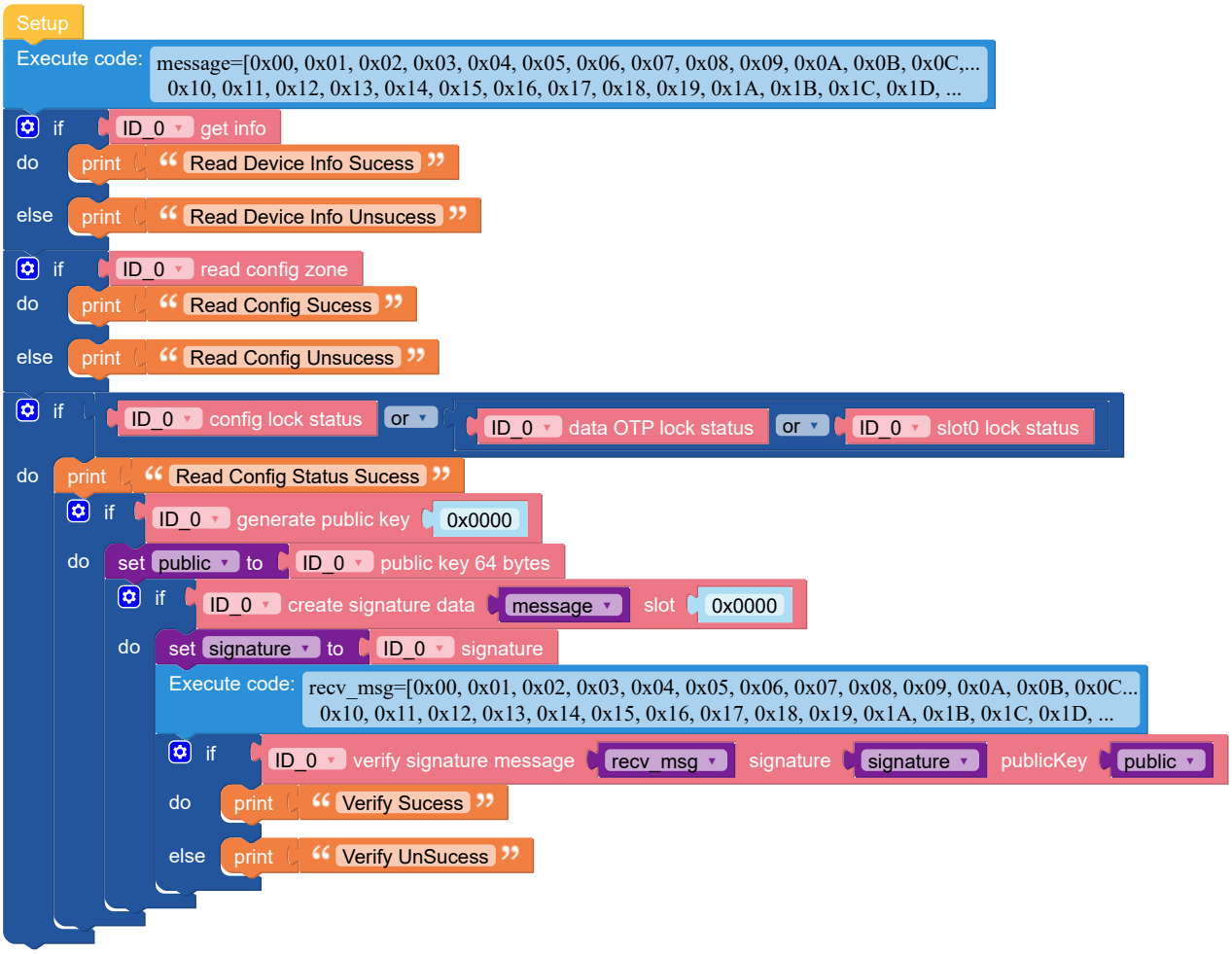
Unit ID

Example

Generate the public key, create the message signature and verify the signature



```
from m5stack import *
from m5stack_ui import *
from uiflow import *
import unit

screen = M5Screen()
screen.clean_screen()
screen.set_screen_bg_color(0xFFFFFF)
ID_0 = unit.get(unit.ID, unit.PORTA)


public = None
signature = None
message = None
recv_msg = None

message=[0x00, 0x01, 0x02, 0x03, 0x04, 0x05, 0x06, 0x07, 0x08, 0x09, 0x0A, 0x0B, 0x0C,
0x0D, 0x0E, 0x0F,
  0x10, 0x11, 0x12, 0x13, 0x14, 0x15, 0x16, 0x17, 0x18, 0x19, 0x1A, 0x1B, 0x1C, 0x1D, 0x1E,
0x1F]
if ID_0.get_info():
  print('Read Device Info Sucess')
else:
  print('Read Device Info Unsucess')
if ID_0.readConfigZone():
  print('Read Config Sucess')
else:
  print('Read Config Unsucess')
if (ID_0.configLockStatus) or (ID_0.dataOTPLockStatus) or (ID_0.slot0LockStatus):
  print('Read Config Status Sucess')
  if ID_0.generatePublicKey(0x0000):
    public = ID_0.publicKey64Bytes
    if ID_0.createSignature(message, 0x0000):
      signature = ID_0.signature
      recv_msg=[0x00, 0x01, 0x02, 0x03, 0x04, 0x05, 0x06, 0x07, 0x08, 0x09, 0x0A, 0x0B,
0x0C, 0x0D, 0x0E, 0x0F,
        0x10, 0x11, 0x12, 0x13, 0x14, 0x15, 0x16, 0x17, 0x18, 0x19, 0x1A, 0x1B, 0x1C, 0x1D,
0x1E, 0x1F]
      if ID_0.verifySignature(recv_msg, signature, public):
        print('Verify Sucess')
      else:
        print('Verify UnSucess')
```

API

```
print((str('status:') + str((ID_0.configLockStatus))))
```

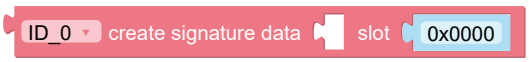
- Retrieve configuration lock status


```
print(ID_0.configZone)
```

- Read configuration parameter region


```
print((str('new key pair:') + str((ID_0.createNewKeyPair(0x0000)))))
```

- Get generated key pair

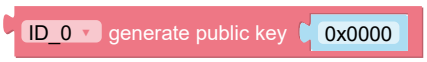



```
