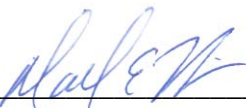




Test Certificate

A sample of the following product received on April 3, 2008 and tested on April 3, April 4 and April 5, 2008 complied with the requirements of EN 301 489-17 V1.2.1 "ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 17: Specific conditions for Wideband data and HIPERLAN equipment" and EN 301 489-1 V1.6.1 "Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements" given the measurement uncertainties as detailed in Elliott report R71331.

Summit Data Communications Model SDC-CF10AG



Mark E. Hill
Staff Engineer

Summit Data
Communications

Printed Name



Testing Cert #2016-01

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*Electromagnetic Compatibility Test Report
For EN 301 489-17 V1.2.1 / EN 301 489-1 v1.6.1
ElectroMagnetic Compatibility (EMC) standard for radio
equipment and services;
Part 1: Common technical requirements and
Part 17: Specific conditions for Wideband data and
HIPERLAN equipment
on the
Summit Data Communications
Model: SDC-CF10AG*

COMPANY: Summit Data Communications
526 South Market Suite 407
Akron, OH 44311

TEST SITE: Elliott Laboratories, Inc.
684 W. Maude Ave
Sunnyvale, CA 94085

TEST SITE: Elliott Laboratories, Inc.
41039 Boyce Road.
Fremont, CA. 94538-2435

REPORT DATE: April 10, 2008

REISSUE DATE: April 22, 2008

FINAL TEST DATES: April 3, April 4 and April 5, 2008

AUTHORIZED SIGNATORY: _____


Mark E. Hill
Staff Engineer

Testing Cert #2016-01

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REVISION HISTORY

Revision #	Date	Comments	Modified By
1	April 15, 2008	Initial Release	David Guidotti
2	April 22, 2008	Reissued to correct model name	David Guidotti

TABLE OF CONTENTS

COVER PAGE.....1

REVISION HISTORY2

TABLE OF CONTENTS3

SCOPE.....4

OBJECTIVE.....4

STATEMENT OF COMPLIANCE.....4

DEVIATIONS FROM THE STANDARD.....5

TEST RESULTS.....5

 EMISSIONS TESTING.....5

 IMMUNITY TESTING.....6

 MEASUREMENT UNCERTAINTIES.....7

EQUIPMENT UNDER TEST (EUT) DETAILS.....8

 GENERAL.....8

 OTHER EUT DETAILS.....8

 EUT CLASSIFICATION8

 ENCLOSURE.....8

 MODIFICATIONS.....8

 SUPPORT EQUIPMENT.....9

 EUT INTERFACE PORTS9

 EUT OPERATION DURING IMMUNITY TESTING.....9

 EUT PERFORMANCE CRITERIA.....9

IMMUNITY TEST DESCRIPTIONS10

 GENERAL INFORMATION.....10

IMMUNITY MEASUREMENT INSTRUMENTATION10

 ELECTROSTATIC DISCHARGE TEST SYSTEM10

 ELECTROMAGNETIC FIELD TEST SYSTEM.....10

 INSTRUMENT CALIBRATION.....10

EUT PLACEMENT – IMMUNITY TESTING11

IMMUNITY TEST PROCEDURES12

 EUT AND CABLE PLACEMENT.....12

 APPLICATION OF ELECTROSTATIC DISCHARGES12

 APPLICATION OF ELECTROMAGNETIC FIELD.....12

 APPENDIX A: Test Equipment Calibration Data1

 APPENDIX B: Test Data Log Sheets.....2

 APPENDIX C: ESD Test Configuration Photographs3

 APPENDIX D: Radiated Immunity Test Configuration Photographs.....5

SCOPE

The European Committee for Electrotechnical Standardization (CENELEC), the European Telecommunications Standards Institute (ETSI) and the International Electrotechnical Commission (IEC) publish standards regarding the electromagnetic compatibility of electronic devices. Electromagnetic compatibility tests have been performed on the Summit Data Communications model SDC-CF10AG in accordance with these standards.

Electromagnetic compatibility test data has been taken pursuant to the relevant requirements of EN 301 489-17 V1.2.1 "ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 17: Specific conditions for Wideband data and HIPERLAN equipment" and EN 301 489-1 V1.6.1 "Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements". Tests were performed in accordance with the current, published versions of the basic standards referenced in EN 301 489-17 as outlined in Elliott Laboratories test procedures. The test data has been provided as an appendix to this report for reference.

The test results recorded herein are based on a single type test of the Summit Data Communications model SDC-CF10AG and therefore apply only to the tested sample. The sample was selected and prepared by Ron Seide of Summit Data Communications.

OBJECTIVE

The objective of the manufacturer is to comply with EN 301 489-17 V1.2.1. In the case of most equipment, this document requires testing to other EN specifications using the criteria contained in EN 301 489-17 and EN 301 489-1

In order to demonstrate compliance, the manufacturer or a contracted laboratory makes measurements and takes the necessary steps to ensure that the equipment complies with the appropriate technical standards.

