Device Statistics – Temperature

T13 Technical Proposal – e06183r7

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Revision 7, 2008-06-05

[This document is a proposal for the T13 to describe the Device Statistics for the device to report. The device temperature statistics is the information for the collected temperature information in the device. The statistics supported are optional, and only applicable to the applicable devices.]

A.5 Device Statistics (Log Address TBAh)

A.5.1 Overview

The Device Statistics log contains selected statistics about the device. This log shall be read-only, and shall only be accessed via the GPL feature set. This log is supported if there is a non-zero length for log address TBAh in the General Purpose Log Directory. The format of the data is defined in table TBA. If the Device Statistics log is supported, only the Structure Version field is required. Each statistic is composed of a 1-byte flag field and a value field. If the bit 7 of the flag field is set to one then the value field of that statistic is valid. Each statistic shall be a multiple of 8 bytes long. The number of log pages may be greater than one.

A.5.2 Device Temperature Statistics (Page TBA)

A.5.2.1 Overview

Device Statistics log page TBA contains general information about the device as described in table TBA. The value in the temperature field is a two's complement integral in degrees Celsius.

The summary of this temperature statistics is as followed:

1. Structure Version
2. Current Device Temperature
3. Average Device Temperature (Lifetime)
4. Average Short Term Device Temperature
5. Average Device Temperature for the Past 1008-Hour
6. Highest Device Temperature Ever (Lifetime)
7. Lowest Device Temperature Ever (Lifetime)
8. Highest Short Term Average Temperature (Lifetime)
9. Lowest Short Term Average Temperature (Lifetime)
10. Highest Average 1008-Hour Temperature (Lifetime)
11. Lowest Average 1008-Hour Temperature (Lifetime)

Table TBA – Temperature Statistics

Offset	Type	Content
0-7	QWord	Structure Version
		Bit **Meaning** 63:56 Reserved 55:48 Device Statistics Version Number = 0001h 47:16 Reserved 15:0 TBAh, Page Number
8-15	QWord	Current Device Temperature
		Bit **Meaning** 63 1 = Counter supported, 0 = Counter not supported 62:56 Reserved for flags 55:32 Reserved 31:0 Current Device Temperature
16-23	QWord	Average Device Temperature (Lifetime)

		Bit **Meaning** 63 1 = Counter supported, 0 = Counter not supported 62 1 = Value is valid, 0 = Value is not valid (first sample has not taken) 61:56 Reserved for flags 55:32 Reserved 31:0 Average Device Temperature (Lifetime)
24-31	QWord	Average Short Term Device Temperature
		Bit **Meaning** 63 1 = Counter supported, 0 = Counter not supported 62 1 = Value is valid, 0 = Value is not valid (less than 144 samples taken) 61:56 Reserved for flags 55:8 Reserved 7:0 Average Short Term Device Temperature
32-39	QWord	Average Device Temperature for the Past 1008-Hour
		Bit **Meaning** 63 1 = Counter supported, 0 = Counter not supported 62 1 = Value is valid, 0 = Value is not valid (less than 1008 hours of samples taken) 62:56 Reserved for flags 55:8 Reserved 7:0 Average Device Temperature for the Past 1008-Hour
40-47	QWord	Highest Device Temperature Ever (Lifetime)
		Bit **Meaning** 63 1 = Counter supported, 0 = Counter not supported 62 1 = Value is valid, 0 = Value is not valid (first sample not taken) 61:56 Reserved for flags 55:8 Reserved 7:0 Highest Device Temperature Ever (Lifetime)
48-55	QWord	Lowest Device Temperature Ever (Lifetime)
		Bit **Meaning** 63 1 = Counter supported, 0 = Counter not supported 62 1 = Value is valid, 0 = Value is not valid (first sample not taken) 61:56 Reserved for flags 55:8 Reserved 7:0 Lowest Device Temperature Ever (Lifetime)
56-63	QWord	Highest Short Term Average Temperature (Lifetime)
		Bit **Meaning** 63 1 = Counter supported, 0 = Counter not supported 62 1 = Value is valid, 0 = Value is not valid (less than 24 hours of samples taken) 62:56 Reserved for flags 55:8 Reserved 7:0 Highest Short Term Average Temperature (Lifetime)
64-71	QWord	Lowest Short Term Average Temperature (Lifetime)

