TEST REPORT
FROM
RFI GLOBAL SERVICES LTD

Test of: DL-SKORPIO

To: FCC Part 15.247: 2009 Subpart C, RSS-210 Issue 7 June 2007
and RSS-Gen Issue 2 June 2007

Test Report Serial No:
RFI-RPT-RP77022JD01A

This Test Report Is Issued Under The Authority Of Brian Watson, COO Payments and Consultancy: 	
Checked By:	Nigel Davison
Signature: 	
Date of Issue:	05 May 2010

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1. Customer Information

Company Name:	Datalogic Mobile s.r.l.
Address:	Via S.Vitalino, 13 Lippo di Calderara di Reno (BO) 40012 - Italy Italy

2. Summary of Testing

2.1. General Information

Specification Reference:	47CFR15.247
Specification Title:	Code of Federal Regulations Volume 47 (Telecommunications) 2009: Part 15 Subpart C (Radio Frequency Devices) - Section 15.247
Specification Reference:	RSS-210 Issue 7 June 2007
Specification Title:	Low-power Licence-exempt Radio communication Devices (All Frequency Bands): Category I Equipment.
Specification Reference:	RSS-GEN Issue 2 June 2007
Specification Title:	General Requirements and Information for the Certification of Radio communication Equipment
Site Registration:	FCC: 209735 Industry Canada: 3245B-2
Location of Testing:	RFI Global Services Ltd, Wade Road, Basingstoke, Hampshire, RG24 8AH.
Test Dates:	18 February 2010

2.2. Summary of Test Results

FCC Reference (47CFR)	Industry Canada Reference	Measurement	Result
Part 15.247(b)(3)	RSS-Gen 4.9 RSS-210 A8.4(4)	Transmitter Maximum Equivalent Isotropic Radiated Power (EIRP)	✓

Key to Results

✓ = Complied ✗ = Did not comply

2.3. Methods and Procedures

Reference:	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.

2.4. Deviations from the Test Specification

For the measurements contained within this test report, there were no deviations from, additions to, or exclusions from the test specification identified above.

3. Equipment Under Test (EUT)

3.1. Identification of Equipment Under Test (EUT)

Brand Name:	Datalogic Mobile s.r.l.
Model Name or Number:	DL-SKORPIO
Serial Number:	D10A02477
IC Number:	3862E-M1120
FCC ID:	U4G0053

3.2. Description of EUT

The equipment under test is DL-SKORPIO 701-902 and DL-SKORPIO 701-902-G Mobile Computer with Wi-Fi (802.11 b/g) Radio Card and *Bluetooth* capabilities.

3.3. Modifications Incorporated in the EUT

No modifications were applied to the EUT during testing.

3.4. Additional Information Related to Testing

Tested Technology:	WiFi 802.11b/g modes			
Power Supply Requirement:	4.2 V			
Type of Unit:	Transceiver			
Channel Spacing:	1 MHz			
Modulation:	DBPSK	BPSK	CCK	64-QAM
Data Rate (Mbit/s):	1 Mbps,	6 Mbps	11 Mbps	54 Mbps
Maximum Transmit EIRP Peak:	15.1 dBm			
Maximum Transmit EIRP Average:	13.8 dBm			
Transmit Frequency Range:	2412 MHz to 2462 MHz			
Transmit Channels Tested:	**Channel ID**	**Channel Number**	**Channel Frequency (MHz)**	
	Bottom	1	2412	
	Middle	6	2437	
	Top	11	2462	
Receive Frequency Range:	2412 MHz to 2462 MHz			
Receive Channels Tested:	**Channel ID**	**Channel Number**	**Channel Frequency (MHz)**	
	Bottom	1	2412	
	Middle	6	2437	
	Top	11	2462	

3.5. Support Equipment

The following support equipment was used to exercise the EUT during testing:

Description:	Charging Unit
Brand Name:	Datalogic mobile s.r.l.
Model Name or Number:	No stated
Serial Number:	D07N0184

Description:	AC mains adapter
Brand Name:	Power-win technology Corp
Model Name or Number:	PW-060A-01Y140
Serial Number:	72769778

4. Operation and Monitoring of the EUT during Testing

4.1. Operating Modes

The EUT was tested in the following operating mode(s):

- Transmit Mode. Set to transmit on top, middle and bottom channels on all data rates to establish the highest power levels i.e. 802.11b: 1 Mbps (DBPSK), 802.11g: 6 Mbps (BPSK), 11 Mbps (CCK) and 54 Mbps (64-QAM).

