Report Number	TRN-15313
Customer	Rod Rayner
Contact	Intalect Ltd
Product Type	IT Wireless System
Test Purpose	UMS Energy Performance Test
Sales Order Ref	20100
Works Order Number	WO-5657
Test Item Reference	TI-10237
LAB Test Method Reference	TES-20012
Test Standards	LM-79-08 and Elexon UMS Charge Code process V4.0
Lab Location Reference	UMS
Tested by	Steve Hunt
Date of Test	31/07/2015
Analysed by	Steve Hunt
Number of products tested	5

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Date: 31/07/2015

I.T Wireless NA (ElephantWiFi Enterprise Tracker - Intalect)

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Test Conditions

Measurements were made with an ambient temperature of 23°C +/- 2°C. Measurements were taken only after sufficient time for thermal stabilisation has been allowed.

Test Equipment

Yokogawa WT210 Power Analyzer. Kikusui PCR2000M Stable AC Power Supply

with PC control and data recording

Full data control and recording using Labview software and full integration of the AC Stable Power Supply and Power Analyser

Product Name	I.T Wireless NA (ElephantWiFi Enterprise Tracker - Intalect)
Part/Serial Number	See (Identifier) below
Type of Product	IT Wireless System
Test System Item 1	Ruckus AP
Test System Item 2	POE Brick
Test System Item 3	Nanostation #1
Test System Item 4	Nanostation #2
Ambient Temperature	23.8°C
Manufacturer	Intalect Ltd
Date of Manufacturer	2015
Thermal Management	Passive
Dimmable	Yes
Humidity	<65% RH

Test Item	Identifier	Serial Number
TI-10237A	1	371454302363
TI-10237B	2	171534005108
TI-10237C	3	171594604969
TI-10237D	4	171584304958
TI-10237E	5	241504206294

