
print(extencoder_0.get_str_meter_value())
```

- Get the string representation of the meter pulse count value

extencoder_0 ▾ Get zero pulse count value

```
print(extencoder_0.get_zero_counter_value())
```

- Get the zero mode of the ExtEncoderUnit object

extencoder_0 ▾ Get Z trigger mode

```
print(extencoder_0.get_z_trigger_mode())
```

- Transition to Z-trigger mode

extencoder_0 ▾ Reset encoder and meter count value

```
extencoder_0.reset_encoder()
```

- Reset the encoder and meter count values

extencoder_0 ▾ Set device I2C slave address 0x59

```
extencoder_0.set_i2c_address(0x59)
```

- Set the device I2C slave address

extencoder_0 ▾ Set perimeter value 1000

```
extencoder_0.set_perimeter_value(1000)
```

- Set peripheral values

extencoder_0 ▾ Set pulse per cycle value 1000

```
extencoder_0.set_pulse_value(1000)
```

- Set the pulses per revolution value

extencoder_0 ▾ Set zero pulse pulse count value 0

```
extencoder_0.set_zero_counter_value(0)
```

- Set the total zero pulse value for the object

extencoder_0 ▾ Set clear count Z trigger mode NOT CLEAR ▾

```
extencoder_0.set_z_trigger_mode(0)
```

- Set the clear Z-trigger mode

- NOT CLEAR
- Z-RISING EDGE
- Z-FALLING EDGE