#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);

}