

# Climatic Test Report

Equipment under Test (EUT): **D3313-S12 in FUTRO-chassis**  
with CPU AMD GX-210HA SOC 1.0GHz,  
passive cooled

Applicant: FUJITSU TECHNOLOGY SOLUTIONS GmbH  
FTS PDG WPS R&D OEM  
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Document No.: CLI+1SB13-0024+K01

Test date: February 17, until February 20, 2014

Issue date: February 28, 2014

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Signature

Reviewed by:

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Deputy Head of LAB E



Signature

The results in this report apply only to the tested sample(s).

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## EUT: D3313-S12 in FUTRO-chassis

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## EUT: D3313-S12 in FUTRO-chassis

### 3. Summary of standards and results

The system was tested according to the applicable standards as referenced below.

#### 3.1. Classification of climatic conditions

Climatic environmental conditions according to: DIN EN 60721-3-3 (Edition 09/95)

##### Equipment under test:

Product specification:                      Operation:                      Class 3K2 according to DIN EN 60721 Part 3-3

##### Test specification:

Climatic test	DIN EN 60068-1 (Edition 03/95)	Environmental tests part 1, general and guidance.
Climatic test dry heat operation	DIN EN 60068-2-2 (Edition 05/08)	Environmental tests; part 2: test section B, dry heat

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### 3.2. Summary of results

#### 3.2.1. Valued tests

	passed	failed
Dry heat operation +35°C	X	

Note: The results are only applicable for the tested configuration.

### 3.3. Table of used instruments

#### Climatic test cabinet

Test- / Measure device	Equipment name			Check / Calibration	
	Manu- facturer	Type	Serial-No.	last*	next*
Climatic test cabinet	Vötsch Industrie- technik	VC <sup>3</sup> 4034	58566117350 010	11.13CH	11.14CH
41. Data Acquisition Unit 30 ch. Thermocouples	Yokogawa Thermocoax	DA100-13-1F Chrom- Alumel	27E539143 Type:K	10.12C with	10.14C Recorder
Multimeter	Fluke	87V TRUE RMS	88630333	11.13C	11.15C

- C = Calibration CH = Check

## EUT: D3313-S12 in FUTRO-chassis

### 4. Equipment under test

#### 4.1. System description

Product: S26361-D3313-S12  
 Manufacturer: FUJITSU TECHNOLOGY SOLUTIONS GmbH  
 Type: Personal Computer  
 Approval name: D3313-S

Part no.: S26361-D3313-S12  
 Serial no.: 43468119

Component	Model	Manufacturer	Part no.	Serial no.	Rev.	Remark
System board	D3313-S12	FTS	S26361-D3313-S12	43468119	GS51	with CPU AMD K16 GX-210HA SOC with Radeon HD Graphic 1.0GHz, BIOS: V4.6.5.4 R1.2.0 for D3313-S1x 01/31/2014
Heat sink	B972-V1	Cooler Master	V26898-B972-V1	CM0342272		CM P/N:DL5-G5070-F2-GP
RAM 2x	HMT325S6CFR8A-PB N0 AA	SK hynix		n.a.		2GB 1Rx8 PC3L-12800S-11-12-B2, dc:1323/1317
WLAN board	GA5G M7930LX3	n.a.		6302AF4C79 025927		
HDD	THMSMX032GMCT	Toshiba		Y33A304WK ZTK		Solid State Drive, 32GB
Graphic controller	NVS 300	nVidia	S26361-D1473-V338	03251100194 22	GS1	
other	D3318-A10	FTS	S26361-D3318-A10	42052269	GS50	PCIe riser card
Chassis	FUTRO DS	LiteOn	C26361-K528-A400- *-Z100	G320C00084	03	Module for D3003, LOE P/N:15G320C02A0T-R, D/C:YYWW 1211
AC adapter	FSP100-RAA	FSP Group Inc.		H00001148		DC output:24V=4.17A (100Wmax)