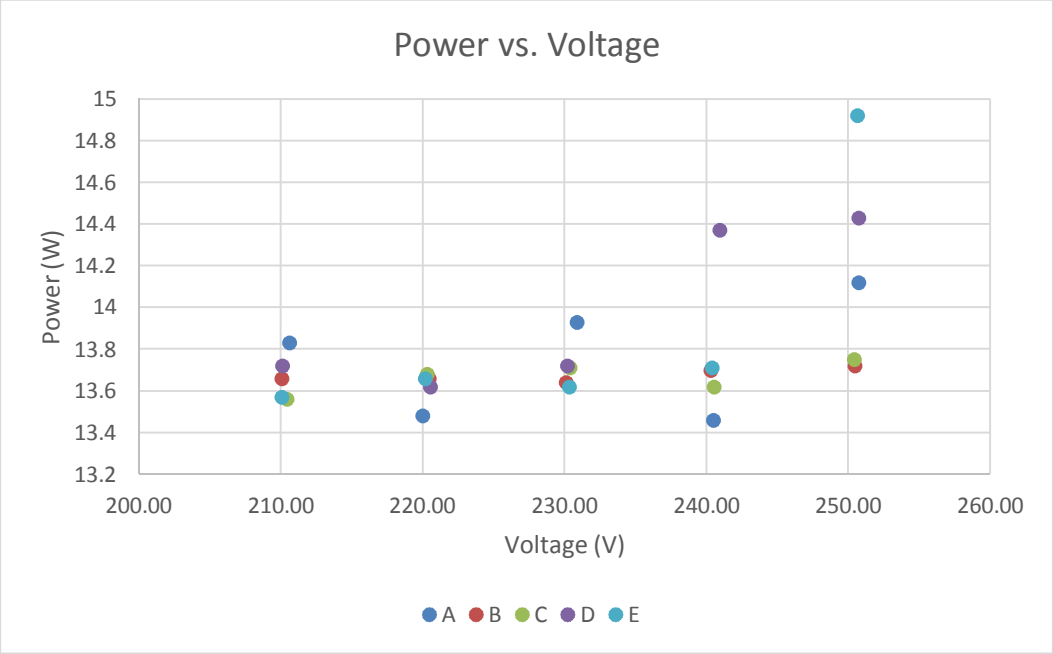
Test Conditions

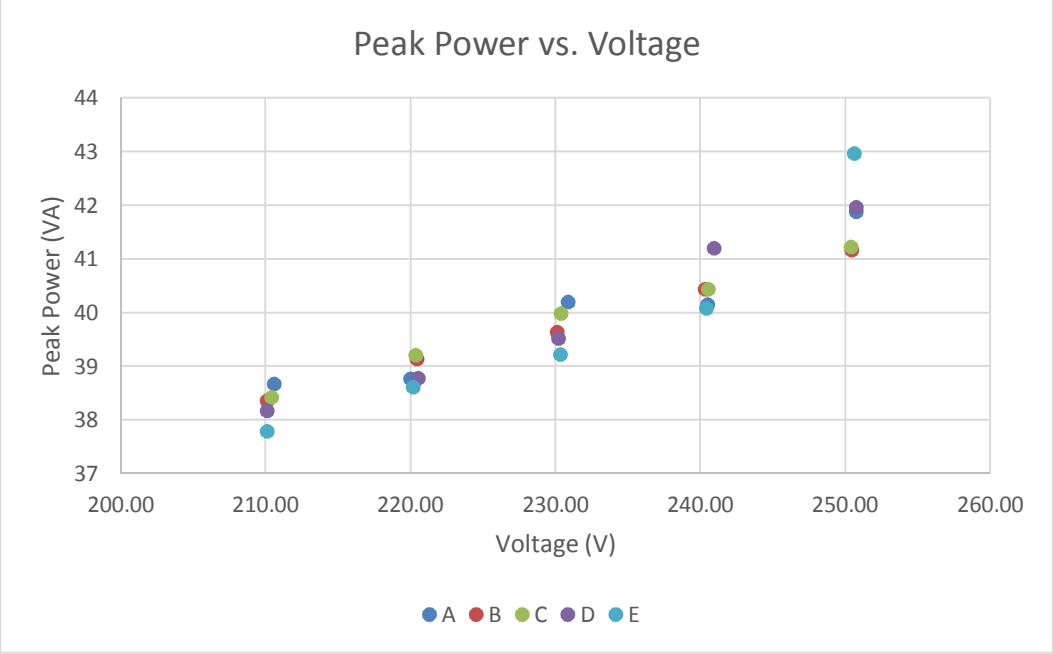
	Before Test	After Test
AC Supply Voltage (V)	251.14V	250.49V
AC Supply Frequency (Hz)	50Hz	50Hz
Voltage RMS Summation of the Harmonic Components (THD	0.09%	0.12%

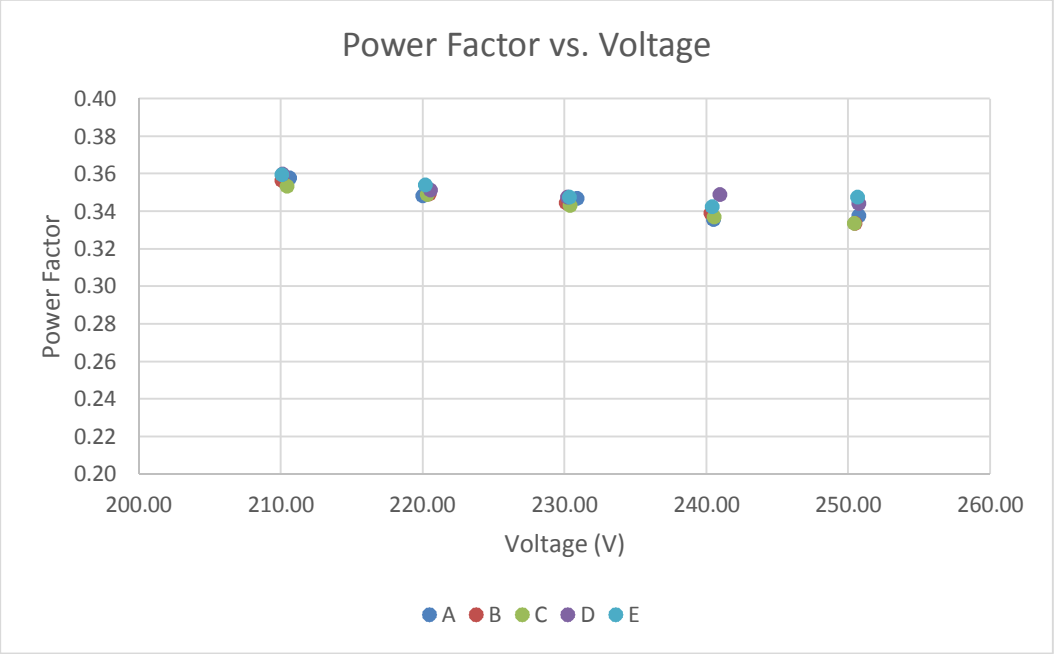
The test items were stabilised according to the electrical power stability of LM79-08. Stabilization is achieved when the difference in electrical power measurement is less than 0.5%. Each test item was stabilised at 250V.

