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**GloT End Node (0x03) Format -
Software Design Document**

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1 Introduction

1.1 Purpose

Sales and FAE may be required to provide the uplink format to customers or the Cloud Team. This document defines the uplink format of each type of GloT end device.

1.2 Scope

Defines the uplink format of each type of GloT end device. This document also defines the function of the data if the data needs to be transferred to meaningful format.

2. Technology Keyword

GPS: Global Positioning System

3. Data Format

Items	System ID	FPort	Node	Production Description
3.1	0x3	0x05	BOPI Manhole	Manhole Detector G-Sensor

3.1 BOPI Manhole

Start Address	Definition	Length(byte)	Description
0	Alert	1	Refer to table 1 *
1	Battery voltage	1	Value divided by 10
2	Temperature	1	From -127 through +127
3	G-Sensor 3-axis	6	Value multiplied by 1000

* Table 1

Bit	Definition	Description
0	Status	0 is close, 1 is open
1	Alert	0 is keep-alive, 1 is G-sensor alert
2	Calibration	0 is calibration passed, 1 is calibration failed
3	Voltage	0 is normal, 1 is low battery
4	N/A	

5	N/A	
6	N/A	
7	N/A	

* Table 2 Error Code

[bit7, bit6, bit5]	Definition
[0 0 0]	noError
[0 0 1]	hardFault
[0 1 0]	memManage
[0 1 1]	busFault
[1 0 0]	usageFault
[1 0 1]	mallocFail
[1 1 0]	stackOverflow

4. References

[1]