



ElectroMagnetic Compatibility
and Systems Integration Pty Ltd



EMC Compliance Report
on the
Mintap gap measuring device
Model: C-Gap

Document No: MINTAP-P01-EMC-RCM-CR

prepared by

EMCSI Pty Ltd

for

MINTAP Services Pty Ltd

Dated: 28th October 2013

| | | |
|--|-------------------------------|--------|
| Document Number | Date of Issue | Page |
| MINTAP-P01-EMC-RCM-CR | 28 th October 2013 | 2 of 9 |
| EMCSI Pty Ltd PO Box 626 Williamstown Victoria 3016 Phone (03) 9329 0159 Fax (03) 9399 1303 | | |

TABLE OF CONTENTS

| | | |
|----|-------------------------|---|
| 1. | GENERAL | 3 |
| 2. | EQUIPMENT DESCRIPTION | 5 |
| 3. | TEST PROCEDURE | 6 |
| 4. | TEST METHOD AND RESULTS | 6 |

APPENDIX A - Emission Test Graphs 1 to 2

| | | |
|--|-------------------------------|--------|
| Document Number | Date of Issue | Page |
| MINTAP-P01-EMC-RCM-CR | 28 th October 2013 | 3 of 9 |
| EMCSI Pty Ltd PO Box 626 Williamstown Victoria 3016 Phone (03) 9329 0159 Fax (03) 9399 1303 | | |

1. GENERAL

| | |
|---|---|
| <p>1.1. Compliance Service</p> <p>EMCSI Pty Ltd A.C.N. 069 034 117 P.O. Box 626 Williamstown Victoria 3016</p> | <p>1.2. Customer</p> <p>MINTAP Services Pty Ltd 49 Second Avenue Claremont WA 6010</p> |
|---|---|

1.3. DEVICE UNDER TEST

Gap Measuring device
Model: C-Gap

1.4. TESTS and ASSESSMENT

Tests were conducted against the following standard:

| | |
|-----------------------|--|
| AS/NZS CISPR 22: 2009 | Limits and methods of measurement of radio disturbance characteristics of information technology equipment |
|-----------------------|--|

| | | |
|--|-------------------------------|--------|
| Document Number | Date of Issue | Page |
| MINTAP-P01-EMC-RCM-CR | 28 th October 2013 | 4 of 9 |
| EMCSI Pty Ltd PO Box 626 Williamstown Victoria 3016 Phone (03) 9329 0159 Fax (03) 9399 1303 | | |

1.5. Emission Requirements

| Port | Frequency Range MHz | Limits | Reference Standard |
|-----------|---------------------|----------------------------------|--------------------|
| Enclosure | 30 to 230 | 40 dB(μ V/m) at 3m distance | CISPR 22;2009 |
| | 230 to 1000 | 47 dB(μ V/m) at 3m distance | |
| AC Mains | 0.15 to 0.5 | N/A battery operated | CISPR 22:2009 |
| | 0.5 to 5 | N/A battery operated | |
| | 5 to 30 | N/A battery operated | |

The highest frequency of the internal source of the device is less than 108 MHz.

1.6. TEST RESULTS

The device described in sub-clause 1.3 meets the requirements of AS/NZS CISPR 22:2009 Class B.



Cornelius Chidlow
Director and signatory
EMCSI Pty Ltd

| | | |
|--|-------------------------------|--------|
| Document Number | Date of Issue | Page |
| MINTAP-P01-EMC-RCM-CR | 28 th October 2013 | 5 of 9 |
| EMCSI Pty Ltd PO Box 626 Williamstown Victoria 3016 Phone (03) 9329 0159 Fax (03) 9399 1303 | | |

2. EQUIPMENT DESCRIPTION

The EUT has a number of attachments varying in size (diameter) that attached via a quick release hose. These bladders are then lowered into crushing machines and the air pressure sent to the device through the hose is then calibrated to the device via the calibration function to +/- 5mm. All functions can be accessed via the onscreen menu. The device is only operated for short periods of time -15mins approximately and all read outs from the device are displayed on the screen. The device operates on 4 x AA batteries. Refer to photo 1