		Bit **Meaning** 63 1 = Counter supported, 0 = Counter not supported 62 1 = Value is valid, 0 = Value is not valid (less than 24 hours of samples taken) 62:56 Reserved for flags 55:8 Reserved 7:0 Lowest Short Term Average Temperature (Lifetime)
72-79	QWord	Highest Average 1008-Hour Temperature (Lifetime)
		Bit **Meaning** 63 1 = Counter supported, 0 = Counter not supported 62 1 = Value is valid, 0 = Value is not valid (less than 1008 hours of samples taken) 61:56 Reserved for flags 55:8 Reserved 7:0 Highest Average 1008-Hour Temperature (Lifetime)
80-87	QWord	Lowest Average 1008-Hour Temperature (Lifetime)
		Bit **Meaning** 63 1 = Counter supported, 0 = Counter not supported 62 1 = Value is valid, 0 = Value is not valid (less than 1008 hours of samples taken) 62:56 Reserved for flags 55:8 Reserved 7:0 Lowest Average 1008-Hour Temperature (Lifetime)
88-511	Byte	Reserved

A.5.2.2 Structure Version

A.5.2.2.1 Description

Structure Version defines the version of the data structure arrangement for this statistics. The structure is defined by the T13 committee. When a new structure is defined the version number will be assigned.

Bit 56:48 is used for the revision number of the statistics structure. Bit 15:0 is used for the page number of the Log Page for this statistics.

A.5.2.2.2 Update Interval

Update interval is not applicable to the Structure Version field.

A.5.2.2.3 Measurement Unit

Measurement unit is not applicable to the Structure Version field.

A.5.2.2.4 Initialization

Structure Version shall be initialized to the corresponding number at the time of manufacture.

A.5.2.3 Current Device Temperature

A.5.2.3.1 Description

Current Device Temperature is a value that records current device temperature measured by the device.

A.5.2.3.2 Update Interval

Current Device Temperature is measured and updated on the following events. When the device is operational the value is updated and stored in a non-volatile location at a minimum interval of one hour.

1. Update on Timer: Yes (= 1 hour)
2. Update on entering Standby state: Yes
3. Update on entering Sleep state: Yes
4. Update on Device Statistics Page Read: Yes

A.5.2.3.3 Measurement Units

Current Device Temperature is measured in the unit of degrees Celsius.

A.5.2.3.4 Initialization

Current Device Temperature reflects the current temperature of the device. There is no initialized value stored.

A.5.2.4 Average Device Temperature (Lifetime)

A.5.2.4.1 Description

Average Device Temperature (Lifetime) is a value that records the average lifetime device temperature by taking samples at a mean interval of 10 minutes. The value of average device temperature is only recorded when the device is in Active or Idle states.

A.5.2.4.2 Update Interval

Average Device Temperature (Lifetime) is updated on the following events. When the device is operational the counter is updated and stored in a non-volatile location at a minimum interval of one hour.

1. Update on Timer: Yes (= 1 hour)
2. Update on entering Standby state: Yes
3. Update on entering Sleep state: Yes
4. Update on Device Statistics Page Read: Yes

A.5.2.4.3 Measurement Units

Average Device Temperature (Lifetime) is measured in the unit of degrees Celsius.

A.5.2.4.4 Initialization

Average Short Term Device Temperature is not initialized at the time of manufacture. Until the device takes first sample the Value Valid bit (bit 62) is cleared to 0 and the data on bit 7:0 is not valid. After the first sample is taken the Value Valid bit is set to one and the temperature value on bit 7:0 is updated.

