


|   |   |                             |                    |
|---|---|-----------------------------|--------------------|
|  | Report No: <b>R2810</b><br>Issue No: <b>2</b> | <b>FCC ID : YISACTIVE10</b> |                    |
|   | Test No: <b>T3612</b>                         |                             | <b>Test Report</b> |



**dB Technology**  
|----- ( Cambridge Ltd. ) -----|

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## REPORT ON ELECTROMAGNETIC COMPATIBILITY TESTS

Performed at:  
**TWENTY PENCE TEST SITE**

**Twenty Pence Road,  
Cottenham,  
Cambridge  
U.K.  
CB24 8PS**

on

**Satmap Systems Ltd**

**Active 10**

dated


**9th August 2010**

### Document History

| Issue | Date     | Affected page(s) | Description of modifications | Revised by | Approved by |
|-------|----------|------------------|------------------------------|------------|-------------|
| 1     | 09/08/10 |                  | Initial release              |            |             |
| 2     | 26/10/10 | 8                | Cal interval added           | DS         | DB          |
|       |          |                  |                              |            |             |
|       |          |                  |                              |            |             |
|       |          |                  |                              |            |             |

Based on report template:  
v090319

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|   |                         |                             |               |
|---|-------------------------|-----------------------------|---------------|
|  | Report No: <b>R2810</b> | <b>FCC ID : YISACTIVE10</b> |               |
|   | Issue No: <b>2</b>      |                             |               |
|   | Test No: <b>T3612</b>   | <b>Test Report</b>          | Page: 2 of 18 |

Equipment Under Test (EUT):

Active 10

Test Commissioned by:

Satmap Systems Ltd  
Fountains House  
Cleeve Road  
Leatherhead  
Surrey  
KT22 7LX

Representative:

Mike Beadman

Test Started:

15th June 2010

Test Completed:

2nd July 2010

Test Engineer:

Stephen Browning

Date of Report:

9th August 2010

Written by: Stephen Browning

Checked by: Dave Smith

Signature:



Signature:



Date: 9th August 2010

Date: 9th August 2010

**dB Technology can only report on the specific unit(s) tested at its site. The responsibility for extrapolating this data to a product line lies solely with the manufacturer.**

## Test Standards Applied

**CFR 47 : 2009  
Class B**

*Code of Federal Regulations: Pt 15 Subpart B- Radio Frequency Devices -  
Unintentional Radiators*


## Emissions Test Results Summary

**CFR 47 : 2009**

**PASS**


| Test                | Port     | Method          | Limit | PASS/FAIL | Notes |
|---------------------|----------|-----------------|-------|-----------|-------|
| Conducted Emissions | ac power | ANSI C63.4:2003 | FCC_B | PASS      |       |
| Radiated Emissions  |          | ANSI C63.4:2003 | FCC_B | PASS      |       |

specs\_fccv100412

|   |   |                             |               |
|---|---|-----------------------------|---------------|
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|   | Test No: <b>T3612</b>                         |                             |               |
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|  |   |                             |               |
|--|---|-----------------------------|---------------|
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|  | Test No: <b>T3612</b>                         |                             |               |
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## 1 EUT Details

### 1.1 General

The EUT was a SatMap active10 navigation device. It is a portable GPS device which is powered from an internal battery pack. It can be plugged into a PC via USB for both charging the internal battery and transferring route information. The EUT had a plastic enclosure. It included microprocessor circuitry with a maximum frequency of 266MHz.

Details of the EUT and associated peripherals used during the tests are listed below. Figure 1 shows the interconnections between the EUT and peripherals.

| Item | Manufacturer       | Model         | Description          | Serial No:    | Notes |
|------|--------------------|---------------|----------------------|---------------|-------|
| 1    | Satmap Systems Ltd | active10      | EUT                  | 0702043       |       |
| 2    | Dell               | Precision M65 | Laptop PC            | 714-0699      | #1    |
| 3    | Dell               | DA90PS2-00    | 19.5V In-line PSU    | 843-0X09      | #2    |
| 4    | D-Link             | DES-1005D     | Ethernet Switch      | B21B44B001162 | #1    |
| 5    | DVE                | DV-751AUK     | 7.5V 1A Plug-top PSU | none          | #2    |

- #1 FCC Declaration of Conformity  
#2 Power supply - only requires FCC Verification.

