RADIO PERFORMANCE TEST REPORT
FROM
RFI GLOBAL SERVICES LTD

Partial Test of: Datalogic Scanning. PowerScan, PBT7100 Bar Code Reader

To: FCC Part 15.247: 2008 (Subpart C)
RSS-210 Issue 7 June 2007 and RSS-Gen Issue 2 June 2007

Test Report Serial No:
RFI/RPT1/RP74225JD15B

This Test Report Is Issued Under The Authority Of Steve Flooks, Service Leader:  **pp**	
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1. Customer Information

1.1. Contact Information

Company Name:	Datalogic Scanning, Inc
Address:	959 Terry Street Eugene Oregon 97402-9150 USA

1.2. Manufacturer #1 Information

Company Name:	Datalogic Scanning
Address:	959 Terry Street Eugene Oregon 97402-9150 USA

1.3. Manufacturer #2 Information

Company Name:	Datalogic Scanning Slovakia s.r.o.
Address:	Priloy 588/47-919/26 Zavar Trnava Slovak Republic

2. Equipment Under Test (EUT)

The following information (with the exception of the date of receipt) has been supplied by the customer:

2.1. Identification of Equipment Under Test (EUT)

Description:	*Bluetooth* Barcode Reader
Brand Name:	PowerScan
Model Name or Number:	PBT7100
Serial Number:	ZP0002754
FCC ID Number:	O9N-PBT7K
Industry Canada Certification Number:	3862A-PBT71K

2.2. Description of EUT

The equipment under test was a *Bluetooth* Barcode Reader.

2.3. Modifications Incorporated in the EUT

During the course of testing the EUT was not modified.

2.4. Support Equipment

No support equipment was used to exercise the EUT during testing:

2.5. Additional Information Related to Testing

Technology Tested:	Bluetooth		
Type of Unit:	Transceiver		
Mode:	Basic Rate		
Modulation:	GFSK		
Packet Type: *(Maximum Payload)*	DH5		
Data Rate (Mbit/s):	1		
Channel Spacing:	1 MHz		
Transmit Frequency Range:	2402 to 2480 MHz		
Transmit Channels Tested:	**Channel ID**	**Channel Number**	**Channel Frequency (MHz)**
	Bottom	0	2402
	Middle	39	2441
	Top	78	2480
Receive Frequency Range:	2402 to 2480 MHz		
Receive Channels Tested:	**Channel ID**	**Channel Number**	**Channel Frequency (MHz)**
	Bottom	0	2402
	Middle	39	2441
	Top	78	2480
Power Supply Requirement:	Nominal Voltage	4.2	(V)

3. Test Specification, Methods and Procedures

3.1. Test Specification

Reference:	FCC Part 15.247: 2008 Subpart C
Title:	Code of Federal Regulations, Part 15.247 (47CFR15) (Intentional Radiators operating within the band 2400 MHz to 2483.5 MHz)

Reference:	RSS-210 Issue 7 June 2007
Title:	Low-power Licence-exempt Radio communication Devices (All Frequency Bands): Category I Equipment.

Reference:	RSS-Gen Issue 2 June 2007
Title:	General Requirements and Information for the Certification of Radio communication Equipment.

3.2. Methods and Procedures

The methods and procedures used were as detailed in:

ANSI C63.2 (1996)
Title: American National Standard for Instrumentation - Electromagnetic Noise and Field Strength Instrumentation, 10 Hz to 40 GHz.

ANSI C63.4 (2003)
Title: American National Standard Methods of Measurement of Electromagnetic Emissions from Low Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz.

ANSI C63.5 (1988)
Title: American National Standard for the Calibration of antennas used for Radiated Emission measurements in Electromagnetic Interference (EMI) control.

ANSI C63.7 (1988)
Title: American National Standard Guide for Construction of Open Area Test Sites for performing Radiated Emission Measurements.

CISPR 16-1: (1999)
Title: Specification For Radio Disturbance and Immunity Measuring Apparatus and Methods. Part 1: Radio Disturbance and Immunity Measuring Apparatus.

DA00-705 (2000)
Title: Filing and Frequency Measurement Guidelines for Frequency Hopping Spread Spectrum Systems.