A.5.2.5 Average Short Term Device Temperature

A.5.2.5.1 Description

Average Short Term Device Temperature is a value that records the average of the most recent 144 temperature samples recorded at a mean interval of 10 min. These last 144 samples are accumulated to a 24 hours time period. The Average Short Term Device Temperature is calculated by averaging the last 144 temperature samples. Samples are only recorded when the device is in Active or Idle states.

A.5.2.5.2 Update Interval

Average Short Term Device Temperature is updated on the following events. When the device is operational the counter is updated and stored in a non-volatile location at a minimum interval of one hour.

5. Update on Timer: Yes (= 1 hour)
6. Update on entering Standby state: Yes
7. Update on entering Sleep state: Yes
8. Update on Device Statistics Page Read: Yes

A.5.2.5.3 Measurement Units

Average Short Term Device Temperature is measured in the unit of degrees Celsius.

A.5.2.5.4 Initialization

Average Short Term Device Temperature is not initialized at the time of manufacture. Until the device takes 144 samples the Value Valid bit (bit 62) is cleared to 0 and the data on bit 7:0 is not valid. After the 144 samples are taken the Value Valid bit is set to one and the temperature value on bit 7:0 is updated.

A.5.2.6 Average Device Temperature for the Past 1008-Hour (42-days)

A.5.2.6.1 Description

Average Device Temperature for the Past 1008-Hour (42-days) is a value that records the average of the most recent 1008 hours of temperature. The Average Short Term Device Temperature is recorded on every 24 hours for 42 times. At the end of 24 hours a new Average Short Term Device Temperature value replaces the oldest one of the 42 data. The Average Device Temperature for the Past 1008-Hour is calculated by averaging the 42 data of the Average Short Term Device Temperature stored. Samples are only recorded when the device is in Active or Idle state.

A.5.2.6.2 Update Interval

Average Device Temperature for the Past 1008-Hour (42-days) is updated on the following events. When the device is operational the counter is updated and stored in a non-volatile location at a minimum interval of one hour.

9. Update on Timer: Yes (= 1 hour)
10. Update on entering Standby state: Yes
11. Update on entering Sleep state: Yes
12. Update on Device Statistics Page Read: Yes

A.5.2.6.3 Measurement Units

Average Device Temperature for the Past 1008-Hour (42-days) is measured in the unit of degrees Celsius.

A.5.2.6.4 Initialization

Average Device Temperature for the Past 1008-Hour (42-days) is not initialized at the time of manufacture. Until the device takes 1008 hours of data the Value Valid bit (bit 62) is cleared to 0 and the data on bit 7:0 is not valid. After the 1008 hours of samples are taken the Value Valid bit is set to one and the temperature value on bit 7:0 is updated.

A.5.2.7 Highest Device Temperature Ever (Lifetime)

A.5.2.7.1 Description

Highest Device Temperature Ever (Lifetime) is a value that records the highest device temperature after the device is manufactured. This data is calculated by comparing the current Device Temperature sample taken at a mean interval of 10 minutes and the Highest Device Temperature Ever (Lifetime) recorded.

A.5.2.7.2 Update Interval

Highest Device Temperature Ever (Lifetime) is updated on the following events. When the device is operational the counter is updated and stored in a non-volatile location at a minimum interval of one hour.

13. Update on Timer: Yes (= 1 hour)
14. Update on entering Standby state: Yes
15. Update on entering Sleep state: Yes
16. Update on Device Statistics Page Read: Yes

A.5.2.7.3 Measurement Units

Highest Device Temperature Ever (Lifetime) is measured in the unit of degrees Celsius.

A.5.2.7.4 Initialization

Highest Device Temperature Ever (Lifetime) is not initialized at the time of manufacture. Until the device takes first sample the Value Valid bit (bit 62) is cleared to 0 and the data on bit 7:0 is not valid. After the first sample is taken the Value Valid bit is set to one and the temperature value on bit 7:0 is updated.