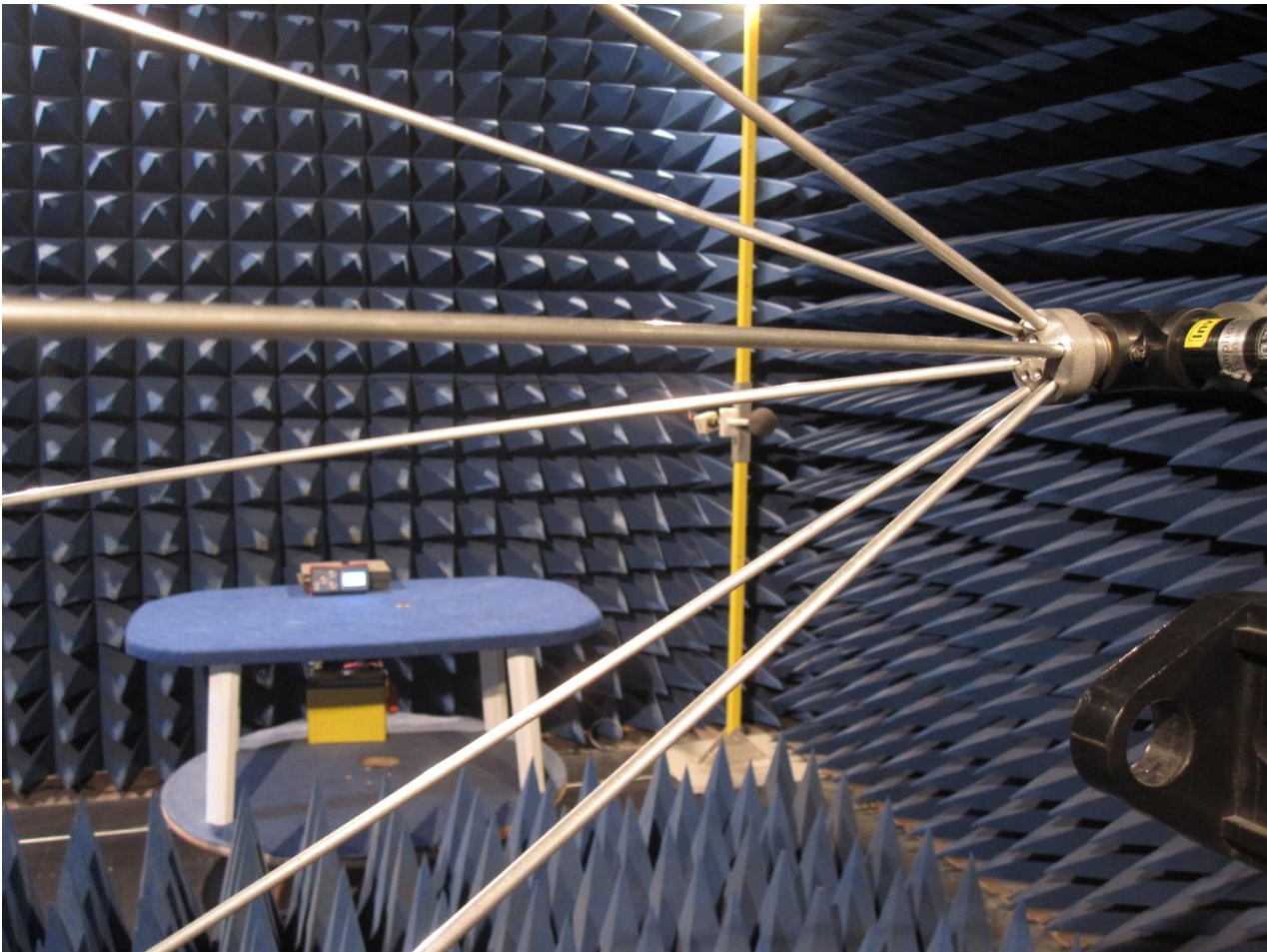


Photo 1 showing the equipment under test.

| | | |
|--|-------------------------------|--------|
| Document Number | Date of Issue | Page |
| MINTAP-P01-EMC-RCM-CR | 28 th October 2013 | 6 of 9 |
| EMCSI Pty Ltd PO Box 626 Williamstown Victoria 3016 Phone (03) 9329 0159 Fax (03) 9399 1303 | | |

3. TEST PROCEDURE

Radiated emission measurements were made in accordance with the procedures set down in AS/NZS CISPR 22:2009.

