

FCC LISTED, REGISTRATION
NUMBER: 2764.01

Test report No:
2209CBRS.003A1

ISED LISTED REGISTRATION
NUMBER: 23595-1

Test report

Citizen Broadband Radio Service Test report as per WINNForum Test Specification WINNF-TS-0122-V1.0.0

Identification of item tested.....:	Breeze Compact Base Station
Trademark	
CBSD Identifier	CMP.XT-BS-3.X
CBSD Final HW version	004-002-00
CBSD Final SW version	0700.07617
Domain Proxy Identifier	BreezeVIEW
Domain Proxy Final HW version	NA
Domain Proxy Final SW version	7.0.0.028
Features	CBSD, Domain Proxy, LTE-TDD 48
Manufacturer	Telrad Networks Ltd. 1 Bat Sheva Street, P.O.B. 6118, Lod 711600, Israel
Test method requested, standard.....:	WinnForum TEST SPECIFICATION WINNF-TS-0122-V1.0.0
Summary	IN COMPLIANCE
Approved by (name / position & signature)	Bryan Mikesch, Chief Operating Officer, DEKRA Certification Inc.
Date of issue.....:	2018-09-12
Report template No.....:	FDT08_20



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DEKRA Certification, Inc. is a CBRS Alliance authorized test laboratory.

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Uncertainty

Uncertainty (factor $k=2$) was calculated according to the DEKRA Certification Inc. internal document PODT000.

Usage of samples

Samples undergoing test have been selected by: **the client**

Sample S/01 is composed of the following elements:

Control N°	Description	Model	Serial N°	Date of reception
02209.003	Breeze Compact Base Station	CMP.XT-BS-3.X	95032353	05/11/2018
NA	Domain Proxy Software	BreezeVIEW version 7.0.0.028	NA	05/11/2018

Test sample description

Testing was performed using the Breeze Compact Base Station as CBSD in combination with BreezeVIEW version 7.0.0.028 as the Domain Proxy software. The combination was considered as the Unit Under Test.

Testing period

2018-05-23 to 2018-06-25

Environmental conditions

In the shielded chamber, the following limits were not exceeded during the test.

Temperature	Min. = 15 °C Max. = 35 °C
Relative humidity	Min. = 20 % Max. = 75 %
Air pressure	Min. = 860 mbar Max. = 1060 mbar

Modifications to the reference test report

Following editorial modifications are introduced with respect to the test report number 2209CBRS.003 related with the same samples, in the next clauses and sub-clauses:

Clauses / Sub-clauses	Modification	Justification
Usage of Samples	Date of reception was corrected	Editorial
Remarks and comments	Technical personnel name was updated	Editorial

Remarks and comments

1: The tests have been performed by the technical personnel: Vinayak Thotton Veettil