STATEMENT OF COMPLIANCE

The tested sample of Summit Data Communications model SDC-CF10AG complied with the requirements of EN 301 489-17 V1.2.1 given the performance criteria as specified by the manufacturer.

Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product that could result in increased emissions should be checked to ensure compliance has been maintained (i.e., printed circuit board layout changes, different enclosure, different line filter or power supply, harnessing and/or interface cable changes, etc.).

DEVIATIONS FROM THE STANDARD

No deviations were made from the EN 301 489-17 V1.2.1 standards.

TEST RESULTS

The following tests were performed on the Summit Data Communications model SDC-CF10AG. The results are based upon performance criteria defined by the manufacturer. The actual test results and associated performance criteria are contained within an appendix of this report.

EMISSIONS TESTING

Test	Port	Basic Standard	Level	Compliance Status
Radiated Emissions	Enclosure	EN 55022	-	N/A – Note 1
Conducted Emissions	AC Power	EN 55022	-	N/A – Note 1
Conducted Emissions	DC Power	EN 55022	-	N/A – Note 1
Harmonic Current Emissions	AC Power	EN 61000-3-2	-	N/A – Note 1
Voltage Fluctuations	AC Power	EN 61000-3-3	-	N/A – Note 1
Conducted Emissions - Telecom	-	EN 55022	-	N/A – Note 1

Note 1 – The EUT is a radio module. Compliance with the above requirements would be dependent on the host system and would be covered when the host system is evaluated.

IMMUNITY TESTING

Test	Basic Standard	Level Required	Level Tested	Criterion Met	Status
Radio frequency Electromagnetic Field	EN 61000-4-3	80-2000 MHz, 3 V/m, 80% 1 KHz AM	80-2500 MHz, 3 V/m, 80% 1 KHz AM	A / CT / CR	Complied
ElectroStatic Discharge	EN 61000-4-2	4 kV CD, 8 kV AD	4 kV CD, 8 kV AD	A / TT / TR	Complied
Fast Transients Common Mode – AC Power Ports	EN 61000-4-4	N/A – Note 1			
Fast Transients Common Mode DC Power Ports	EN 61000-4-4	N/A – Note 1			
Fast Transients Common Mode - Signal, Control, and Telecommunications Ports	EN 61000-4-4	N/A – Note 1			
Radio frequency Common Mode,, AC Power Port	EN 61000-4-6	N/A – Note 1			
Radio frequency Common Mode, DC Power Ports	EN 61000-4-6	N/A – Note 1			
Radio frequency Common Mode, Signal, Control, and Telecommunications Ports	EN 61000-4-6	N/A – Note 1			
Vehicular Surges	ISO 7637-1, ISO 7637-2	N/A – Note 1			
Voltage Dips and Interrupts	EN 61000-4-11	N/A – Note 1			
Surge, AC Power Port	EN 61000-4-5	N/A – Note 1			
Surge, Telecommunications ports	EN 61000-4-5	N/A – Note 1			

Note 1 – The EUT is a radio module. Compliance with the above requirements would be dependent on the host system and would be covered when the host system is evaluated. The EUT is powered from a host system and does not have any interface cables.

MEASUREMENT UNCERTAINTIES

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the test results be included in the report. The measurement uncertainties given below are based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a 95% confidence level and were calculated in accordance with NAMAS document LAB 34. For emissions tests, the uncertainties were calculated using the approach described in CISPR 16-4-2:2003 and the levels were found to be below levels of Ucispr and therefore no adjustment of the data for measurement uncertainty is required.

Measurement Type	Measurement Unit	Frequency Range	Expanded Uncertainty
	Pst, Plt	N/A	$\pm 3.46 \%$
Radiated Immunity	V/m	80 – 2500 MHz	- 26.3%, + 29.97%
ESD	KV	N/A	$\pm 8.6\%$

EQUIPMENT UNDER TEST (EUT) DETAILS**GENERAL**

The Summit Data Communications model SDC-CF10AG is a wireless local area network (802.11 or Wi-Fi) module. Since the EUT would be placed on a table top during operation, the EUT was treated as table-top equipment during testing to simulate the end-user environment. The EUT power is normally supplied by a host system.

The sample was received on April 3, 2008 and tested on April 3, April 4 and April 5, 2008. The EUT consisted of the following component(s):

Manufacturer	Model	Description	Serial Number
Summit Data Communications	SDC-CF10AG	802.11a/g Compact Flash Module	CF10AG07122-0000376

OTHER EUT DETAILS

The following EUT details should be noted: The EUT was tested in the transmit and non-transmit modes.

EUT CLASSIFICATION

The radio module is designed to be installed into hosts systems that could be classified as either portable or fixed.

