


**Test Report (pdf copy)
 FCC/Industry Canada
 Testing of
 NET 2 ENTRY PANEL
 For
 PAXTON ACCESS**

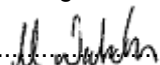
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2	Second Issue	MR	27 th August 2015

The uncertainties are for a confidence probability of not less than 95%

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This test reports relates only to the unit(s) tested



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1

Introduction

Name and address of laboratory: York EMC Services Ltd
 Three Lane Ends Business Centre
 Methley Road
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Name and address of client: Paxton Access Limited
 Paxton House
 Home Farm Road
 Brighton
 East Sussex
 BN1 9HU

The test results contained in this test report relate only to the unit(s) tested.

Equipment under test POE door entry panel with integral radio transmitter

Manufacturer Paxton Access Limited

Product name NET2 ENTRY

Model Names NET2 ENTRY STD (Standard Panel)
 NET2 ENTRY VR (Vandal Resistant Panel)

Part numbers 337-420 (STD), 337-520 (VR)

Circuit revision Fully defined by Part Number

Customer supplied test plan ref.

Date of receipt of EUT 6th August 2015

Method of receipt Courier

Date(s) of test(s) 21st August 2015

Date(s) when EUT was out of laboratory's control None

Method of disposal Awaiting disposal

Personnel witnessing tests None

Any other relevant information:

The products are powered by POE (Power over Ethernet). A Standard (STD) version of each model (plastic enclosure) and a Vandal Proof (VR) version (metal enclosure) were provided for test. In normal operating mode the transmitter polls between 125kHz and 13.56MHz.

2 Test Specification

2.1 Product Description and Environment

The products are powered by POE (Power over Ethernet) A Standard (STD) version of each model (plastic enclosure) and a Vandal Proof (VR) version (metal enclosure) were provided for test. In normal operating mode the Transmitter polls between 125kHz and 13.56MHz.

The equipment under test is the NET2 ENTRY PANEL with integral radio transmitter. It is a door entry panel intended for use in a RCL/ domestic office/ retail/ light industrial environment. The EUT falls into the category of an Intentional Radiator and Digital Devices, subject to Subpart C, Section 15.209; Subpart A Section 15.33, and Subpart C Section 15.225. The frequencies of the intentional transmitters are 125kHz and 13.56MHz.

The customer has advised that the highest frequency used within the EUT is 800MHz, generated by the IMx6 Processor.

2.2 Equipment Ports

Port	Cable Connected	Connected to
Ethernet	Cat 5 twisted pair	Hub
AC mans (Hub)	Mains cable	120V 60Hz AC

2.3 Relevant standards

2.3.1 Emissions

Regulation Test Standard	Reference Standard	Class/limit	Test order
FCC: 47 CFR Part 15 Section 15.207 (Note 1) Industry Canada (IC): Industry Canada RSS-Gen:2010 (Note 2) Industry Canada RSS-210:2010 (Note 3)	Conducted emissions ANSI C63.4:2009	Limits 47CFR15.207	1

Note 1: Title 47 of the Code of Federal Regulations, Part 15 – Radio Frequency Devices, Subpart C - Intentional Radiators (Not UKAS accredited).

Note 2: RSS-Gen 2010 General Requirements and information for the Certification of Radio Apparatus (Not UKAS accredited).

Note 3: RSS-210:
2010 Licence exempt Radio Apparatus Category 1 Equipment (Not UKAS accredited)

Note 4: The EUT was tested in one mode of operation

3 Test Results

3.1 Conducted emissions (150kHz to 30MHz) Standard Panel

Mode of operation	Description	Mode No.
	Apparatus powered via POE. Hub in turn powered from 120V / 60Hz supply. Call open.	1

Test standard	Test description	Class/limit
Conducted emissions 47CFR15.107 and ANSI C63.4:2009	Conducted emissions	Limits 47CFR15.207

Results	Mode	Figure	Results Tables	Result	Comments
	1	C01	3.1.3 and 3.1.4	Pass	Standard Panel – Neutral conductor
	1	C02	3.1.1 and 3.1.2	Pass	Standard Panel – Live conductor

Note 1: The graphical results, Figures C01 and C02 may be found in Appendix 2 of this report.

