Cellocator
Hardware Types IDs
Application Notes

Proprietary and Confidential

Version 1.0

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1 Introduction

The current hardware ID representation method of Cellocator units limits the total number of available products. This document describes the new, backward compatible, Hardware ID representation system that expands the range of hardware ID codes. The new method will be implemented on future products, starting with the CelloTrack nano.

1.1 Definitions, Acronyms and Abbreviations

Name	Description

1.2 References and Bibliography

No.	Document Name	Number	Version	Date	Location
1					
2					

1.3 Revision History

Version number	Date	Description
1.0	November 9, 2014	First version

2 Hardware IDs Representation

2.1 Hardware ID Overview

The Hardware ID is one of the main identifiers of a Cellocator unit. It is used in the following ways:

- On any message from the unit to the server (i.e. byte 13 on message type 0).
- As part of the firmware file name (i.e. F046A_PCello**HW24**_Telit3-Automotive_STM32RCT6_S512_31x_Ar.csf).
- As part of the PL file name (i.e. **hw_24**_fw_31x_Cello-F_V324.PL).
- Displayed to the user by the Evaluation Suite applications (i.e. by activating the Platform Manifest query).
- Used as an integral part of the Cellocator+ maintenance application.

2.2 Current Representation Method for Hardware IDs

The current representation method utilizes the Unit Hardware ID byte (byte no. 13 in message type 0), which is comprised of PCB Type and Modem Type. The 8 bits representing the Unit Hardware ID are divided into two fields: the *PCB type* (bits 0 to 4, total 5 bits) and the *Modem type* (Bits 5 to 7, total 3 bits). The fields are partitioned as follows:

Unit Hardware ID							
Modem Type Code			Unit PCB Type code				
7	6	5	4	3	2	1	0

Currently the PCB Type code is used as the HW ID for the PL file name, FW file name and the Evaluation Suite. For example, the Cello Telit HW ID is 24 and the Cello Cinterion is 25.

The fact that seven possible modem type codes (3 Bits represent 7 possible combinations) are automatically allocated for each Unit PCB type has created many unused Hardware ID codes.

2.3 New Representation Method for Hardware IDs

The new method ensures the Hardware ID is identified as 8 bits rather than a composition of PCB type code and Modem type code, allowing 256 Hardware IDs.

The following table describes the historical and available products with both representation methods:

Unit HW ID (8 Bits)	PCB Type (5 Bits)	Product Name	Modem Code (3 Bits)	Modem Type
225	1	CR300	7	GE864-QUAD-V2
2	2	CFE	0	No Modem
35	3	Olympic	1	No Modem - Tetra/Astro ext modem
4	4	Compact Fleet	0	Sony/Erickson GR47
36	4	Compact Fleet	1	Enfora Enabler II-G
68	4	Compact Fleet	2	Telit GE864
100	4	Compact Fleet	3	Telit GE864, mute support
5	5	Compact Security	0	Sony/Erickson GR47
37	5	Compact Security	1	Enfora Enabler II-G
69	5	Compact Security	2	Telit GE864
101	5	Compact Security	3	Telit GE864, mute support
39	7	Compact CAN 8 Sensor	1	Enfora Enabler II-G
71	7	Compact CAN	2	Telit GE864
199	7	Compact CAN TOB	6	Telit GE864, automotive
9	9	370-50	0	Sony/Erickson GR47
105	9	370-50	3	Telit GE864, mute support
170	10	CelloTrack 1 Output	5	Enfora 3
235	11	CR300B	7	GE864-QUAD-V2
172	12	CelloTrack	5	Enfora III
78	14	Cello-IQ GNSS	2	GE910 QUAD V3
209	17	Compact CAN TOB	6	Telit GE864, automotive
18	18	CelloTrack T (2G)	0	Telit GE910 QUAD
82	18	CelloTrack T (3G)	2	Telit HE910 NAD

Unit HW ID (8 Bits)	PCB Type (5 Bits)	Product Name	Modem Code (3 Bits)	Modem Type
19	19	CelloTrack Power T (2G)	0	Telit GE910 QUAD
83	19	CelloTrack Power T (3G)	2	Telit HE910 NAD
20	20	Cello-CANiQ (NA)	0	UE910 NAR
52	20	Cello-CANiQ (EU)	1	UE910 EUR
84	20	Cello-CANiQ (2G)	2	GE910 QUAD V3
182	22	compact EOB	5	Enfora III
183	23	CelloTrack Power	5	Enfora III
216	24	Cello (Telit)	6	Telit GE864, automotive
249	25	Cello Cinterion	7	Cinterion BGS3
220	28	Compact TOB	6	Telit GE864, automotive
221	29	CR200	6	Telit GE864, automotive
222	30	CR200B	6	Telit GE864, automotive
223	31	Cello-IQ	6	Telit GE864, automotive

The PL and firmware files for these units are available and will not be changed. New firmware or PL files for these products will be named according to the old HW type convention.

The PL and firmware files of future units, starting with the CelloTrack nano, will be named in accordance with the new convention, using the Unit Hardware ID and not the PCB Type.

The Evaluation Suite presentation of the HW ID of the existing units, which are defined in the table above, will not be changed but future units will be presented using the new method.

The wireless protocol is not changed since the same byte is still used for the Hardware ID representation; the meaning of that information is changed in accordance with the new method.

The *Cellocator Wireless Communication Protocol* document was modified to include the new method of representation.

The Cellocator+ will be backward compatible and support new products in accordance with the new methods.

2.4 SW Developer Guide

Application developers can use either the old presentation method or the new one for existing units, as specified in the table in the previous section. The HW IDs for future products must be derived according to the new presentation method.

An updated Hardware ID table defining the HW ID of each unit type can be found in the *Unit's Hardware, Firmware and Protocol Versions* section of the *Cellocator Wireless Communication Protocol* document.