

Proposal for the Device Statistic Information Additions Device Freefall Statistics Group

To: T13 Technical Committee
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This document shows the list of candidates of device freefall statistic information to be included in the Device Statistic Information Log. Each of the candidates will be reviewed and included in the standard after approval. Supporting of each of the item on the list is optional.

Summary of Device Statistic Information Candidates:

1. Device Statistic Information Header
2. Total Number of Freefall Events Detected by The Device (Lifetime)
3. Total Number of Freefall Events Detected by The Device (Since the last power on reset was processed)
4. Number of Freefall Events was Detected by the Threshold Setting while Media Spinning but Heads in Safe Position (Lifetime)
5. Number of Freefall Events was Detected While Media Spinning but Heads in Safe position (Since the last power on reset was processed)
6. Number of Freefall Events Detected Where the Magnitude of the Event Exceeds the Maximum Rating of the Device (Lifetime)
7. Number of Warning Freefall Events (Lifetime)

Freefall Event: An acceleration event that causes the device to initiate self-protection.

Device Statistic Information Table

Byte Offset	Bit	8. Description
0		Device Statistic Information Header
		Description: Device Statistic revision information Updated: when T13 decide to make a new revision to this structure Units: unsigned integer Initialized: 0001h
	63:48	Revision number
	47:0	Reserved

*8		Total Number of Freefall Events Detected by The Device (Lifetime)
		Description: This counter is incremented by one when a Freefall event is detected
		Update Criteria: When event occurs
		Measurement Units: Freefall events
		Initialization: Cleared to zero at the factory
	63	
62:56	Reserved	
55:32	Reserved	
31:0	Unsigned DWORD	Total Number of Freefall Events Detected by The Device (Lifetime)
*8		Total Number of Freefall Events Detected by The Device (Since the last power on reset was processed)
		Description: This counter is incremented by one when a Freefall event is detected
		Update Criteria: When event occurs
		Measurement Units: Freefall events
		Initialization: Cleared to zero at power on reset is processed by the device
	63	1: Counter Supported
62:56	Reserved	
55:32	Reserved	
31:0	Unsigned DWORD	Total Number of Freefall Events Detected by The Device (Since the last power on reset was processed)
*8		Number of Freefall Events was Detected by the Threshold Setting while Media Spinning but Heads in Safe Position (Lifetime)
		Description: —
		Updated: —
		Units: — unsigned integer
		Initialized: — 0000h
	63	1: Counter Supported
62:56	Reserved	Detected Triggered by the Threshold Setting
55:32	Reserved	
31:0	Number of Freefall Events was Detected by the Threshold Setting while Media Spinning but Heads in Safe Position (Lifetime)	
*8		Number of Freefall Events was Detected While Media Spinning but Heads in Safe position (Since the last power on reset was processed)
		Description: —
		Updated: —
		Units: — unsigned integer
		Initialized: — 0000h
	63	1=valid statistic data
62:56	Reserved	
55:32	Reserved	
31:0	Number of Freefall Events was Detected While Media Spinning but Heads in Safe position (Since the last power on reset was processed)	

*8		Number of Freefall Events Detected Where the Magnitude of the Event Exceeds the Maximum Rating of the Device (Lifetime)
		Description: the device internal setting determine the level of the freefall event is in a high level that might cause data error to occur
		Updated:
		Units: unsigned integer
		Initialized: 0000h
	63	1=valid statistic data
	62:56	Reserved
	55:32	Reserved
	31:0	Number of High Freefall Events (Lifetime)
*8		Number of Warning Freefall Events (Lifetime)
		Description: the device internal setting determine the level of the freefall event is in a warning level that might cause data error to occur
		Updated: _____
		Units: _____ unsigned integer
		Initialized: _____ 0000h
	63	1=valid statistic data
	62:56	Reserved
	55:32	Reserved
	31:0	Number of Warning Freefall Events (Lifetime)