Frequency (MHz)	Average Detector. Amplitude (dBuV)	Average Detector Limit (dBuV)	Margin (dB)	Result
0.155	34.2	55.7	21.49	Pass
0.250	36.1	51.8	15.67	Pass
0.285	29.5	50.7	21.16	Pass
0.335	36.5	49.3	13.77	Pass
0.380	36.6	48.3	11.67	Pass
0.555	14.5	47.0	32.5	Pass

Table 3.1.1 Live Conductor: Results measured with the average detector compared to the average detector limit

Frequency (MHz)	Quasi-Peak Detector. Amplitude (dBuV)	Quasi-Peak Detector Limit (dBuV)	Margin (dB)	Result
0.155	50.3	65,7	15.45	Pass
0.250	41,9	61.8	19.91	Pass
0.285	37.3	60.7	23.46	Pass
0.335	38.4	59.3	20.88	Pass
0.380	41.5	58.3	16.8	Pass
0.555	28.2	57.0	28.18	Pass

Table 3.1.2 Live Conductor: Results measured with the quasi-peak detector compared to the quasi-peak detector limit

Frequency (MHz)	Average Detector. Amplitude (dBuV)	Average Detector Limit (dBuV)	Margin (dB)	Result
0.155	34.1	55.7	21.67	Pass
0.250	36.1	51.8	15.71	Pass
0.290	33.0	50.5	17.54	Pass
0.335	34.5	49.3	14.83	Pass
0.380	37.0	48.3	11.31	Pass
0.430	29.9	47.3	17.36	Pass

Table 3.1.3 Neutral Conductor: Results measured with the average detector compared to the average detector limit

Frequency (MHz)	Quasi-Peak Detector. Amplitude (dBuV)	Quasi-Peak Detector Limit (dBuV)	Margin (dB)	Result
0.155	50.6	65.7	15.17	Pass
0.250	42.0	61.8	19.77	Pass
0.290	38.4	60.5	22.08	Pass
0.335	38.8	59.3	20.5	Pass
0.380	42.0	68.3	16.3	Pass
0.430	33.9	57.3	23.4	Pass

Table 3.1.4 Neutral Conductor: Results measured with the quasi-peak detector compared to the quasi-peak detector limit

3.2 Conducted emissions (150kHz to 30MHz) Vandal Resistant Panel

Mode of operation	Description	Mode No.
	Apparatus powered via POE. Hub in turn powered from 120V / 60Hz supply. Call open.	1

Test standard	Test description	Class/limit
Conducted emissions 47CFR15.107 and ANSI C63.4:2009	Conducted emissions	Limits 47CFR15.207

Results	Mode	Figure	Results Tables	Result	Comments
	1	C03	3.2.3 and 3.2.4	Pass	Vandal Resistant Panel – Neutral conductor
	1	C04	3.2.1 and 3.2.2	Pass	Vandal Resistant Panel – Live conductor

Note 1: The graphical results, Figures C03 and C04 may be found in Appendix 2 of this report.

Frequency (MHz)	Average Detector. Amplitude (dBuV)	Average Detector Limit (dBuV)	Margin (dB)	Result
0.150	37.0	56.0	19.03	Pass
0.250	36.1	51.8	15.69	Pass
0.340	26.6	49.2	22,62	Pass
0.380	36.4	48.3	11,84	Pass
0.440	23.8	47.1	23.22	Pass
0.505	27.9	46.0	18.09	Pass

Table 3.2.1 Live Conductor: Results measured with the average detector compared to the average detector limit

Frequency (MHz)	Quasi-Peak Detector. Amplitude (dBuV)	Quasi-Peak Detector Limit (dBuV)	Margin (dB)	Result
0.150	51.8	66.0	14.22	Pass
0.250	41.8	61.8	19.97	Pass
0.340	37.2	59.2	22.04	Pass
0.380	41.8	58.3	16.5	Pass
0.440	31.8	57.1	25.25	Pass
0.505	35.7	56.0	20.29	Pass