A.5.2.8 Lowest Device Temperature Ever (Lifetime)

A.5.2.8.1 Description

Lowest Device Temperature Ever (Lifetime) is a value that records the lowest device temperature after the device is manufactured. This data is calculated by comparing the current Device Temperature sample taken at a mean interval of 10 minutes and the Lowest Device Temperature Ever (Lifetime) recorded.

A.5.2.8.2 Update Interval

Lowest Device Temperature Ever (Lifetime) is updated on the following events. When the device is operational the counter is updated and stored in a non-volatile location at a minimum interval of one hour.

17. Update on Timer: Yes (= 1 hour)
18. Update on entering Standby state: Yes
19. Update on entering Sleep state: Yes
20. Update on Device Statistics Page Read: Yes

A.5.2.8.3 Measurement Units

Lowest Device Temperature Ever (Lifetime) is measured in the unit of degrees Celsius.

A.5.2.8.4 Initialization

Lowest Device Temperature Ever (Lifetime) is not initialized at the time of manufacture. Until the device takes first sample the Value Valid bit (bit 62) is cleared to 0 and the data on bit 7:0 is not valid. After the first sample is taken the Value Valid bit is set to one and the temperature value on bit 7:0 is updated.

A.5.2.9 Highest Short Term Average Temperature Ever (Lifetime)

A.5.2.9.1 Description

Highest Short Term Average Temperature Ever (Lifetime) is a value that records the highest device short term average temperature after the device is manufactured. This data is calculated by comparing the current Average Short Term Device Temperature and the Highest Short Term Average Temperature Ever (Lifetime) recorded.

A.5.2.9.2 Update Interval

Highest Short Term Average Temperature Ever (Lifetime) is updated on the following events. When the device is operational the counter is updated and stored in a non-volatile location at a minimum interval of one hour.

21. Update on Timer: Yes (= 1 hour)
22. Update on entering Standby state: Yes
23. Update on entering Sleep state: Yes
24. Update on Device Statistics Page Read: Yes

A.5.2.9.3 Measurement Units

Highest Short Term Average Temperature Ever (Lifetime) is measured in the unit of degrees Celsius.

A.5.2.9.4 Initialization

Highest Short Term Average Temperature Ever (Lifetime) is not initialized at the time of manufacture. Until the device records the first Average Short Term Device Temperature the Value Valid bit (bit 62) is cleared to 0 and the data on bit 7:0 is not valid. After the first Average Short Term Device Temperature is recorded and the Highest Short Term Average Temperature is calculated the Value Valid bit is set to one and the temperature value on bit 7:0 is updated.

A.5.2.10 Lowest Short Term Average Temperature Ever (Lifetime)

A.5.2.10.1 Description

Lowest Short Term Average Temperature Ever (Lifetime) is a value that records the lowest device short term average temperature after the device is manufactured. This data is calculated by comparing the current Average Short Term Device Temperature and the Lowest Short Term Average Temperature Ever (Lifetime) recorded.

A.5.2.10.2 Update Interval

Lowest Short Term Average Temperature Ever (Lifetime) is updated on the following events. When the device is operational the counter is updated and stored in a non-volatile location at a minimum interval of one hour.

25. Update on Timer: Yes (= 1 hour)
26. Update on entering Standby state: Yes
27. Update on entering Sleep state: Yes
28. Update on Device Statistics Page Read: Yes

A.5.2.10.3 Measurement Units

Lowest Short Term Average Temperature Ever (Lifetime) is measured in the unit of degrees Celsius.

A.5.2.10.4 Initialization

Lowest Short Term Average Temperature Ever (Lifetime) is not initialized at the time of manufacture. Until the device records the first Average Short Term Device Temperature the Value Valid bit (bit 62) is cleared to 0 and the data on bit 7:0 is not valid. After the first Average Short Term Device Temperature is recorded and the Highest Short Term Average Temperature is calculated the Value Valid bit is set to one and the temperature value on bit 7:0 is updated.