ENCLOSURE

The EUT does not have an enclosure as it is designed to be installed within the enclosure of a host computer or system. The actual radio module is in a metal enclosure consistent with a compact flash form factor.

MODIFICATIONS

The EUT did not require modifications during testing in order to comply with the immunity specification.

SUPPORT EQUIPMENT

The following equipment was used as local support equipment for immunity testing:

Manufacturer	Model	Description	Serial Number
Hp	iPAQ	PDA	00039-146-717-467
Sycard	CFextend160B	Compact Flash Extender	C169B-6283

The following equipment was used as remote support equipment for immunity testing:

Manufacturer	Model	Description	Serial Number
Cisco	1130AG	WiFi Wireless AP	FTX1040T17J

EUT INTERFACE PORTS

The EUT has no interface ports. The card was tested outside of the host system via the use of an extender card.

EUT OPERATION DURING IMMUNITY TESTING

During immunity testing the EUT will be exercised by pinging to a communication link (AP).

Normal operation is indicated by the host system and is monitored by the host system.

EUT PERFORMANCE CRITERIA
Criterion A /CT / CR:

For Transmit mode testing: during and after testing the EUT shall continue to transmit and link to the remote AP. A degradation of performance is allowed providing no change of the actual mode of operation (e.g. unintended transmission) or stored data is allowed. After the test, the apparatus shall continue to operate as intended.

For unintentional transmit mode testing: during and after testing the EUT shall not transmit. Confirmation of transmission was performed using a spectrum analyzer.

IMMUNITY TEST DESCRIPTIONS

GENERAL INFORMATION

Final test measurements were taken on April 3, 2008 at the Elliott Laboratories Test Site located at 684 West Maude Avenue, Sunnyvale, California.

Final test measurements were taken on April 4 and April 5, 2008 at the Elliott Laboratories Test Site located at 41039 Boyce Road, Fremont, California.

Considerable engineering effort has been expended to ensure that the facilities conform to all pertinent CENELEC and IEC standards.

IMMUNITY MEASUREMENT INSTRUMENTATION

ELECTROSTATIC DISCHARGE TEST SYSTEM

An ESD simulator is used for all testing. It is capable of applying electrostatic discharges in both contact discharge mode to 8 kV and air discharge mode to 15 kV in both positive and negative polarities in accordance with the EN 61000-4-2 basic EMC publication.

ELECTROMAGNETIC FIELD TEST SYSTEM

A signal generator and power amplifiers are used to provide a signal at the appropriate power and frequency to an antenna to obtain the required electromagnetic field at the position of the EUT in accordance with the EN61000-4-3 basic EMC publication.

INSTRUMENT CALIBRATION

All test equipment is regularly checked to ensure that performance is maintained in accordance with the manufacturer's specifications. An appendix of this report contains the list of test equipment used and calibration information.

EUT PLACEMENT – IMMUNITY TESTING

EN 61000-4-2 specifies that the EUT shall be placed above a ground reference plane. For tabletop equipment, the standard specifies that a 1.6 by 0.8 meter metal sheet, connected to the reference ground plane via a metal strap with two 470 k Ω resistors in series, shall be placed on a 0.8m high, non-conductive table. The EUT and attached cables are isolated from this metal sheet by 0.5 millimeter thick insulating material. EN61000-4-2 states that floor mounted equipment shall be placed on insulating supports so that the equipment and associated interface cables are 10 centimeters above the reference ground plane. During the tests, the EUT was positioned over a ground reference plane in conformance with these requirements.

EN61000-4-3 specifies that the test be performed in a shielded chamber meeting the field uniformity requirements described in this basic EMC publication. Tabletop EUTs are to be placed on an 80 cm high, non-conducting table and floor mounted equipment shall be positioned 10 cm above the floor of the chamber. During the EN61000-4-3 test, the EUT was positioned in a shielded, anechoic test chamber in conformance with this requirement.

IMMUNITY TEST PROCEDURES

EUT AND CABLE PLACEMENT

The EUT and any peripherals are located at the center of the table for tabletop devices and in the center of the ground plane with the insulating support for floor-standing devices. The standards require that interconnecting cables be connected to the available ports of the unit and that the placement of the unit and the attached cables simulate a typical installation, so far as practicable.

APPLICATION OF ELECTROSTATIC DISCHARGES

The points of application of the test discharges directly to the EUT are determined after consideration of the parts of the EUT that are accessible to the operator during normal operation. Contact and air discharges are applied to the EUT. Contact discharges are also applied to the coupling planes to simulate nearby ESD events.

APPLICATION OF ELECTROMAGNETIC FIELD

The electromagnetic field is established at the front edge of the EUT.

The frequency test signal is swept across the frequency range of the test using a forward power level necessary to obtain the required field strength at the EUT. The field is amplitude modulated using a 1KHz sine wave to a depth of 80% in accordance with EN 61000-4-3.

