

# Device Statistics – Free-Fall

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T13 Technical Proposal – e06182r8

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**A.5 Device Statistics (Log Address TBD)**

**A.5.1 Device Free-Fall Statistics (Page TBD)**

**Comment [J1]:** Add definition to the definition section: section 3.1  
 Shock: a sudden and violent blow or impact.  
 Free fall: the condition of unrestrained motion in a gravitational field.

**A.5.1.1 Overview**

Device Statistics log page 2 contains device free-fall information about the device as described in table TBD.

The summary of this usage statistics is as followed:

- a) Structure Version;
- b) Number of Free-Fall Events Detected; and
- c) Number of Shock Events Detected Where the Magnitude Exceeds Maximum Rating.

**Table TBD – Free-Fall Statistics**

Offset	Type	Content								
0-7	QWord	Structure Version								
		<table border="0"> <tr> <td style="text-align: right;"><b>Bit</b></td> <td><b>Meaning</b></td> </tr> <tr> <td style="text-align: right;">63:56</td> <td>Device Statistics Flags, (See Table TBD)</td> </tr> <tr> <td style="text-align: right;">55:24</td> <td>Reserved</td> </tr> <tr> <td style="text-align: right;">23:16</td> <td>TBD, Page Number</td> </tr> <tr> <td style="text-align: right;">15:0</td> <td>Device Statistics Version Number = 0001h</td> </tr> </table>	<b>Bit</b>	<b>Meaning</b>	63:56	Device Statistics Flags, (See Table TBD)	55:24	Reserved	23:16	TBD, Page Number
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23:16	TBD, Page Number									
15:0	Device Statistics Version Number = 0001h									
8-15	QWord	Number of Free-Fall Events Detected								
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63:56	Device Statistics Flags, (See Table TBD)									
55:32	Reserved									
31:0	Number of Shock Events Detected Where the Magnitude Exceeds Maximum Rating (DWord)									
24-511	Byte	Reserved								

**A.5.1.2 Structure Version**

**A.5.1.2.1 Description**

Structure Version defines the version of the data structure arrangement for this page.

Bits 23:16 are the page number of the Log Page. Bit 15:0 is the revision number of the statistics structure.

**A.5.1.2.2 Update Interval**

NA

**A.5.1.2.3 Measurement Unit**

NA

**A.5.1.2.4 Initialization**

Structure Version shall be set to 0001h.

**A.5.1.3 Number of Free-Fall Events Detected**

**A.5.1.3.1 Description**

The Number of Free-Fall Events Detected statistic is a counter that records the number of free-fall events detected by the device. This statistic is incremented by one for each free-fall event detected.

**A.5.1.3.2 Update Interval**

When the device is operational this statistic is updated and stored in a non-volatile location at a maximum interval of one hour.

**A.5.1.3.3 Measurement Unit**

Events

**A.5.1.3.4 Initialization**

This statistic shall be cleared to zero at the time of manufacture.

**A.5.1.4 Number of Shock Events Detected Where the Magnitude Exceeds Maximum Rating**

**A.5.1.4.1 Description**

The Number of Shock Events Detected Where the Magnitude Exceeds Maximum Rating statistic is a counter that records the number of shock events detected by the device with the magnitude higher than the maximum rating of the device. This statistic is incremented by one for each event detected.

**A.5.1.4.2 Update Interval**

When the device is operational this statistic is updated and stored in a non-volatile location at a maximum interval of one hour.

**A.5.1.4.3 Measurement Unit**

Events

**A.5.1.4.4 Initialization**

This statistic shall be cleared to zero at the time of manufacture.