A.5.2.11 Highest Average 1008-Hour Temperature Ever (Lifetime)

A.5.2.11.1 Description

Highest Average 1008-Hour Temperature Ever (Lifetime) is a value that records the highest device average 1008-hour temperature after the device is manufactured. This data is calculated by comparing the current Average Device Temperature for the Past 1008-Hour value and the Highest Average 1008-Hour Temperature Ever (Lifetime) recorded.

A.5.2.11.2 Update Interval

Highest Average 1008-Hour Temperature Ever (Lifetime) is updated on the following events. When the device is operational the counter is updated and stored in a non-volatile location at a minimum interval of one hour.

29. Update on Timer: Yes (= 1 hour)
30. Update on entering Standby state: Yes
31. Update on entering Sleep state: Yes
32. Update on Device Statistics Page Read: Yes

A.5.2.11.3 Measurement Units

Highest Average 1008-Hour Temperature Ever (Lifetime) is measured in the unit of degrees Celsius.

A.5.2.11.4 Initialization

Highest Average 1008-Hour Temperature Ever (Lifetime) is not initialized at the time of manufacture. Until the device records the first Average Device Temperature for the Past 1008-Hour the Value Valid bit (bit 62) is cleared to 0 and the data on bit 7:0 is not valid. After the first Average Device Temperature for the Past 1008-Hour is recorded and the Highest Short Term Average Temperature is calculated the Value Valid bit is set to one and the temperature value on bit 7:0 is updated.

A.5.2.12 Lowest Average 1008-Hour Temperature Ever (Lifetime)

A.5.2.12.1 Description

Lowest Average 1008-Hour Temperature Ever (Lifetime) is a value that records the Lowest device average 1008-hour temperature after the device is manufactured. This data is calculated by comparing the current Average Device Temperature for the Past 1008-Hour and the Lowest Average 1008-Hour Temperature Ever (Lifetime) recorded.

A.5.2.12.2 Update Interval

Lowest Average 1008-Hour Temperature Ever (Lifetime) is updated on the following events. When the device is operational the counter is updated and stored in a non-volatile location at a minimum interval of one hour.

33. Update on Timer: Yes (= 1 hour)
34. Update on entering Standby state: Yes
35. Update on entering Sleep state: Yes
36. Update on Device Statistics Page Read: Yes

A.5.2.12.3 Measurement Units

Lowest Average 1008-Hour Temperature Ever (Lifetime) is measured in the unit of degrees Celsius.

A.5.2.12.4 Initialization

Lowest Average 1008-Hour Temperature Ever (Lifetime) is not initialized at the time of manufacture. Until the device records the first Average Device Temperature for the Past 1008-Hour the Value Valid bit (bit 62) is cleared to 0 and the data on bit 7:0 is not valid. After the first Average Device Temperature for the Past 1008-Hour is recorded and the Lowest Short Term Average Temperature is calculated the Value Valid bit is set to one and the temperature value on bit 7:0 is updated.

(The following section is copied from previous version for reference.)

e06183r6

Proposal for the Device Statistic Information Additions Device Temperature Statistics Group

To: T13 Technical Committee
From: Joseph Chen, Samsung
Steve Livaccari, IBM
Date: Apr 4, 2008

This document shows the list of candidates of device temperature 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:

12. Device Statistic Information Header
13. Current Device Temperature
14. Average Short Term Device Temperature
15. Average Device Temperature for the Past 1008-Hour
16. Highest Device Temperature Ever (Lifetime)
17. Lowest Device Temperature Ever (Lifetime)
18. Highest Short Term Average Temperature (Lifetime)
19. Lowest Short Term Average Temperature (Lifetime)
20. Highest Average 1008-Hour Temperature (Lifetime)
21. Lowest Average 1008-Hour Temperature (Lifetime)

Temperature Statistics:

The location and the precision of the temperature sensor are vendor specific. The temperature reported is an estimate of the case temperature of the device.