Test Results Summary

These are the summary graphs of the test results for all products tested. The raw results are on page 6 of this test report.







Power factors measured have a Leading phase angle and therefore the driver has capacitive properties.

Measurement Uncertainty

Parameter	Uncertainty
Voltage (300 V, 50/60 Hz)	± 0.061 V_{rms}
Current (200 mA, 50/60Hz)	± 0.07 mA_{rms}
Current (0.5 A, 50/60Hz)	± 0.16 mA_{rms}
Current (5 A, 50/60Hz)	± 0.0016 A_{rms}
Power (300 V, 200 mA, 50/60 Hz)	± 0.032 W_{rms}
Power (300 V, 0.5 A, 50/60 Hz)	± 0.09 W_{rms}
Power (300 V, 5 A, 50/60 Hz)	± 0.0009 kW_{rms}
Frequency (50/60 Hz)	± 0.001 Hz
Power Factor	± 0.0006 PF

Measurements of power of 0.50W or greater are made with an uncertainty of less than or equal to 2% at the 95% confidence level. Measurements of power less than 0.50W are made with an uncertainty of less than or equal to 0.01W at the 95% confidence level.

Full Test Results

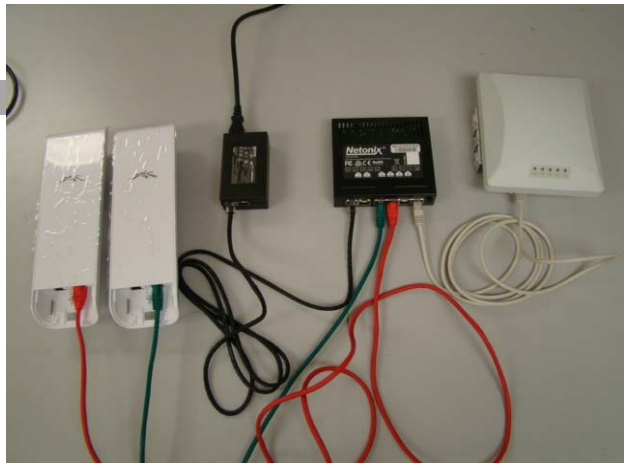
Test Item	Voltage (V)	Current (mA)	Electrical Power (W)	Ambient Temp (°C)	Peak Power (VA)	Power Factor	Leading / Lagging
A	250.77	166.96	14.12	23.83	41.87	0.337	Leading
B	250.48	164.34	13.72	23.78	41.16	0.333	Leading
C	250.44	164.60	13.75	23.74	41.22	0.333	Leading
D	250.79	167.31	14.43	23.84	41.96	0.344	Leading
E	250.67	171.36	14.92	23.73	42.96	0.347	Leading
A	240.52	166.90	13.46	23.94	40.14	0.335	Leading
B	240.36	168.19	13.70	23.80	40.43	0.339	Leading
C	240.59	168.03	13.62	24.05	40.43	0.337	Leading
D	241.00	170.89	14.37	23.92	41.19	0.349	Leading
E	240.44	166.64	13.71	23.97	40.07	0.342	Leading
A	230.93	174.02	13.93	23.87	40.19	0.347	Leading
B	230.14	172.19	13.64	24.06	39.63	0.344	Leading
C	230.42	173.50	13.71	24.22	39.98	0.343	Leading
D	230.26	171.59	13.72	24.22	39.51	0.347	Leading
E	230.37	170.26	13.62	24.01	39.22	0.347	Leading
A	220.05	176.12	13.48	24.12	38.76	0.348	Leading
B	220.49	177.47	13.66	24.09	39.13	0.349	Leading
C	220.38	177.88	13.68	24.18	39.20	0.349	Leading
D	220.57	175.78	13.62	24.22	38.77	0.351	Leading
E	220.23	175.33	13.66	24.17	38.61	0.354	Leading
A	210.64	183.58	13.83	24.14	38.67	0.358	Leading
B	210.13	182.50	13.66	24.23	38.35	0.356	Leading
C	210.46	182.57	13.56	24.25	38.42	0.353	Leading
D	210.14	181.61	13.72	24.29	38.16	0.360	Leading
E	210.13	179.80	13.57	24.35	37.78	0.359	Leading