4. TEST METHOD & RESULTS

4.1. Radiated and Conducted Emissions - Summary

| Graph No | Test Description | Result |
|----------|---|--------|
| 1 | Radiated Emissions Vertical polarization (3m distance) | PASS |
| 2 | Radiated Emissions Horizontal polarization (3m distance) | PASS |

Refer to the Appendix A for the test result graphs.

4.2. Explanation of Test Graphs

Graphs 1 and 2 show radiated emission measurements at the 3m distance in an anechoic chamber. Vertical measurements are shown on graph 1 and horizontal measurements on graph 2 together with the ambient levels. All measurements passed the B-Class limit.

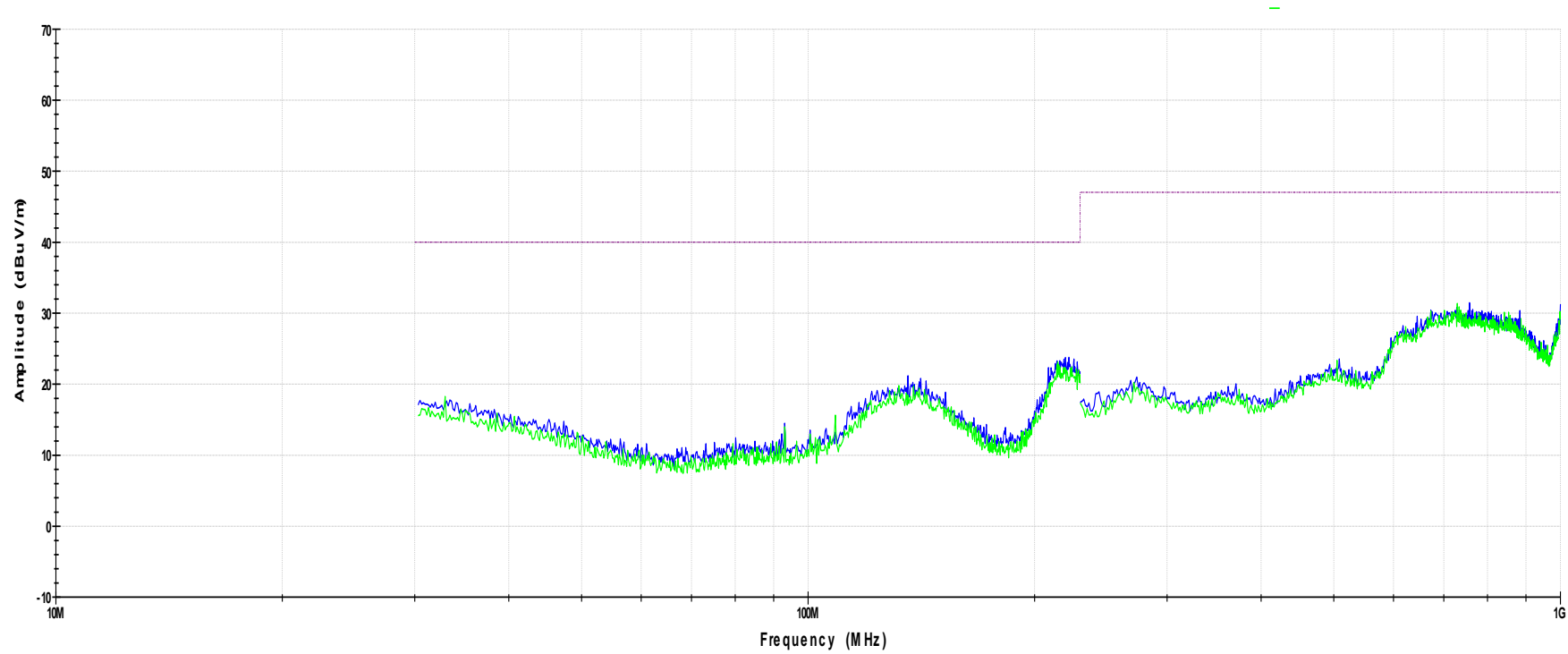
4.3. Test Equipment

| Asset No | Equipment | Model No | Serial No | Cal Due |
|----------|-------------------|-------------|------------|---------|
| 1 | Spectrum Analyser | HP8595EM | 3710A00205 | Apr 14 |
| 260 | Biconical Antenna | CE300e | 1 | May 14 |
| 6 | Log Periodic | LP1000 | LP01 | Apr 14 |
| 94 | Preamp | UTC10-221-1 | 9603-4230 | Jul 14 |