3.3. Definition of Measurement Equipment

The measurement equipment used complied with the requirements of the standards referenced in the methods & procedures section above. Appendix 1 contains a list of the test equipment used.

4. Deviations from the Test Specification

Only EIRP was performed on the EUT at the request of the client.

5. Operation and Configuration of the EUT during Testing

5.1. Operating Modes

The EUT was tested in the following operating modes, unless otherwise stated:

- In *Bluetooth* basic rate test mode connected to and controlled by a *Bluetooth* tester.
- Configured to transmit full power on Bottom, Middle and Top channels.
- Packet size transmitted was DH5.

5.2. Configuration and Peripherals

The EUT was tested in the following configuration:

- Stand alone mode with no accessories.
- All orientations of the EUT exhibited similar results.

6. Summary of Test Results

Range of Measurements	FCC Reference	Industry Canada Reference	Port Type	Result
Transmitter Maximum Peak Output Power	C.F.R. 47 FCC Part 15 Section 15.247(b)(1)	RSS-Gen 4.8 RSS-210 A8.4(2)	Antenna	Complied

6.1. Location of Tests

All the measurements described in this report were performed at the premises of RFI Global Services Ltd, Wade Road, Basingstoke, Hampshire, RG24 8AH.

6.2. Site Registration Numbers

FCC: 209735

IC: 3245B-1

7. Measurements, Examinations and Derived Results

7.1. General Comments

This section contains test results only.

Measurement uncertainties are evaluated in accordance with current best practice. Our reported expanded uncertainties are based on standard uncertainties, which are multiplied by an appropriate coverage factor to provide a statistical confidence level of approximately 95%. Please refer to section 8 for details of measurement uncertainties.

7.2. Test Results

7.2.1. Transmitter Maximum Peak Output Power: (EIRP)

Ambient Temperature: 23ºC Relative Humidity: 33%

Results:

Battery Powered Devices

Channel	EIRP (dBm)	Limit (dBm)	Margin (dB)	Result
Bottom	8.9	30.0	21.1	Complied
Middle	7.7	30.0	22.3	Complied
Top	6.2	30.0	23.8	Complied

Note(s):

1. These tests were performed radiated; therefore the EUT antenna gain is encompassed in the final result and not measurable.

8. Measurement Uncertainty

No measurement or test can ever be perfect and the imperfections give rise to error of measurement in the results. Consequently, the result of a measurement is only an approximation to the value of the measurand (the specific quantity subject to measurement) and is only complete when accompanied by a statement of the uncertainty of the approximation.

The expression of uncertainty of a measurement result allows realistic comparison of results with reference values and limits given in specifications and standards.

The uncertainty of the result may need to be taken into account when interpreting the measurement results.

The reported expanded uncertainties below are based on a standard uncertainty multiplied by an appropriate coverage factor, such that a confidence level of approximately 95% is maintained. For the purposes of this document “approximately” is interpreted as meaning “effectively” or “for most practical purposes”.

Measurement Type	Range	Confidence Level (%)	Calculated Uncertainty
Transmitter Maximum Peak Output Power	Not Applicable	95%	±2.94 dB

The methods used to calculate the above uncertainties are in line with those recommended within the various measurement specifications. Where measurement specifications do not include guidelines for the evaluation of measurement uncertainty, the published guidance of the appropriate accreditation body is followed.

Appendix 1. Test Equipment Used

RFI No.	Instrument	Manufacturer	Type No.	Serial No.	Date Last Calibrated	Cal. Interval (Months)
A1818	Antenna	EMCO	3115	00075692	25 Oct 2008	12
C1164	Cable	Rosenberger Micro-Coax	FA210A10 15007070	43188-1	20 Apr 2008	12
K0002	Site Reference 4421	Rainford EMC	N/A	N/A	26 Aug 2008	12
M1124	Spectrum Analyser	Rohde & Schwarz	ESIB26	100046K	19 Feb 2008	12
M208	Thermometer/Hygrometer	RS Components Ltd	RS212-124	M208-RS212-124	19 Apr 2007	12

NB In accordance with UKAS requirements, all the measurement equipment is on a calibration schedule.