Device Statistic Information Table

Byte Offset	Bit	Description	
0		Device Statistic Information Header	
		Description:	When T13 decides to make a new revision to this structure
		Update Criteria:	NA
		Measurement Units:	NA
		Initialization:	At the time of manufacture
	63:48	Revision number	0001h
	47:16	Reserved	
	15:0	Page Number	xxxxh
8		Current Device Temperature	
		Description:	This value indicates the current device temperature measured by the device.
		Update Criteria:	This information is updated when this statistic log is read.
		Measurement Units:	In degrees Celsius
		Initialization:	Not applicable
	63	1= This statistics data is supported	
	62:56	Reserved	
	55:8	Reserved	

	7:0	Two's Complement INT Current Device Temperature
16		Average Short Term Device Temperature
		Description: This statistic reports the average of the most recent 144 temperature samples recorded at a mean interval of 10 min. Samples are only recorded when the device is in Active or Idle state. Update Criteria: Update on Timer: Yes (= 1 hour) Update on entering Standby state: Yes Update on entering Sleep state: Yes Update on Device Statistics Page Read: Yes Measurement Units: In degrees Celsius Initialization: Until the device takes 144 samples the data valid bit (bit 62) is cleared to 0 and the data on bit 7:0 is not valid. After the 144 samples are taken the data valid bit is set to one and the value on bit 7:0 is updated.
	63	1=This statistics data is supported Questions: 1. Is this valid statistic data bit indicates "Support" or "Valid" → Bit 63 is for "Supported" and bit 62 is for "Valid." 2. Can this supported bit change after power-on? → ~~Yes~~ No 3. Can this valid bit change after the drive is shipped? → Yes
	62	1=This statistic data is valid
	61:8	Reserved
	7:0	Two's Complement INT Average Short Term Device Temperature
24		Average Device Temperature for the Past 1008-Hour
		Description: This statistic reports the average of the most recent 1008 hours of temperature. The device averages the last 42 Average Short Term Device Temperature samples. Samples are only recorded when the device is in Active or Idle state. Update Criteria: Update on Timer: Yes (= 1 hour) Update on entering Standby state: Yes Update on entering Sleep state: Yes Update on Device Statistics Page Read: Yes Measurement Units: In degrees Celsius Initialization: Until the device takes 42 samples the data valid bit (bit 62) is cleared to 0 and the data on bit 7:0 is not valid. After the 42 samples are taken the data valid bit is set to one and the value on bit 7:0 is updated.
	63	1=This statistics data is supported
	62	1=This statistic data is valid
	61:8	Reserved
	7:0	Two's Complement INT Average Device Temperature for the Past 1008-Hour
32		Highest Device Temperature Ever (Lifetime)
		Description: This value indicates the recorded highest device temperature after the device is manufactured. The measurement is based on the samples recorded at a mean interval of 10 min. Update Criteria: Update on Timer: Yes (= 1 hour) Update on entering Standby state: Yes Update on entering Sleep state: Yes Update on Device Statistics Page Read: Yes Measurement Units: In degrees Celsius Initialization: Until the device takes the first sample the data valid bit (bit 62) is cleared to 0 and the data on bit 31:0 is