**Product specification:** operation: Class 3K2 according to EN 60721 part 3-3

Receipt date: February 14, 2014

Condition when received: Ready for test

### EUT: D3313-S12 in FUTRO-chassis

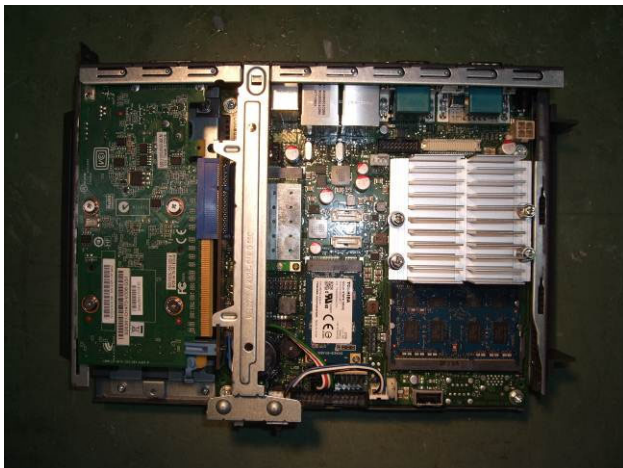
#### 4.2. EUT Photos



Picture no. 1: EUT front



Picture no. 2: EUT back



Picture no. 3: EUT top opened



Picture no. 4: Chassis type label

**EUT: D3313-S12 in FUTRO-chassis**



Picture no. 5: System board type label



Picture no. 6: CPU heat sink type label

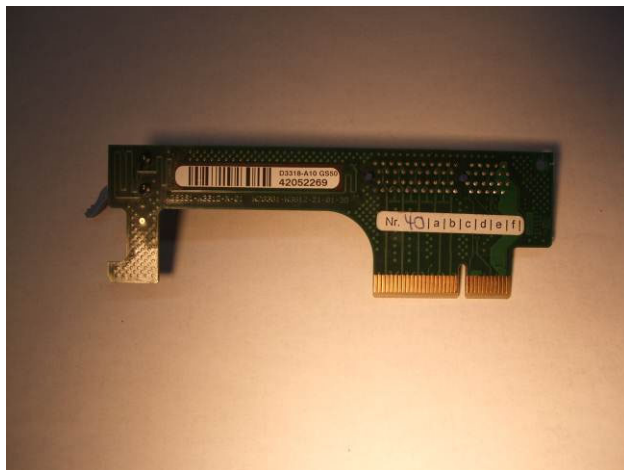


Picture no. 7: Memory type label



Picture no. 8: mSATA SSD type label

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Picture no. 9: PCIe riser type label



Picture no. 10: VGA type label



Picture no. 11: EUT in climatic cabinet



Picture no. 12: EUT prepared for measurement



## EUT: D3313-S12 in FUTRO-chassis

### 5. Test results

#### 5.1. Dry heat operation, +35°C

	passed	failed
Operation at high temperature (+35°C)	X	

**Test conditions:** SN29067-1 (Edition 11/95)

**Class:** 3K2

**Standards:** DIN EN 60068-2-2 (Edition 05/08) Test section B: dry heat

**Temperature values:** +35°C

**Requirements:** Specified performance data must be met.  
For all components the maximum temperatures allowed must not be exceeded.