The test is repeated with each of the four sides of the EUT facing the field generating antenna. For small, portable products the test is also performed with the top and bottom sides of the EUT facing the antenna.

APPENDIX A: Test Equipment Calibration Data

1 Page

ESD, 03-Apr-08

Engineer: Joe What

<u>Manufacturer</u>	<u>Description</u>	<u>Model #</u>	<u>Asset #</u>	<u>Cal Due</u>
Hewlett Packard	EMC Spectrum Analyzer, 9 kHz - 6.5 GHz	8595EM	787	19-Feb-09
Schaffner	ESD Gun	NSG-435	1491	13-Aug-08

Radiated Immunity, 80 - 1000 MHz, 05-Apr-08

Engineer: vnarayan

<u>Manufacturer</u>	<u>Description</u>	<u>Model #</u>	<u>Asset #</u>	<u>Cal Due</u>
Rohde & Schwarz	Power Meter, Dual Channel	NRVD	1071	11-Jun-08
Rohde & Schwarz	Signal Generator, 9 kHz-2.080 GHz	SMY02	1302	29-Oct-08
Werlatone	Directional Coupler, 0.1-1000 MHz, 40dB, 500w	C6021	1533	N/A
ETS Lindgren	Biconilog Antenna 26 MHz - 3 GHz, Radiated Immunity Only	3140B	1775	N/A
Rohde & Schwarz	Power Sensor, 1 uW-100 mW, DC-18 GHz, 50ohms	NRV-Z51	1797	21-Aug-08
Amplifier Research	Amplifier, 250W, 1000 Amps	250W1000A	1809	N/A

Radiated Immunity, 80 - 2500 MHz, 5-Apr-08

Engineer: Chris Groat

<u>Manufacturer</u>	<u>Description</u>	<u>Model #</u>	<u>Asset #</u>	<u>Cal Due</u>
Rohde & Schwarz	Power Meter, Dual Channel	NRVD	1071	11-Jun-08
Hughes	Amplifier, 2 - 4 GHz (TWT)	8020H01	1259	N/A
Comtech	Amplifier, 1-2 GHz (TWT)	AR1929-50	1281	N/A
Werlatone	Directional Coupler, 1000-3000 MHz, 30dB, 100w	C6710	1532	N/A
Werlatone	Directional Coupler, 0.1-1000 MHz, 40dB, 500w	C6021	1533	N/A
Rohde & Schwarz	Power Sensor 100 uW - 2 Watts (w/ 20 dB pad, SN BJ5155)	NRV-Z32	1536	12-Jul-08
Elliott Laboratories	RI, 61000-4-3 (3rd Ed.), 80MHz-2.7 GHz	Chamber #5 Ve	1560	15-Apr-08
ETS Lindgren	Biconilog Antenna 26 MHz - 3 GHz, Radiated Immunity Only	3140B	1775	N/A
EMCO	Antenna, Horn, 1-18 GHz (SA40-Purple)	3115	1779	07-Apr-08
Anritsu	Signal Generator, 100MHz-20GHz	68347C	1785	N/A
Amplifier Research	Amplifier, 250W, 1000 Amps	250W1000A	1809	N/A

APPENDIX B: Test Data Log Sheets

ELECTROMAGNETIC COMPATABILITY

TEST LOGS

T71257 8 Pages



EMC Test Data

Client:	Summit Data Communications	Job Number:	J71248
Model:	SDC-CF10AG	T-Log Number:	T71257
Contact:	Ron Seide	Account Manager:	Dean Eriksen
Emissions Standard(s):	EN 301 489-17 v1.2.1	Class:	-
Immunity Standard(s):	EN301 489-1 V1.6.1 (2005-09)	Environment:	Wireless

EMC Test Data

For The

Summit Data Communications

Model

SDC-CF10AG

Date of Last Test: 4/7/2008



EMC Test Data

Client:	Summit Data Communications	Job Number:	J71248
Model:	SDC-CF10AG	T-Log Number:	T71257
Contact:	Ron Seide	Account Manger:	Dean Eriksen
Emissions Standard(s):	EN 301 489-17 v1.2.1	Class:	-
Immunity Standard(s):	EN301 489-1 V1.6.1 (2005-09)	Environment:	Wireless

EUT INFORMATION

The following information was collected during the test session(s).

General Description

The EUT is a wireless local area network (802.11 or Wi-Fi) module. Since the EUT would be placed on a table top during operation, the EUT was treated as table-top equipment during testing to simulate the end-user environment. The EUT power is normally supplied by a host system.

Equipment Under Test

Manufacturer	Model	Description	Serial Number	FCC ID
Summit Data Communications	SDC-CF10AG	802.11a/g Compact Flash Module	CF10AG07122-0000376	TWG-SDCCF10AG

Other EUT Details

The following EUT details should be noted: The EUT was tested in the transmit and non-transmit modes.

