Examples of GPS

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Contents

Example of GPS

Revision history

Revision	Date	Description
0.1	2017.03.06	Initial release
200	2017.04.14	Add gps function(get_lastLocation)
201	2017.04.18	Add function set_cn0_current_savetime_enable(...)
202	2017.04.25	Add function : gps_tracking_set_interval(...) / gps_tracking_get_interval(...)

Example of GPS

1. Introduction

1.1 Purpose

The example of GPS documentation includes descriptions to help you understand and develop GPS in the module. It is provided for development purposes only and should always be tested with your design.

1.2 Build Target

- project file for uVersion

development₩sigfox_cfg2₩source_gps_example₩pca10040₩s132₩arm5_no_packs ₩GPS_example_keil.uvprojx (use Keil_v5)

development₩sigfox_cfg2₩source_gps_example₩pca10040₩s132₩arm5_no_packs ₩GPS_example_gcc.uvprojx (use gcc)

- Example C files

development₩sigfox_cfg2₩source_gps_example₩GPS_example_main.c

2. Common Initialize

```
#include "cfg_gps_module.h"
.....
// Initalize for GPS module(initializing gpio of gps)
    gps_init();
```

3. GPS acquisition request examples

```
int main(void){

...

// Initalize for GPS module(initializing gpio of gps)
    gps_init();

//set gps tracking interval time
    gps_sec = 60; // sec
    gps_tracking_set_interval(module_parameter_item_gps_tracking_time_sec, gps_sec);

//get gps tracking timeout
    tracking_time = gps_tracking_get_interval(module_parameter_item_gps_tracking_time_sec);
    cPrintLog(CDBG_MAIN_LOG, "GPS get Tracking time[%d] ₩n", tracking_time);

// set enable/disable of gps C/N0 check(save current consumption)
    set_cn0_current_savetime_enable(module_parameter_item_gps_cn0_current_savetime_enable,
CGPS_CNO_CHECK_DISABLE);

// nmea data request of gps tracking
    result = start_gps_tracking();
    if(result == CGPS_Result_OK)
    {
// get last location (gps position fixed)
        result = get_lastLocation(&ns, &latitude, &ew, &longitude);
        if(result == CGPS_Result_OK)
        {
// success of get gps data
            cPrintLog(CDBG_MAIN_LOG, "GPS Position NS[%s]₩n", ns);
            cPrintLog(CDBG_MAIN_LOG, "GPS Position Latitude[%s]₩n", latitude);
            cPrintLog(CDBG_MAIN_LOG, "GPS Position EW[%s]₩n", ew);
            cPrintLog(CDBG_MAIN_LOG, "GPS Position Longitude[%s]₩n", longitude);
        }
        else
        {
// no gps data
            cPrintLog(CDBG_MAIN_LOG, "GPS Module NoData!₩n");
```

```
            }
        }
        else if(result == CGPS_Result_NoData)
        {
// no gps data
            cPrintLog(CDBG_MAIN_LOG, "GPS Module NoData!₩n");
        }
        else if(result == CGPS_Result_NotStarted)
        {
// gps C/N0 dB-Hz check
            cPrintLog(CDBG_MAIN_LOG, "GPS C/N0 dB-Hz Low!₩n");
        }
        else if(result == CGPS_Result_Fix_Fail)
        {
// position fix fail
            cPrintLog(CDBG_MAIN_LOG, "GPS Tracking Fail!₩n");
        }
        else
        {
// not available GPS
            cPrintLog(CDBG_MAIN_LOG, "Not Available GPS Module!₩n");
        }
```

Result