

UMS SUMMARY TEST REPORT

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ISSUED BY:
CRANAGE EMC TESTING LIMITED
STABLE COURT
OAKLEY
MARKET DRAYTON
SHROPSHIRE, TF9 4AG



Report No: **U0073R1** Date of Issue: **21st March 2017**

This document summarises the results of testing to ascertain the appropriate Elexon Charge Codes for inclusion in BSCP520.

Tested & Inspected for: **Cambridge Communication Systems Limited**
Mount Pleasant House
3rd Floor
Huntingdon Road
Cambridge
CB3 0RN

Test Date: **15th March 2017**

Receipt Date of Test Item: **15th March 2017**

Wired Node (Peripheral)

Test Item Description: **Metnet 1200 Microwave Backhaul Node**
Manufacturer: **Cambridge Communication Systems Limited**
Product Code: **G28ES000089**
Unit Number: **E000EB0**
Serial Number: **003760**
Assy Number: **ASY0311 rev.01.10.**
Operating Conditions: **Refer to page 3.**

Sample 1 (UUT – Unit Under Test)

Test Item Description: **Metnet 1200 Microwave Backhaul Node**
Manufacturer: **Cambridge Communication Systems Limited**
Product Code: **G28ES000089**
Unit Number: **E000EC0**
Serial Number: **003776**
Assy Number: **ASY0311 rev.01.10.**
Operating Conditions: **Refer to page 3. Sample 1 paired with peripheral wired node.**

Sample 2 (UUT)

Test Item Description: **Metnet 1200 Microwave Backhaul Node**
Manufacturer: **Cambridge Communication Systems Limited**
Product Code: **G28ES000089**
Unit Number: **E000EB9**
Serial Number: **003769**
Assy Number: **ASY0311 rev.01.10.**
Operating Conditions: **Refer to page 3. Sample 2 paired with peripheral wired node.**

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Sample 3 (UUT)

Test Item Description:	Metnet 1200 Microwave Backhaul Node
Manufacturer:	Cambridge Communication Systems Limited
Product Code:	G28ES000089
Unit Number:	E000EB7
Serial Number:	003767
Assy Number:	ASY0311 rev.01.10.
Operating Conditions:	Refer to page 3. Sample 3 paired with peripheral wired node.

Sample 4 (UUT)

Test Item Description:	Metnet 1200 Microwave Backhaul Node
Manufacturer:	Cambridge Communication Systems Limited
Product Code:	G28ES000089
Unit Number:	E000EB4
Serial Number:	003764
Assy Number:	ASY0311 rev.01.10.
Operating Conditions:	Refer to page 3. Sample 4 paired with peripheral wired node.

Sample 5 (UUT)

Test Item Description:	Metnet 1200 Microwave Backhaul Node
Manufacturer:	Cambridge Communication Systems Limited
Product Code:	G28ES000089
Unit Number:	E000E9B
Serial Number:	003739
Assy Number:	ASY0311 rev.01.10.
Operating Conditions:	Refer to page 3. Sample 5 paired with peripheral wired node.

Approved Signatories: M. Richens - Technical Director


APPROVED SIGNATORY

Verification Signatories: G. Maskill - Test Engineer


VERIFICATION SIGNATORY

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Mode of Operation: A two node network was formed with GPS connectivity present. The unit under test (UUT) formed a microwave radio link to a secondary node (peripheral). One laptop (peripheral) was connected to a 'wired' node (peripheral), which acted as a client or server for iperf data to be streamed (running software Element Management System v.14.1.0). The UUT (software version 14-1-0) was transmitting/receiving on dual channels (channel 1 at 27.605 GHz and channel 0 at 28.615 GHz). Data traffic with quadrature amplitude modulation was carried across the link within a bandwidth of 112MHz per channel. The UUT signal strength was 9.9 dBm. A photograph showing the test item can be found on page 4.

Unit under test: - Units were powered up for 15 minutes at 230V AC 50 Hz to stabilise.

Test Condition: - Measurements were taken after 10 minutes at each voltage level. This was found to be an adequate time window for the purpose of the test measurements.

All results are rounded to two decimal places.

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Watts					
Voltage (Vrms)	Sample No.				
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
210	34.15	33.95	34.08	33.92	34.03
220	34.13	33.94	34.17	34.01	34.14
230	34.35	34.02	34.20	34.28	34.06
240	34.31	34.09	34.22	34.09	34.10
250	34.34	34.14	34.29	34.18	34.09

VA					
Voltage (Vrms)	Sample No.				
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
210	69.32	68.38	68.59	68.69	68.61
220	70.36	70.13	70.42	70.47	70.42
230	72.35	71.85	72.00	72.51	71.78
240	73.74	73.45	73.51	73.58	73.29
250	75.13	74.93	75.04	75.10	74.70

Ambient temperature range recorded during test period:
18°C - 22°C

Test Equipment

Asset Number	Description	Calibration Date	Calibration Due
AN288	Power Source	-	-
AN1162	Power Analyser	06/09/2016	-

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Photographs of the Test Item



Above: Unit under test.

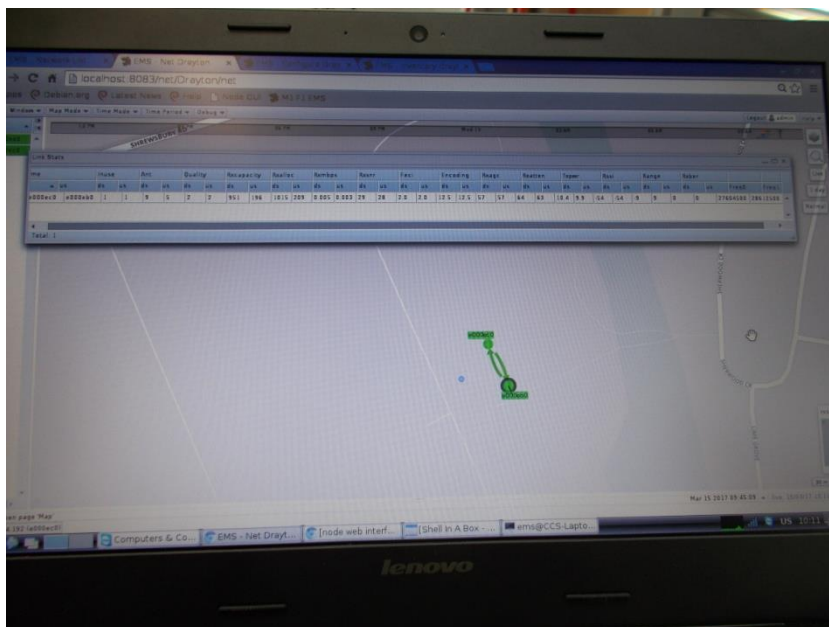
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Above: Laptop software showing Node connectivity.



Above: Unit under test - labelling.

Measurement Uncertainty

The 95 % confidence measurement uncertainty for AC Power (Analyser) is 0.17%.