		not valid. After the first sample is taken the data valid bit is set to one and the value on bit 31:0 is updated.
	63	1=This statistics data is supported
	62	1=This statistic data is valid
	61:32	Reserved
	31:8	Unsigned DWORD Time Stamp in Power-on-Hour
	7:0	Two's Complement INT Highest Device Temperature Ever (Lifetime)
40		Lowest Device Temperature Ever (Lifetime)
		Description: This value indicates the recorded lowest device temperature after the device is manufactured. The measurement is based on the samples recorded at a mean interval of 10 min. Update Criteria: Update on Timer: Yes (= 1 hour) Update on entering Standby state: Yes Update on entering Sleep state: Yes Update on Device Statistics Page Read: Yes Measurement Units: In degrees Celsius Initialization: Until the device takes the first sample the data valid bit (bit 62) is cleared to 0 and the data on bit 31:0 is not valid. After the first sample is taken the data valid bit is set to one and the value on bit 31:0 is updated.
	63	1=This statistics data is supported
	62	1=This statistic data is valid
	61:32	Reserved
	31:8	Unsigned DWORD Time Stamp in Power-on-Hour
	7:0	Two's Complement INT Lowest Device Temperature Ever (Lifetime)
48		Highest Short Term Average Temperature (Lifetime)
		Description: This value indicates the recorded highest device short term average temperature after the device is manufactured. The measurement is based on the samples recorded by the Average Device Short Term Temperature. Update Criteria: Update on Timer: Yes (= 1 hour) Update on entering Standby state: Yes Update on entering Sleep state: Yes Update on Device Statistics Page Read: Yes Measurement Units: In degrees Celsius Initialization: Until the device takes 144 samples the data valid bit (bit 62) is cleared to 0 and the data on bit 31:0 is not valid. After the 144 samples are taken the data valid bit is set to one and the value on bit 31:0 is updated.
	63	1=This statistics data is supported
	62	1=This statistic data is valid
	61:32	Reserved
	31:8	Unsigned DWORD Time Stamp in Power-on-Hour
	7:0	Two's Complement INT Highest Short Term Average Temperature (Lifetime)
56		Lowest Short Term Average Temperature (Lifetime)
		Description: This value indicates the recorded lowest device short term average temperature after the device is

		manufactured. The measurement is based on the samples recorded by the Average Device Short Term Temperature.	
		Update Criteria:	Update on Timer: Yes (= 1 hour) Update on entering Standby state: Yes Update on entering Sleep state: Yes Update on Device Statistics Page Read: Yes
		Measurement Units:	In degrees Celsius
		Initialization:	Until the device takes 144 samples the data valid bit (bit 62) is cleared to 0 and the data on bit 31:0 is not valid. After the 144 samples are taken the data valid bit is set to one and the value on bit 31:0 is updated.
	63	1=This statistics data is supported	
	62	1=This statistic data is valid	
	61:32	Reserved	
	31:8	Unsigned DWORD Time Stamp in Power-on-Hour	
	7:0	Two's Complement INT Lowest Short Term Average Temperature (Lifetime)	
64		Highest Average 1008-Hour Temperature (Lifetime)	
		Description:	This value indicates the recorded highest device short term average temperature after the device is manufactured. The measurement is based on the samples recorded by the Average Device Temperature for the Past 1008-Hour.
		Update Criteria:	Update on Timer: Yes (= 1 hour) Update on entering Standby state: Yes Update on entering Sleep state: Yes Update on Device Statistics Page Read: Yes
		Measurement Units:	In degrees Celsius
		Initialization:	Until the device takes 1008-hour of data the data valid bit (bit 62) is cleared to 0 and the data on bit 31:0 is not valid. After the 1008-hour data are taken the data valid bit is set to one and the value on bit 31:0 is updated.
	63	1=This statistics data is supported	
	62	1=This statistic data is valid	
	61:32	Reserved	
	31:8	Unsigned DWORD Time Stamp in Power-on-Hour	
	7:0	Two's Complement INT Highest Average 1008-Hour Temperature (Lifetime)	
72		Lowest Average 1008-Hour Temperature (Lifetime)	
		Description:	This value indicates the recorded lowest device short term average temperature after the device is manufactured. The measurement is based on the samples recorded by the Average Device Temperature for the Past 1008-Hour.
		Update Criteria:	Update on Timer: Yes (= 1 hour) Update on entering Standby state: Yes Update on entering Sleep state: Yes Update on Device Statistics Page Read: Yes
		Measurement Units:	In degrees Celsius
		Initialization:	Until the device takes 1008-hour of data the data valid bit (bit 62) is cleared to 0 and the data on bit 31:0 is not valid. After the 1008-hour data are taken the data valid bit is set to one and the value on bit 31:0 is updated.

	63	1=This statistics data is supported
	62	1=This statistic data is valid
	61:32	Reserved
	31:8	Unsigned DWORD Time Stamp in Power-on-Hour
	7:0	Two's Complement INT Lowest Average 1008-Hour Temperature (Lifetime)