Table 3.2.2 Live Conductor: Results measured with the quasi-peak detector compared to the quasi-peak detector limit

Frequency (MHz)	Average Detector. Amplitude (dBuV)	Average Detector Limit (dBuV)	Margin (dB)	Result
0.150	36.3	56.0	19.58	Pass
0.250	35.9	51.8	15.82	Pass
0.350	19.4	49.0	29.56	Pass
0.380	36.6	48.3	11.67	Pass
0.445	25.4	47.0	21.58	Pass
0.510	25.7	46.0	20.28	Pass

Table 3.2.3 Neutral Conductor: Results measured with the average detector compared to the average detector limit

Frequency (MHz)	Quasi-Peak Detector. Amplitude (dBuV)	Quasi-Peak Detector Limit (dBuV)	Margin (dB)	Result
0.150	52.2	66.0	13.8	Pass
0.250	42.7	61.8	19.09	Pass
0.350	36.1	59.0	22.83	Pass
0.380	42.1	58.3	16.22	Pass
0.445	33.1	57.0	23.85	Pass
0.510	34.8	56.0	21.16	Pass

Table 3.2.4 Neutral Conductor: Results measured with the quasi-peak detector compared to the quasi-peak detector limit

Modifications	Required for this test	Modification state
	None	0

4 Summary

4.1 Emissions

Regulation Test Standard	47CFR 15 and ANSI C63.4:2009 RSS-GEN 2010
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Regulation Test Standard	Reference Standard	Class/limit	Result
FCC: 47 CFR Part 15 Section 15.207 (Note 1) Industry Canada (IC): Industry Canada RSS-Gen:2010 (Note 2) Industry Canada RSS-210:2010 (Note 3)	Conducted emissions ANSI C63.4:2009	Limits 47CFR15.207	Pass

Note 1: Title 47 of the Code of Federal Regulations, Part 15 – Radio Frequency Devices, Subpart C - Intentional Radiators (Not UKAS accredited).

Note 2: RSS-Gen 2010 General Requirements and information for the Certification of Radio Apparatus (Not UKAS accredited).

Note 3: RSS-210:
2010 Licence exempt Radio Apparatus Category 1 Equipment (Not UKAS accredited)

Note 4: The EUT was tested in one mode of operation.

4.2 Compliance statement

The NET2 door entry panel with integral radio transmitter, as tested, was shown to meet the requirements of the tests listed in 4.1 of this report.

5 Appendices

5.1 Appendix 1 Conducted emission test method (150kHz to 30MHz)

5.1.1 Test information

Standards	ANSI C63.4:2009
YES Test Method	CEP19
Measurement Uncertainty	±3.5dB
Equipment Used	Rohde & Schwarz ESHS10 receiver Rohde & Schwarz ESH3-Z5 LISN Chase 9206 transient limiter

Note: Specific set-ups for the EUT are shown in EUT test configurations section of this report (where applicable).

