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/*
* Demo   : ET-SENSOR BME280
*       : I2C Interface Sensor
* MCU    : ATMEGA32U4
*       : Arduino Leonardo
* I2C    : BME280 (I2C:SCL=D3,SDA=D2)
*/

#include <Wire.h>
#include<Adafruit_Sensor.h>
#include<Adafruit_BME280.h>

//=====
Adafruit_BME280 bme280;                                     // I2C
//=====

#define SEALEVELPRESSURE_HPA (1013.25)
float bme280_temperature;
float bme280_humidity;
float bme280_pressure;
float bme280_altitude;
bool  bme280_status;
//=====
unsigned long lastGetI2CSensorTime = 0;
//=====

void setup()
{
  Serial.begin(115200);
  // Wait MEGA32U4 USB Serial Complete
  while(!Serial);
  Serial.println();
  Serial.println("BME280 I2C(0x76) Test");

  bme280_status = bme280.begin(0x76);
  if(!bme280_status)
  {
    Serial.println("Initial BME280...Error");
    while(1);
  }
  Serial.println("Initial BME280...Complete");
  Serial.println();
}

void loop()
{
  //=====
  // Start of Read I2C Sensor(BME280)
  //=====
  if(millis() - lastGetI2CSensorTime > 5000ul)           // 5-Second

```

```
{
  bme280_temperature = bme280.readTemperature();           // *C
  bme280_humidity     = bme280.readHumidity();             // %RH
  bme280_pressure     = bme280.readPressure() / 100.0F;   // hPa
  bme280_altitude    = bme280.readAltitude(SEALEVELPRESSURE_HPA); // m
  //
  Serial.print("BME280 Temperature = ");
  Serial.print(bme280.readTemperature());
  Serial.println(" *C");

  Serial.print("BME280 Pressure = ");
  Serial.print(bme280.readPressure() / 100.0F);
  Serial.println(" hPa");

  Serial.print("BME280 Approx. Altitude = ");
  Serial.print(bme280.readAltitude(SEALEVELPRESSURE_HPA));
  Serial.println(" m");

  Serial.print("BME280 Humidity = ");
  Serial.print(bme280.readHumidity());
  Serial.println(" %");

  Serial.println();
  //=====
  lastGetI2CSensorTime = millis();
  //=====
}
}
```