

Very simple MicroPython demo:

```
# ghmicro.com
```

```
# AHT21B temperature/humidity sensor - 1.3" OLED display
```

```
import time
from machine import I2C, Pin
import sh1106
```

```
i2c = machine.I2C(1,freq=400000)
display = sh1106.SH1106_I2C(128,64,i2c)
```

```
tri = bytearray(3)
six = bytearray(6)
```

```
def write3(one,two,three):
    tri[0] = one
    tri[1] = two
    tri[2] = three
    i2c.writeto(0x38,tri)
```

```
while 1:
```

```
    write3(0xac,0x33,0x00)      #trigger measurement
    pyb.delay(80)               #wait for measurement
    #should check status here, but delay is long enough
    six = i2c.readfrom(0x38,6)  #read 6 bytes of measurement
```

```
    display.fill(0)            #clear framebuffer
```

```
    #convert temperature
```

```
    i = ((six[3] & 0x0f) << 16) | (six[4] << 8) | six[5]
    temperature_c = ((i / 1048576) * 200) - 50
    temperature_f = ((temperature_c * 9) / 5) + 32
    display.text(str(temperature_f) + "F", 0, 0, 1) #print temp to framebuffer
```

```
    #convert humidity
```

```
    i = ((six[1] << 16) | (six[2] << 8) | six[3]) >> 4
    humidity = (i / 1048576) * 100
    display.text(str(humidity) + "%",0,15,1)      #print humidity to
```

```
framebuffer
```

```
    display.show()              #write framebuffer to screen
```

```
    pyb.delay(2000)             #wait 2 seconds and go again
```