**Test software:** See page 10 + 11

**Results:** No objections

**Remarks:** After directional stability of all temperatures the tests were running for at least 30 minutes.

## EUT: D3313-S12 in FUTRO-chassis

Ch. #	ThC. #	Module/PWB	Component:	1 [°C]	Δt [K]	2 [°C]	Δt [K]	3 [°C]	Δt [K]	4 [°C]	Δt [K]	Max [°C]
1	13	Unit	Ambient air	35		35		35		35		---
2	503	CPU	100D00 CPU	65	25	56	34	70	20	60	30	90
3	725	SB	127C22 VCC_CPU_CORE Elko	56	12	50	18	59	9	52	16	68
4	U23	SB	127C04 P19VP Filter Core Elko	48	20	44	24	50	18	45	23	68
5	138	SB	127C82 VCC_CPU_NB Elko	55	13	50	18	58	10	52	16	68
6	81	SB	923L50 P12VP_STBY Spule	66	34	62	38	70	30	65	35	100
7	G63	SB	923C69 P12VP_STBY Elko	52	16	52	16	53	15	55	13	68
8	E19	SB	430X60 Battery	45	15	45	15	45	15	46	14	60
9	E58	SB	500D00 SIO SMSC	51	19	49	21	54	16	52	18	70
10	U25	SB	505D00 SIO Nuvoton	57	13	57	13	58	12	59	11	70
11	546	SB	920C57 P3V3P_STBY Elko	55	13	53	15	57	11	55	13	68
12	H83	SB	920C77 P5VP_STBY Elko	52	16	51	17	53	15	54	14	68
13	F91	SB	620C10 P12VP Elko	49	19	50	18	50	18	52	16	68
14	2	SB	780D00 Audio Codec	48	22	50	20	56	14	60	10	70
15	G23	SB BS	522D00 COM Driver	53	17	52	18	55	15	54	16	70
16	616	SB BS	800D00 LAN CTRL	52	18	51	19	53	17	53	17	70
17	H30	SB BS	865D00 DP to LVDS Converter	50	30	47	33	52	28	48	32	80
18	718	VGA*	Ambient air under VGA-card	50		54		49		57		---
19												
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30												

**Description: \*Additional Graphics Controller nVidia NVS300**

- Col. 1 Mains 230V / 50Hz; Horizontal stand;  
Test: Windows IdleMode Date: 19.02.2014 12:20:53
- Col. 2 Mains 230V / 50Hz; Vertical stand;  
Test: Windows IdleMode Date: 19.02.2014 14:15:03
- Col. 3 Mains 230V / 50Hz; Horizontal stand;  
Test: SysTest32 Date: 20.02.2014 08:24:43
- Col. 4 Mains 230V / 50Hz; Vertical stand;  
Test: SysTest32 Date: 20.02.2014 06:05:53

## EUT: D3313-S12 in FUTRO-chassis

Ch. #	ThC. #	Module/PWB	Component:	5 [°C]	Δt [K]	6 [°C]	Δt [K]	7 [°C]	Δt [K]	8 [°C]	Δt [K]	Max [°C]
1	13	Unit	Ambient air	35		35						---
2	503	CPU	100D00 CPU	73	17	61	29					90
3	725	SB	127C22 VCC_CPU_CORE Elko	61	7	53	15					68
4	U23	SB	127C04 P19VP Filter Core Elko	51	17	46	22					68
5	138	SB	127C82 VCC_CPU_NB Elko	60	8	53	15					68
6	81	SB	923L50 P12VP_STBY Spule	73	27	67	33					100
7	G63	SB	923C69 P12VP_STBY Elko	55	13	56	12					68
8	E19	SB	430X60 Battery	48	12	48	12					60
9	E58	SB	500D00 SIO SMSC	55	15	52	18					70
10	U25	SB	505D00 SIO Nuvoton	61	9	60	10					70
11	546	SB	920C57 P3V3P_STBY Elko	59	9	56	12					68
12	H83	SB	920C77 P5VP_STBY Elko	55	13	55	13					68
13	F91	SB	620C10 P12VP Elko	52	16	53	15					68
14	2	SB	780D00 Audio Codec	51	19	54	16					70
15	G23	SB BS	522D00 COM Driver	56	14	55	15					70
16	616	SB BS	800D00 LAN CTRL	54	16	54	16					70
17	H30	SB BS	865D00 DP to LVDS Converter	53	27	49	31					80
18	718	VGA*	Ambient air under VGA-card	63		70						---
19												
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30												

Description: \*Additional Graphics Controller nVidia NVS300

Col. 5 Mains 230V / 50Hz; Horizontal stand;  
Test: ThermNow! Date: 20.02.2014 10:5143

Col. 6 Mains 230V / 50Hz; Vertical stand;  
Test: ThermNow! Date: 20.02.2014 13:0113

Col. 7 \_\_\_\_\_  
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Col. 8 \_\_\_\_\_  
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