5.2 Appendix 2 Conducted emission test results

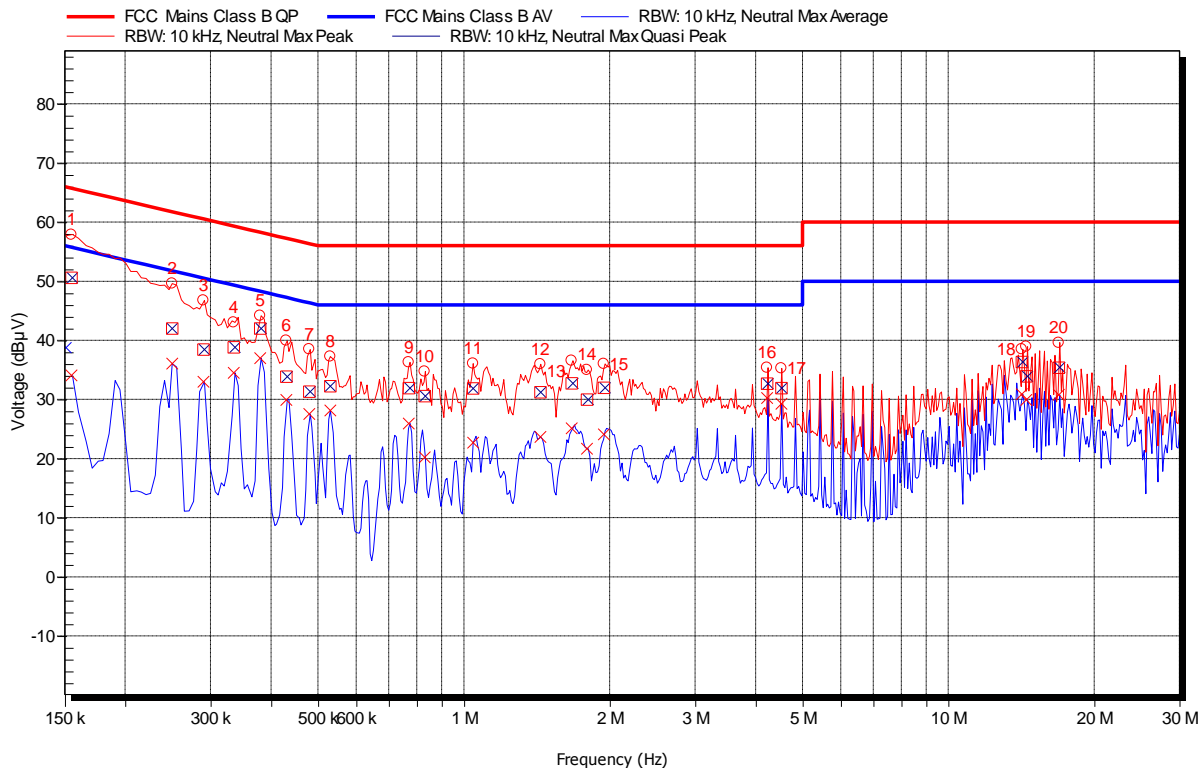


Figure 5.2.1 C01 Conducted emissions results, Inspection Standard Panel (Neutral)