4.2. Configuration and Peripherals

The EUT was tested in the following configuration(s):

- The EUT was configured with the charger port connected to an external 110V AC supply via an AC charger.
- EUT was configured in the x-axis, Y-axis and Z-axis to establish the worst-case position and acquire the maximum output power.

5. Measurements, Examinations and Derived Results

5.1. General Comments

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 6. Measurement Uncertainty* for details.

5.2. Test Results

5.2.1. Transmitter Maximum Equivalent Isotropic Radiated Power (EIRP)

Test Summary:

FCC Part:	15.247(b)(3)
Test Method Used:	ANSI TIA-603-C-2004 and FCC CFR Part 2

Environmental Conditions:

Temperature (°C):	22
Relative Humidity (%):	22

Results: 802.11b Transmitter EIRP Peak

Channel Number	Frequency (GHz)	Data Rate	Peak TX Power (dBm)	Limit (dBm)	Margin (dB)	Result
1	2.412	1 Mbps	13.0	30	17.0	Complied
6	2.437	1 Mbps	12.3	30	17.7	Complied
11	2.462	1 Mbps	12.6	30	17.4	Complied
1	2.412	11 Mbps	13.8	30	16.2	Complied
6	2.437	11 Mbps	13.5	30	16.5	Complied
11	2.462	11 Mbps	14.7	30	15.3	Complied

Results: 802.11g Transmitter EIRP Peak

Channel Number	Frequency (GHz)	Data Rate	Peak TX Power (dBm)	Limit (dBm)	Margin (dB)	Result
1	2.412	1 Mbps	11.5	30	18.5	Complied
6	2.437	1 Mbps	10.4	30	19.6	Complied
11	2.462	1 Mbps	13.1	30	16.9	Complied
1	2.412	11 Mbps	15.1	30	14.9	Complied
6	2.437	11 Mbps	13.7	30	16.3	Complied
11	2.462	11 Mbps	14.1	30	15.9	Complied

Transmitter Maximum Equivalent Isotropic Radiated Power (EIRP) (Continued)

Results: 802.11b Transmitter EIRP Average

Channel Number	Frequency (GHz)	Data Rate	Average TX Power (dBm)	Limit (dBm)	Margin (dB)	Result
1	2.412	1 Mbps	12.4	30.0	17.6	Complied
6	2.437	1 Mbps	11.7	30.0	18.3	Complied
11	2.462	1 Mbps	12.0	30.0	18.0	Complied
1	2.412	11 Mbps	11.8	30.0	18.2	Complied
6	2.437	11 Mbps	11.5	30.0	18.5	Complied
11	2.462	11 Mbps	12.7	30.0	17.3	Complied

Results: 802.11g Transmitter EIRP Average

Channel Number	Frequency (GHz)	Data Rate	Average TX Power (dBm)	Limit (dBm)	Margin (dB)	Result
1	2.412	1 Mbps	12.2	30.0	17.8	Complied
6	2.437	1 Mbps	11.1	30.0	18.9	Complied
11	2.462	1 Mbps	13.8	30.0	16.2	Complied
1	2.412	11 Mbps	12.2	30.0	17.8	Complied
6	2.437	11 Mbps	10.8	30.0	19.2	Complied
11	2.462	11 Mbps	11.2	30.0	18.8	Complied

6. 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
Equivalent Isotropic Radiated Power (EIRP)	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)
A1299	Antenna	Schaffner	CBL6143	5094	13 Aug 2009	12
A1534	Pre Amplifier	Hewlett Packard	8449B OPT H02	3008A00405	Calibrated before use	-
A1818	Antenna	EMCO	3115	00075692	27 Nov 2009	12
A1830	Pulse Limiter	Rhode & Schwarz	ESH3-Z2	100668	05 Jan 2010	12
A1975	High Pass Filter	AtlanTecRF	AFH-03000	090424010	Calibrated before use	-
A288	Antenna	Chase	CBL6111A	1589	13 Mar 2009	12
C363	Cable	Rosenberger	RG142	None	29 Mar 2009	12
K0002	3m RSE Chamber	Rainford EMC	N/A	N/A	01 Sep 2009	12
M1124	Spectrum Analyser	Rohde & Schwarz	ESIB26	100046K	09 Mar 2009	12
M1263	Test Receiver	Rohde & Schwarz	ESIB7	100265	22 Apr 2009	12

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