Testing verdicts

Not applicable..... :	N/A
Pass..... :	P
Fail..... :	F
Inconclusive :	I

Appendix A – Test result

Summary of Test Results

	PASS VERDICT
	TDD
Standard	48
WINNF-TS-0122	33
Total	33

Test Results

Test Spec	Ref	Name	Condition	Date	Test sample	Result	SAS version	SW Version	HW Version
WINNF-TS-0122-V1.0.0	WINNF.FT.D.REG.2	Domain Proxy Multi-Step registration	Normal	6/24/2018	02209.003	P	1.0.0.2	0700.07617	004-002-00
WINNF-TS-0122-V1.0.0	WINNF.FT.C.REG.7	Registration due to change of an installation parameter	Normal	6/24/2018	02209.003	P	1.0.0.2	0700.07617	004-002-00
WINNF-TS-0122-V1.0.0	WINNF.FT.D.REG.9	Domain Proxy Missing Required parameters (responseCode 102)	Normal	6/24/2018	02209.003	P	1.0.0.2	0700.07617	004-002-00
WINNF-TS-0122-V1.0.0	WINNF.FT.D.REG.11	Domain Proxy Pending registration (responseCode 200)	Normal	6/24/2018	02209.003	P	1.0.0.2	0700.07617	004-002-00
WINNF-TS-0122-V1.0.0	WINNF.FT.D.REG.13	Domain Proxy Invalid parameters (responseCode 103)	Normal	6/24/2018	02209.003	P	1.0.0.2	0700.07617	004-002-00
WINNF-TS-0122-V1.0.0	WINNF.FT.D.REG.15	Domain Proxy Blacklisted CBSD (responseCode 101)	Normal	6/24/2018	02209.003	P	1.0.0.2	0700.07617	004-002-00
WINNF-TS-0122-V1.0.0	WINNF.FT.D.REG.17	Domain Proxy Unsupported SAS protocol version (responseCode 100)	Normal	6/24/2018	02209.003	P	1.0.0.2	0700.07617	004-002-00
WINNF-TS-0122-V1.0.0	WINNF.FT.D.REG.19	Domain Proxy Group Error (responseCode 201)	Normal	6/24/2018	02209.003	P	1.0.0.2	0700.07617	004-002-00
WINNF-TS-0122-V1.0.0	WINNF.FT.D.GRA.1	Unsuccessful Grant responseCode=400 (INTERFERENCE)	Normal	6/24/2018	02209.003	P	1.0.0.2	0700.07617	004-002-00
WINNF-TS-0122-V1.0.0	WINNF.FT.C.GRA.2	Unsuccessful Grant responseCode=401 (GRANT_CONFLICT)	Normal	6/24/2018	02209.003	P	1.0.0.2	0700.07617	004-002-00
WINNF-TS-0122-V1.0.0	WINNF.FT.D.HBT.2	Domain Proxy Heartbeat Success Case (first Heartbeat Response)	Normal	6/25/2018	02209.003	P	1.0.0.2	0700.07617	004-002-00
WINNF-TS-0122-V1.0.0	WINNF.FT.C.HBT.3	Heartbeat responseCode=105 (DEREGISTER)	Normal	6/25/2018	02209.003	P	1.0.0.2	0700.07617	004-002-00
WINNF-TS-0122-V1.0.0	WINNF.FT.C.HBT.4	Heartbeat responseCode=500 (TERMINATED_GRANT)	Normal	6/25/2018	02209.003	P	1.0.0.2	0700.07617	004-002-00
WINNF-TS-0122-V1.0.0	WINNF.FT.C.HBT.5	Heartbeat responseCode=501 (SUSPENDED_GRANT) in First Heartbeat Response	Normal	6/25/2018	02209.003	P	1.0.0.2	0700.07617	004-002-00

Test Spec	Ref	Name	Condition	Date	Test sample	Result	SAS version	SW Version	HW Version
WINNF-TS-0122-V1.0.0	WINNF.FT.C.HBT.6	Heartbeat responseCode=501 (SUSPENDED_GRANT) in Subsequent Heartbeat Response	Normal	6/25/2018	02209.003	P	1.0.0.2	0700.07617	004-002-00
WINNF-TS-0122-V1.0.0	WINNF.FT.C.HBT.7	Heartbeat responseCode=502 (UNSYNC_OP_PARAM)	Normal	6/25/2018	02209.003	P	1.0.0.2	0700.07617	004-002-00
WINNF-TS-0122-V1.0.0	WINNF.FT.D.HBT.8	Domain Proxy Heartbeat responseCode=500 (TERMINATED_GRANT)	Normal	6/25/2018	02209.003	P	1.0.0.2	0700.07617	004-002-00
WINNF-TS-0122-V1.0.0	WINNF.FT.C.HBT.9	Heartbeat Response Absent (First Heartbeat)	Normal	6/25/2018	02209.003	P	1.0.0.2	0700.07617	004-002-00
WINNF-TS-0122-V1.0.0	WINNF.FT.C.HBT.10	Heartbeat Response Absent (Subsequent Heartbeat)	Normal	6/25/2018	02209.003	P	1.0.0.2	0700.07617	004-002-00
WINNF-TS-0122-V1.0.0	WINNF.FT.C.HBT.11	Successful Grant Renewal in Heartbeat Test Case	Normal	6/25/2018	02209.003	P	1.0.0.2	0700.07617	004-002-00
WINNF-TS-0122-V1.0.0	WINNF.FT.C.MES.3	Grant Response contains measReportConfig	Normal	6/25/2018	02209.003	P	1.0.0.2	0700.07617	004-002-00
WINNF-TS-0122-V1.0.0	WINNF.FT.D.MES.5	Domain Proxy Heartbeat Response contains measReportConfig	Normal	6/25/2018	02209.003	P	1.0.0.2	0700.07617	004-002-00
WINNF-TS-0122-V1.0.0	WINNF.FT.D.RLQ.2	Domain Proxy Successful Relinquishment	Normal	6/25/2018	02209.003	P	1.0.0.2	0700.07617	004-002-00
WINNF-TS-0122-V1.0.0	WINNF.FT.D.RLQ.4	Domain Proxy Unsuccessful Relinquishment, responseCode=102	Normal	6/25/2018	02209.003	P	1.0.0.2	0700.07617	004-002-00
WINNF-TS-0122-V1.0.0	WINNF.FT.D.RLQ.6	Domain Proxy Unsuccessful Relinquishment, responseCode=103	Normal	6/25/2018	02209.003	P	1.0.0.2	0700.07617	004-002-00
WINNF-TS-0122-V1.0.0	WINNF.FT.D.DRG.2	Domain Proxy Successful Deregistration	Normal	6/25/2018	02209.003	P	1.0.0.2	0700.07617	004-002-00
WINNF-TS-0122-V1.0.0	WINNF.FT.D.DRG.4	Domain Proxy Deregistration responseCode=102	Normal	6/25/2018	02209.003	P	1.0.0.2	0700.07617	004-002-00
WINNF-TS-0122-V1.0.0	WINNF.FT.C.DRG.5	Deregistration responseCode=103	Normal	6/25/2018	02209.003	P	1.0.0.2	0700.07617	004-002-00
WINNF-TS-0122-V1.0.0	WINNF.FT.C.SCS.1	Successful TLS connection between UUT and SAS Test Harness	Normal	5/23/2018	02209.003	P	1.0.0.2	0700.07617	004-002-00