EUT Enclosure

The EUT does not have an enclosure as it is designed to be installed within the enclosure of a host computer or system.

Modification History

Mod. #	Test	Date	Modification
1			
2			
3			

Modifications applied are assumed to be used on subsequent tests unless otherwise stated as a further modification.



EMC Test Data

Client:	Summit Data Communications	Job Number:	J71248
Model:	SDC-CF10AG	T-Log Number:	T71257
Contact:	Ron Seide	Account Manger:	Dean Eriksen
Emissions Standard(s):	EN 301 489-17 v1.2.1	Class:	-
Immunity Standard(s):	EN301 489-1 V1.6.1 (2005-09)	Environment:	Wireless

Test Configuration #1

The following information was collected during the test session(s).

Local Support Equipment

Manufacturer	Model	Description	Serial Number	FCC ID
Hp	iPAQ	PDA	00039-146-717-467	-
Sycard	CFextend160B	Compact Flash Extender	C169B-6283	-

Remote Support Equipment

Manufacturer	Model	Description	Serial Number	FCC ID
Cisco	1130AG	WiFi Wireless AP	FTX1040T17J	-

Cabling and Ports

Port	Connected To	Cable(s)		
		Description	Shielded or Unshielded	Length(m)
Compact Flash	Compact Flash Extender	Compact Flash Extender	Unshielded	-

EUT Operation During Immunity Tests

During immunity testing the EUT will be exercised by pinging to a communication link (AP). Normal operation is indicated by the host system and is monitored by the host system.

Performance Criteria for Immunity Tests

Criterion A:

For Transmit mode testing: during and after testing the EUT shall continue to transmit and link to the remote AP. A degradation of performance is allowed providing no change of the actual mode of operation (e.g. unintended transmission) or stored data is allowed. After the test, the apparatus shall continue to operate as intended.

For unintentional transmit mode testing: during and after testing the EUT shall not transmit. Confirmation of transmission was performed using a spectrum analyzer.



EMC Test Data

Client:	Summit Data Communications	Job Number:	J71248
Model:	SDC-CF10AG	T-Log Number:	T71257
Contact:	Ron Seide	Account Manager:	Dean Eriksen
Immunity Standard(s):	EN301 489-1 V1.6.1 (2005-09)	Environment:	Wireless

ElectroStatic Discharge (EN 61000-4-2)

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Date of Test: 4/3/2008 8:11 Config. Used: 1
Test Engineer: Joe What Config Change: None
Test Location: ESD Lab Host Unit Voltage 120V

General Test Configuration

For table-top equipment, the EUT was placed into a host system and all local support equipment were located on a 0.5-mm thick insulating layer above a horizontal coupling plane, 80 cm above a ground reference plane.

Unless otherwise stated, ten discharges at each voltage, and polarity, were applied to each test point listed. Contact discharges were applied to coupling planes and conductive surfaces of the EUT and host system. Air discharges were applied to any non-conductive surfaces of the EUT and host system. The VCP was located on the table top for table top devices and 80cm above the ground plane for floor standing equipment.

The determination as to the test point being a part of a conductive or non-conductive surface was based on testing the surface for conductivity using an ohmmeter.

Ambient Conditions:

Temperature: 21 °C
Relative Humidity: 38 %
Pressure: 1026 mb

Summary of Results

Run #	Test Performed	Level	Criteria/Result	Comments
1	ESD - Enclosure	4KV Direct 8KV Air	A / Pass	Transmit and Receive Mode

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.



EMC Test Data

Client:	Summit Data Communications	Job Number:	J71248
Model:	SDC-CF10AG	T-Log Number:	T71257
Contact:	Ron Seide	Account Manager:	Dean Eriksen
Immunity Standard(s):	EN301 489-1 V1.6.1 (2005-09)	Environment:	Wireless

Run #1: Electrostatic Discharge

Transmit Mode

Indirect Discharges (To Coupling Planes)	Positive Polarity				Negative Polarity			
	(kV)				(kV)			
Contact Mode	Level 1	Level 2	Level 3	Level 4	Level 1	Level 2	Level 3	Level 4
	2KV	4KV	6KV	8KV	-2KV	-4KV	-6KV	-8KV
VCP located 10cm from the front, rear, left and right sides of the EUT	X	X	-	-	X	X	-	-
HCP located 10cm from the front, rear, left and right sides of the EUT	X	X	-	-	X	X	-	-

Note 1: An "X" indicates that the unit continued to operate as intended. The host system was pinging to a remote AP and the host system reported there were no data errors or loss of data.

Note 2: There was no direct or air discharges to the EUT because it is normally inserted into a host system and would be inaccessible while in operation.