| Document Number | Date of Issue | Page |
|--|-------------------------------|--------|
| MINTAP-P01-EMC-RCM-CR | 28 th October 2013 | 7 of 9 |
| EMCSI Pty Ltd PO Box 626 Williamstown Victoria 3016 Phone (03) 9329 0159 Fax (03) 9399 1303 | | |

APPENDIX A - Test Result Graphs 1 to 2

Graph 1 – Vertical Polarization



Operator: Gabriel Mendez

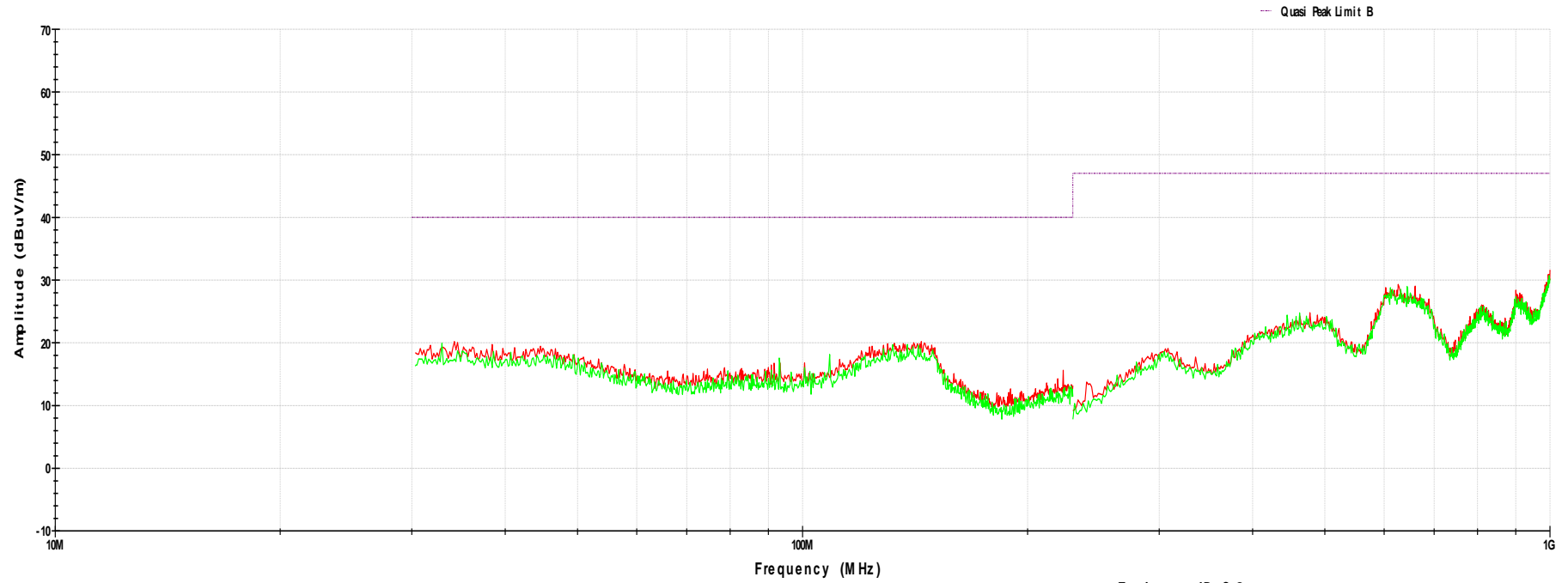
03:03:33 PM, Tuesday, October 22, 2013

Equipment ID: C-Gap

Contact: Cornelius Chidlow

Company: EM CSI Pty Ltd

Graph 2 – Horizontal Polarization



Operator: Gabriel Mendez

03:05:09 PM, Tuesday, October 22, 2013

Equipment ID: C-Gap

Contact: Cornelius Chidlow

Company: EM CSI Pty Ltd