Test Spec	Ref	Name	Condition	Date	Test sample	Result	SAS version	SW Version	HW Version
WINNF-TS-0122-V1.0.0	WINNF.FT.C.SCS.2	TLS failure due to revoked certificate	Normal	5/23/2018	02209.003	P	1.0.0.2	0700.07617	004-002-00
WINNF-TS-0122-V1.0.0	WINNF.FT.C.SCS.3	TLS failure due to expired server certificate	Normal	5/23/2018	02209.003	P	1.0.0.2	0700.07617	004-002-00
WINNF-TS-0122-V1.0.0	WINNF.FT.C.SCS.4	TLS failure when SAS Test Harness certificate is issue by unknown CA	Normal	5/23/2018	02209.003	P	1.0.0.2	0700.07617	004-002-00
WINNF-TS-0122-V1.0.0	WINNF.FT.C.SCS.5	TLS failure when certificate at the SAS Test Harness is corrupted	Normal	5/23/2018	02209.003	P	1.0.0.2	0700.07617	004-002-00
WINNF-TS-0122-V1.0.0	WINNF.PT.C.HBT	UUT RF Transmit Power Measurement	Normal	5/23/2018	02209.003	P	1.0.0.2	0700.07617	004-002-00

Appendix B – Test Systems

Test System Used

Model	Description	Control Number	Uncertainties
Dell Latitude, Windows 7, 64-bit	Laptop with SAS harness	CTC-5233-K	NA
EXA N9010A	Signal Analyzer	0018	NA
MXA N9020A	Signal Analyzer	0382	NA
HWg-STE Plain	Ethernet SNMP Thermometer	1107	NA
DR-4X7S201-LH	Shielded Chamber	0131	NA

Appendix C – CBSD/ DP Supported Features

Condition	Feature Description	Supported
C1	Mandatory for UUT which supports multi-step registration message.	Y
C2	Mandatory for UUT which supports single-step registration with no CPI-signed data in the registration message. By definition, this is a subset of Category A devices which determine all registration information, including location, without CPI intervention.	N
C3	Mandatory for UUT which supports single-step registration containing CPI-signed data in the registration message.	N
C4	Mandatory for UUT which supports RECEIVED_POWER_WITHOUT_GRANT measurement report type.	N
C5	Mandatory for UUT which supports RECEIVED_POWER_WITH_GRANT measurement report type.	Y
C6	Mandatory for UUT which supports parameter change being made at the UUT and prior to sending a deregistration.	N

Appendix D – Reference Standards and Procedures

Reference Standards

Test and Certification for Citizens Broadband Radio Service (CBRS); Conformance and Performance Test Technical Specification; CBSD/DP as Unit Under Test (UUT) Working Document WINNF-TS-0122	V1.0.0
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Test Procedures

PECB001_00: CBRS Alliance Certification Testing Based On WINN Forum CBRS CBSD Test Specification “WINNF-TS-0122”
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Appendix E – Photographs

FRONT VIEW



REAR VIEW



SIDE VIEW – Data connections



SIDE VIEW – RF connections



INTERNAL VIEW