Run #2: Electrostatic Discharge

Non-Transmit Mode

Indirect Discharges (To Coupling Planes)	Positive Polarity				Negative Polarity			
	(kV)				(kV)			
Contact Mode	Level 1	Level 2	Level 3	Level 4	Level 1	Level 2	Level 3	Level 4
	2KV	4KV	6KV	8KV	-2KV	-4KV	-6KV	-8KV
VCP located 10cm from the front, rear, left and right sides of the EUT	X	X	-	-	X	X	-	-
HCP located 10cm from the front, rear, left and right sides of the EUT	X	X	-	-	X	X	-	-

Note 1: An "X" indicates that the unit continued to operate as intended. The EUT did not unintentionally transmit, as monitored by a spectrum analyzer.

Note 2: There was no direct or air discharges to the EUT because it is normally inserted into a host system and would be inaccessible while in operation.

Client:	Summit Data Communications	Job Number:	J71248
Model:	SDC-CF10AG	T-Log Number:	T71257
Contact:	Ron Seide	Account Manager:	Dean Eriksen
Immunity Standard(s):	EN301 489-1 V1.6.1 (2005-09)	Environment:	Wireless

Radiated Immunity (EN 61000-4-3)

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Date of Test: 4/4-5/2008 11:00:00 PM Config. Used: 1
Test Engineer: Vishal Narayan Config Change: None
Chris Groat
Test Location: Fremont Chamber #5 EUT Voltage: 230V/50Hz

General Test Configuration

The EUT and all local support equipment were located on a turntable in an anechoic chamber.

Ambient Conditions: Temperature: 20 °C
 Rel. Humidity: 42 %

Summary of Results

Run #	Test Performed	Level	Criteria/Result	Comments
1	80 - 1000 MHz 1kHz 80% AM	3 V/m 1kHz 80% AM	A/Pass	Receive Mode
1	1000 - 2500 MHz 1kHz 80% AM	3 V/m 1kHz 80% AM	A/Pass	Receive Mode
2	80 - 1000 MHz 1kHz 80% AM	3 V/m 1kHz 80% AM	A/Pass	Transmit Mode
2	1000 - 2500 MHz 1kHz 80% AM	3 V/m 1kHz 80% AM	A/Pass	Transmit Mode

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.



EMC Test Data

Client:	Summit Data Communications	Job Number:	J71248
Model:	SDC-CF10AG	T-Log Number:	T71257
Contact:	Ron Seide	Account Manager:	Dean Eriksen
Immunity Standard(s):	EN301 489-1 V1.6.1 (2005-09)	Environment:	Wireless

Run #1: Radiated Immunity, 80 - 2500 MHz (EN61000-4-3)
Receive Mode

Frequency:	80 - 1000 MHz
Step Size:	1 %
Dwell time:	2874 ms
Field Uniformity:	1.5m x 1.5m
Test Distance:	3

Modulation Details	
Modulating Frequency:	1 kHz
Modulation:	AM
Depth / Deviation:	80%

Frequency Range (MHz)	Level V/m	Front		Left Side		Rear		Right		Top		Bottom	
		Vert.	Horiz.	Vert.	Horiz.	Vert.	Horiz.	Vert.	Horiz.	Vert.	Horiz.	Vert.	Horiz.
80 - 1000	3	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
1000 - 2500	3	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A

Test files used for this run:

The following calibration files from O:\EMC Stuff\Radiated Immunity Cal\CH5\CH5, 0080-1000 MHz, Nov 2006\03 Vm, 80-1000 MHz\ were used:

- 1.55m High - centerline, 3m from tip 80 MHz - 1000 MHz H 3Vm.crf
- 1.55m High - centerline, 3m from tip 80 MHz - 1000 MHz V 3Vm.crf

The following calibration files from O:\EMC Stuff\Radiated Immunity Cal\Chamber #5\CH5, 1000-2500 MHz, December 2006\03 Vm, 1000-2700 MHz\ were used:

- Tip 2m from uniform field, boom arm 1.55m high, 1-2GHz H 3Vm.crf
- Tip 2m from uniform field, boom arm 1.55m high, 1-2GHz V 3Vm.crf
- Tip 2m from uniform field, boom arm 1.55m high, 2-2.5GHz H 3Vm.crf
- Tip 2m from uniform field, boom arm 1.55m high, 2-2.5GHz V 3Vm.crf

Note: An "X" indicates that the unit continued to operate as intended. Occasionally signal's were observed on the analyzer. Turned off the RF and the signals were still observed every couple of minutes. These signals did not seem to be transmit signals as they were occasionally seen and when the problem frequencies were test again signals were not repeatable therefore the EUT passes.