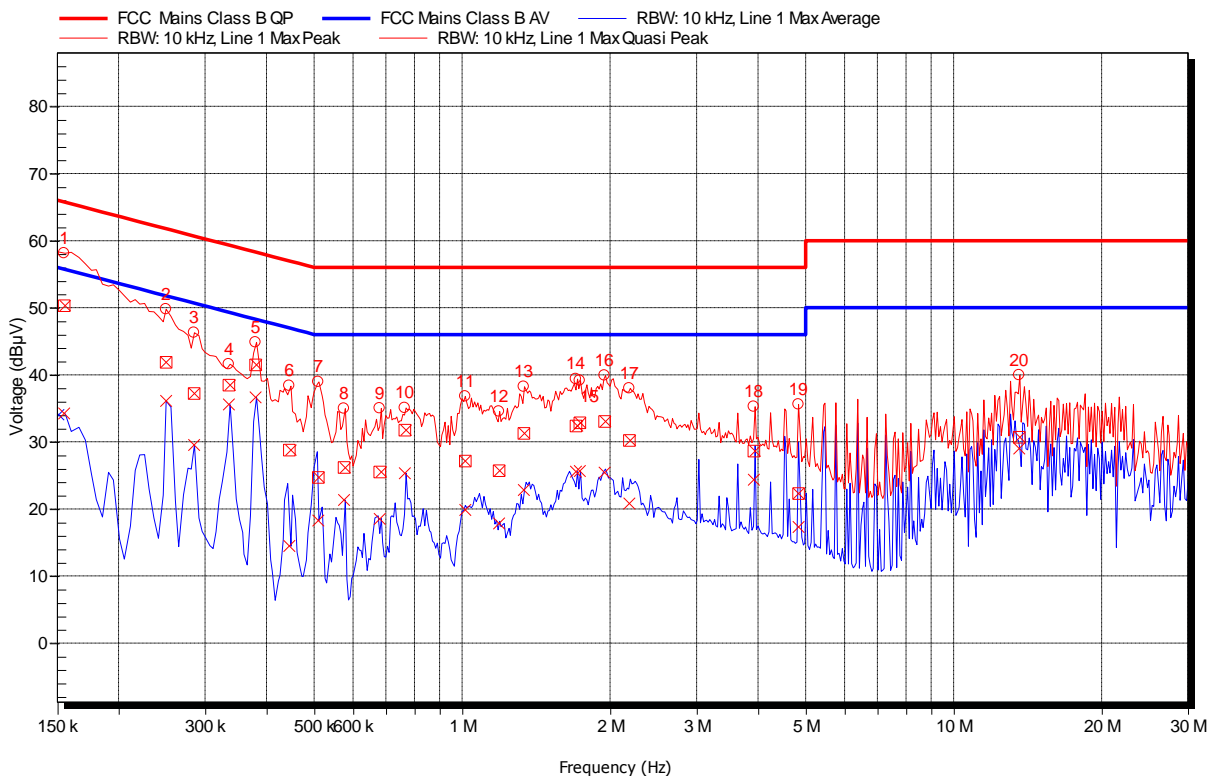


Figure 5.2.2 C02 Conducted emissions results Standard Panel (Live)

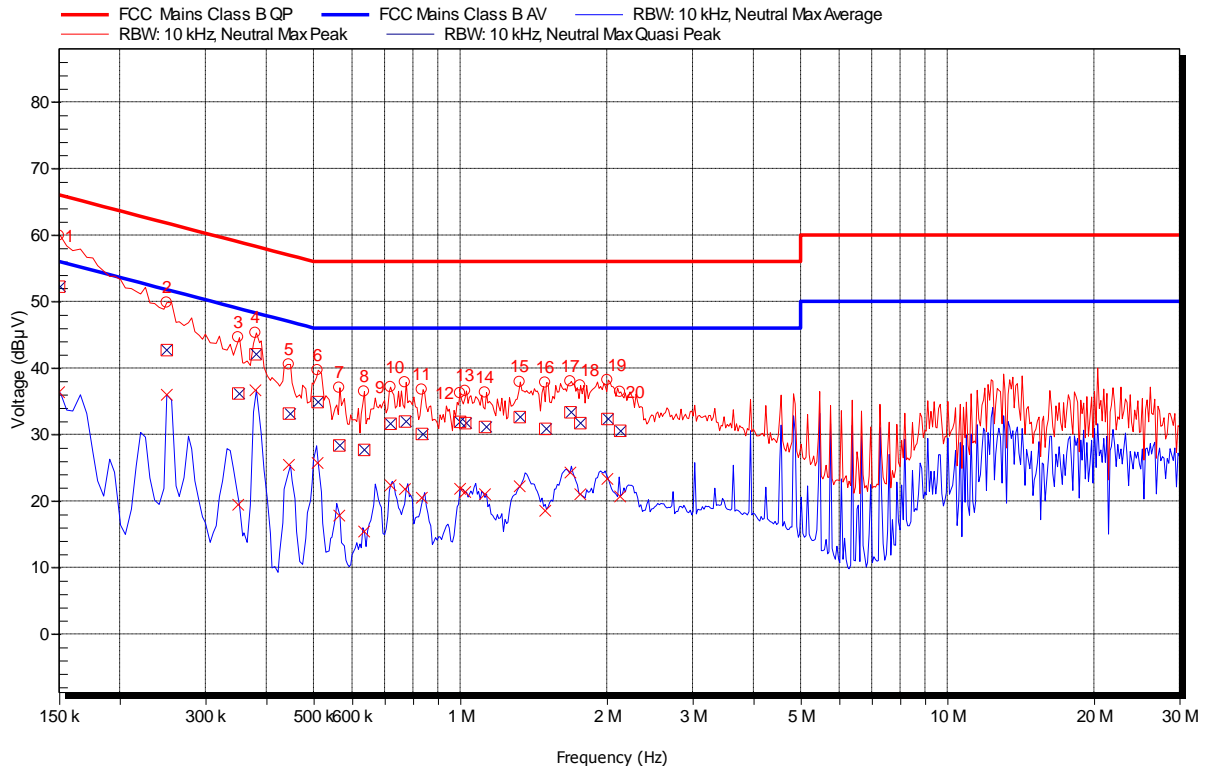


Figure 5.2.3 C03 Conducted emissions results Vandal Resistant Panel (Neutral)

