#include "mm32g0001.h"

#include <stdint.h>

#include <stdbool.h>

#include <stdio.h>

#include "as6221.h"

#include <platform.h>

void AS6221\_Init(uint8\_t addr, as6221\_config\_t conf) {

 device\_address = addr;

 device\_conf = conf;

 AS6221\_UpdateDevice(conf);

}

double AS6221\_GetTemp() {

 static uint8\_t rec[2] ;

 //I2C\_Read(rec,AS6221\_DEFAULT\_ADDRESS, AS6221\_REG\_TVAL,2);

 // Calculate before comma

 uint8\_t t1 = rec[0] << 1;

 t1 |= (rec[1] >> 7);

 // Calculate after comma

 uint8\_t t2 = rec[1] << 1;

 t2 = t2 >> 1;

 // Add together

 double t = t2 \* 0.0078125;

 t += t1;

 printf("temp=%f rec[0]=%d rec[1]=%d\r\n",t,rec[0],rec[1]);

 return 0;

}

void AS6221\_SetAlertLimits(uint16\_t low, uint16\_t high) {

 uint8\_t data[3] = {AS6221\_REG\_TLOW, (uint8\_t)(low >> 1), (uint8\_t)(low << 7)};

 // I2C\_Write(data, 3);

 data[0] = AS6221\_REG\_THIGH;

 data[1] = (uint8\_t)(high >> 1);

 data[2] = (uint8\_t)(high << 7);

 // I2C\_Write(data, 3);

}

void AS6221\_SleepMode() {

 device\_conf.state = AS6221\_STATE\_SLEEP;

 AS6221\_UpdateDevice(device\_conf);

}

void AS6221\_CcMode() {

 device\_conf.state = AS6221\_STATE\_ACTIVE;

 AS6221\_UpdateDevice(device\_conf);

}

void AS6221\_TriggerSingleShot() {

 device\_conf.singleShot = 1;

 AS6221\_UpdateDevice(device\_conf);

 device\_conf.singleShot = 0;

}

void AS6221\_UpdateDevice(as6221\_config\_t conf) {

 uint16\_t c = conf.cr | conf.alert\_mode | conf.alert\_polarity | conf.cf | conf.state;

 if (conf.singleShot) {

 c |= AS6221\_SINGLE\_SHOT;

 }

 uint8\_t data[3] = {AS6221\_REG\_CONFIG, (uint8\_t)(c >> 8), (uint8\_t)c};;

 //I2C\_Write(data, 3);

}