EMC Test Data

Client:	Summit Data Communications	Job Number:	J71248
Model:	SDC-CF10AG	T-Log Number:	T71257
Contact:	Ron Seide	Account Manager:	Dean Eriksen
Immunity Standard(s):	EN301 489-1 V1.6.1 (2005-09)	Environment:	Wireless

Run #2: Radiated Immunity, 80 - 2500 MHz (EN61000-4-3)
Transmit Mode

Frequency:	80 - 1000 MHz
Step Size:	1 %
Dwell time:	2874 ms
Field Uniformity:	1.5m x 1.5m
Test Distance:	3

Modulation Details	
Modulating Frequency:	1 kHz
Modulation:	AM
Depth / Deviation:	80%

Frequency Range (MHz)	Level V/m	Front		Left Side		Rear		Right		Top		Bottom	
		Vert.	Horiz.	Vert.	Horiz.	Vert.	Horiz.	Vert.	Horiz.	Vert.	Horiz.	Vert.	Horiz.
80 - 1000	3	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A
1000 - 2500	3	X	X	X	X	X	X	X	X	N/A	N/A	N/A	N/A

Test files used for this run:

The following calibration files from O:\EMC Stuff\Radiated Immunity Cal\CH5\CH5, 0080-1000 MHz, Nov 2006\03 Vm, 80-1000 MHz\ were used:

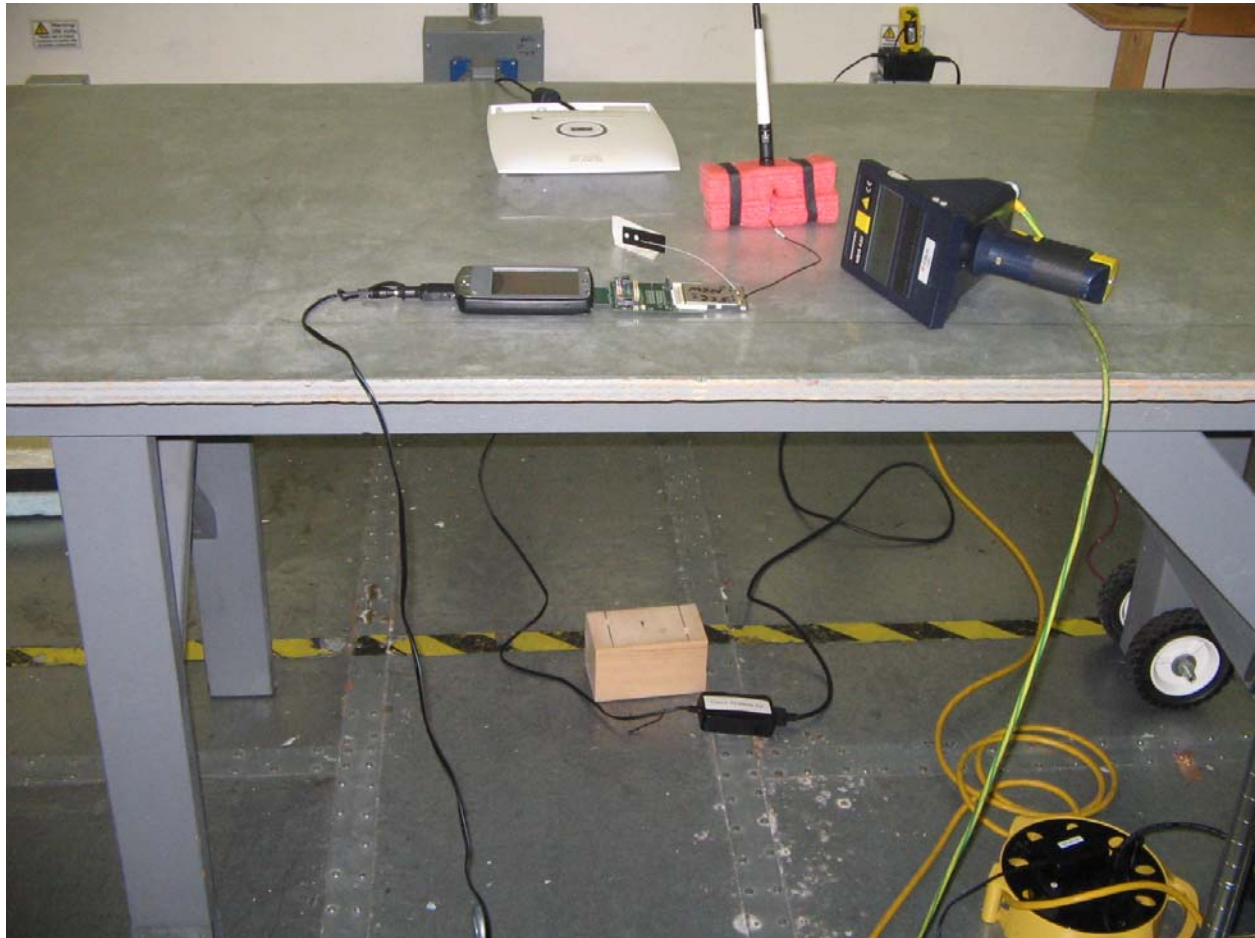
- 1.55m High - centerline, 3m from tip 80 MHz - 1000 MHz H 3Vm.crf
- 1.55m High - centerline, 3m from tip 80 MHz - 1000 MHz V 3Vm.crf