print((str('create signature:') + str((ID_0.createSignature(, 0x0000)))))
```

- Retrieve digital signature data


```
print((str('status:') + str((ID_0.dataOTPLockStatus))))
```

- Check OTP data status




```
print((str('public key:') + str((ID_0.generatePublicKey(0x0000)))))
```

- Get generated public key


```
print(ID_0.get_info())
```

- Read chip basic information


```
print(ID_0.KeyConfig)
```

- Configure permissions for key storage slot


```
print(ID_0.lock_config())
```

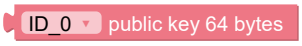
- Retrieve lock configuration details


```
print(ID_0.lockDataAndOTP())
```

- Read locked OTP data


```
print(ID_0.lockDataSlot0())
```

- Check locked data slot status




```
print((str('key:') + str((ID_0.publicKey64Bytes))))
```

- Get 64-byte public key in ECC-P256 format


```
print(ID_0.random_min_max(0, 0))
```

- Generate range-restricted random number


```
print(ID_0.readConfigZone())
```

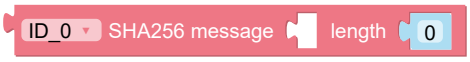
- Extract current security parameters from configuration zone


```
print(ID_0.revisionNumber)
```

- Read chip firmware version


```
print(ID_0.serialNumber)
```

- Read chip unique serial number (UID)




```
print((str('sha256 message:') + str((ID_0.sha256(, 0)))))
```

- Get data length for hardware-accelerated SHA-256 hashing


```
print(ID_0.signature)
```

- Retrieve digital signature


```
print(ID_0.SlotConfig)
```

- Read storage slot configuration


```
print((str('status:') + str((ID_0.slot0LockStatus))))
```

- Check storage slot status


```
print(ID_0.updateRandom32Bytes())
```

- Get updated 32-byte data block


```
print((str('create message:') + str((ID_0.verifySignature(, , )))))
```

- Retrieve signature verification data


```
print(ID_0.wakeup())
```

- Check wake-up status


```
print(ID_0.writeConfigZone())
```

- Read configuration zone write data