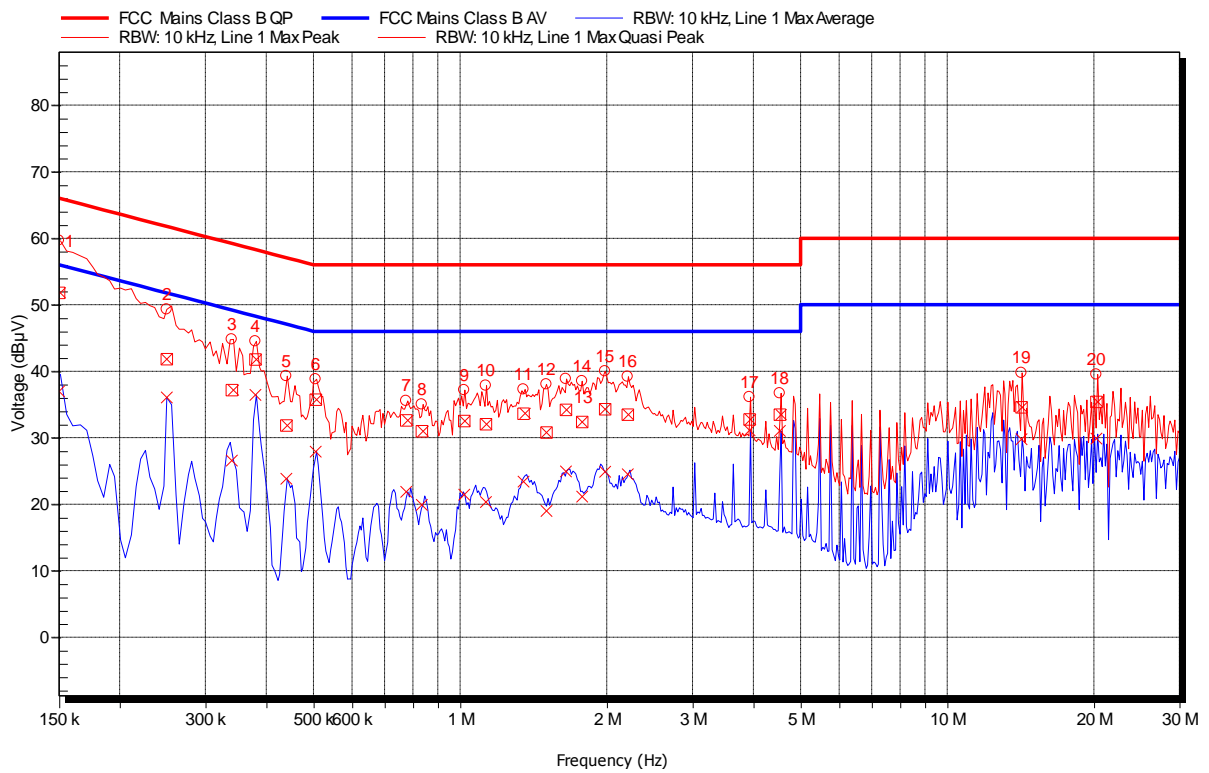


Figure 5.2.4 C04 Conducted emissions results Vandal Resistant Panel (Live)

5.3 Appendix 3 Equipment used

Equipment	No.	Cal Type	Used	Date of last calibration	Calibration interval
Chase CFL 9206 Transient Limiter	78087	In-house	✓	12/01/2015	12 months
R&S ESH3-Z5 LISN	78037	UKAS	✓	23/12/2014	12 months
R&S ESHS 10 Receiver	78035	UKAS	✓	05/01/2015	12 months

NCS - Not on calibration schedule

5.4 Appendix 4 Customers test equipment used

Equipment	Serial number	Cal status
NA	N/A	N/A

5.5 Appendix 5 Modification States

Modification state	Modification
0	As supplied by the customer.

5.6 Appendix 6 Test Report History

Issue	Modification details
1	Original issue of the test report
2	Second issue. Photographs removed.