The following calibration files from O:\EMC Stuff\Radiated Immunity Cal\Chamber #5\CH5, 1000-2500 MHz, December 2006\03 Vm, 1000-2700 MHz\ were used:

- Tip 2m from uniform field, boom arm 1.55m high, 1-2GHz H 3Vm.crf
- Tip 2m from uniform field, boom arm 1.55m high, 1-2GHz V 3Vm.crf
- Tip 2m from uniform field, boom arm 1.55m high, 2-2.5GHz H 3Vm.crf
- Tip 2m from uniform field, boom arm 1.55m high, 2-2.5GHz V 3Vm.crf

Note: An "X" indicates that the unit continued to operate as intended. The EUT continued to transmit to a communication link(Access Point) and the ping tests continued before, after and during testing.

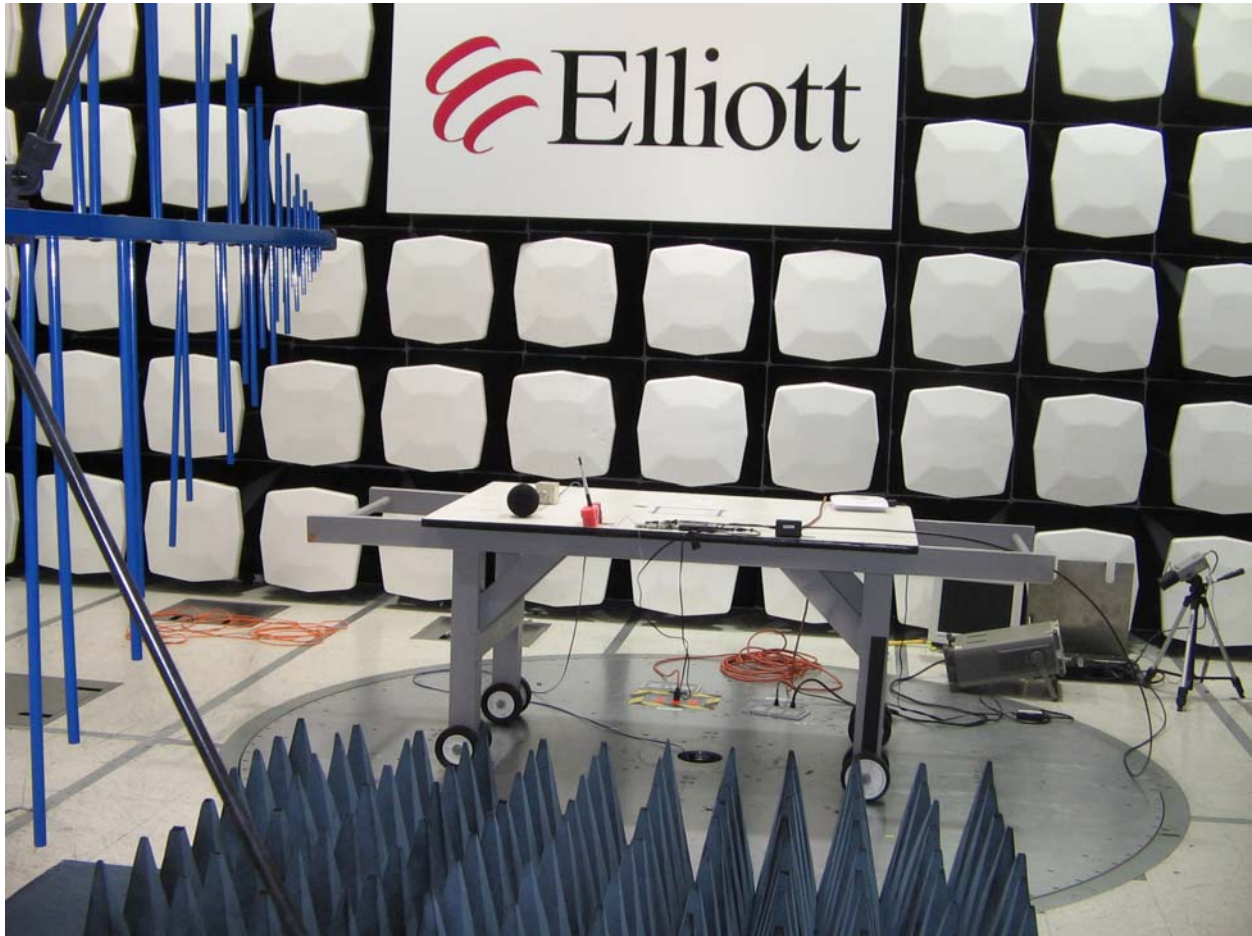
APPENDIX C: ESD Test Configuration Photographs



APPENDIX C: ESD Test Configuration Photographs



APPENDIX D: Radiated Immunity Test Configuration Photographs



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