Test Item Photographs

10237-INFT-WIFINA-11536

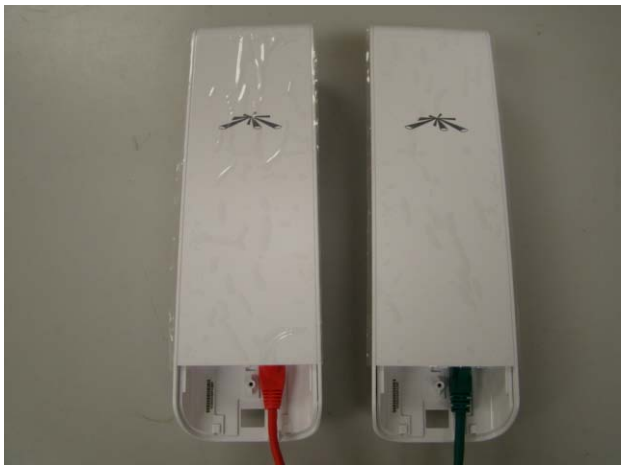
Images of Product(s) under test. Identification of each of the products can be found on page 3 of this report

RUCKUS AP



System Setup

POE

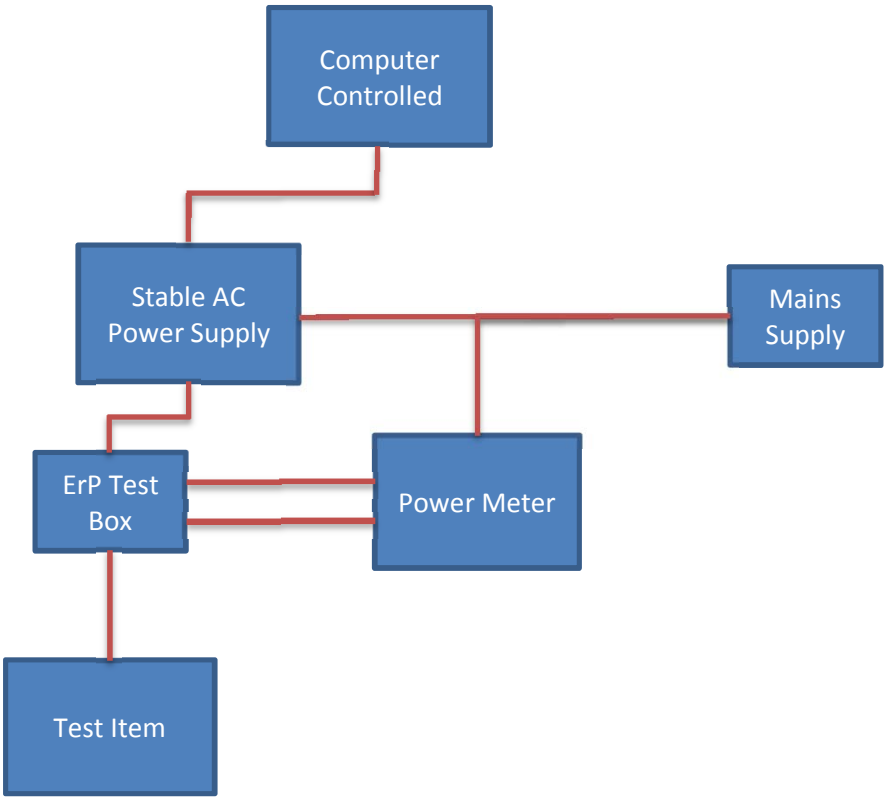


Nanostations

POE Supply

Example of Rating Label

Appendix 1: Test item set-up



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