### 1.2 Modifications to EUT and Peripherals

Details of any modifications that were required to achieve compliance are listed below. The modification numbers are referred to in the results sections as appropriate.

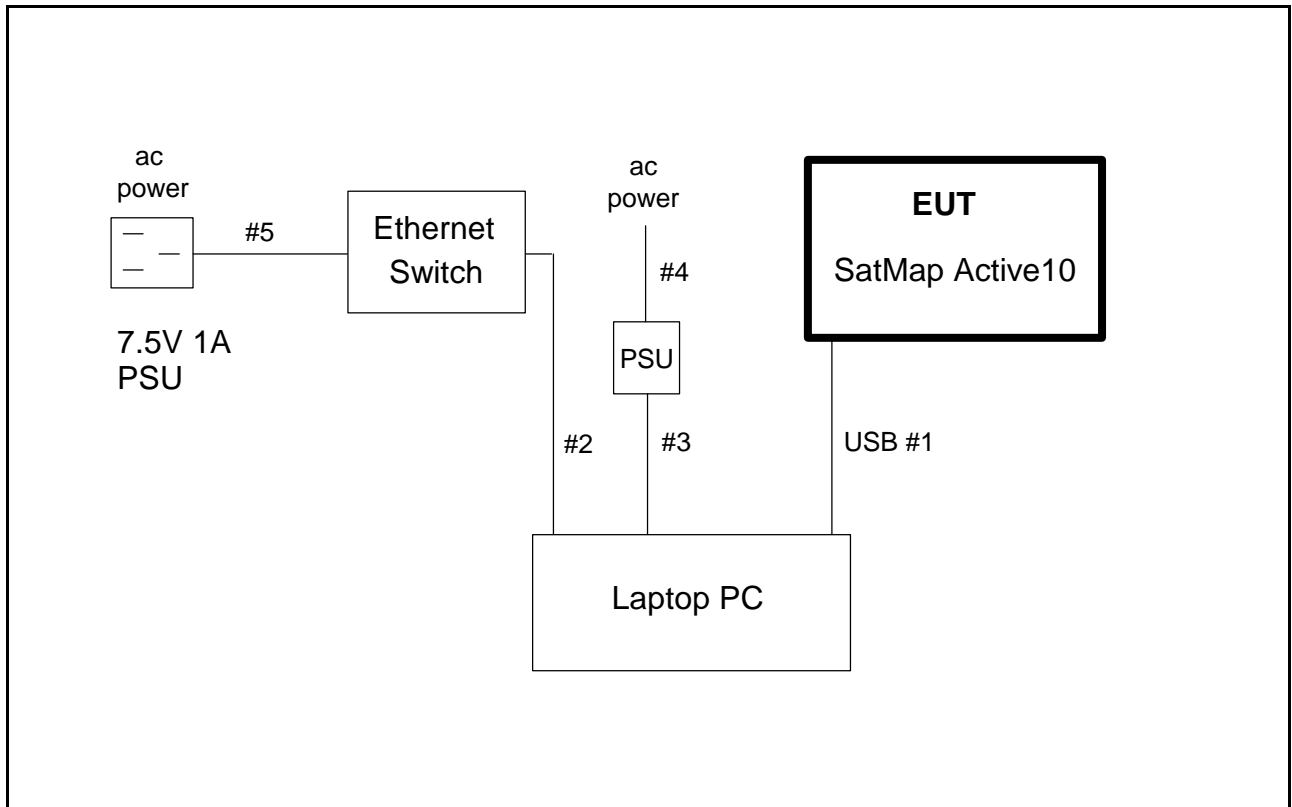
| Mod No: | Details   | Implemented for |
|---------|---|-----------------|
| 0       | Production unit as supplied on 25th June 2010. No modifications were made during the course of testing. |                 |

### 1.3 EUT Operating Modes

The EUT was tested in the following operating mode or modes. Generally, operating modes are chosen that will exercise the functions of the EUT as fully as possible and in a manner likely to produce maximum emission levels or susceptibility. Individual test result sheets reference the operating mode of the EUT.

| Operating Mode | Details   |
|----------------|---|
| 1              | EUT connected and charging via USB to a laptop computer. Computer ethernet port connected to switch. Satsync application running which obtains EUT status data via the USB. |


**Figure 1 General Arrangement of EUT and Peripherals - connected to PC**



#### 1.4 Details of Interconnecting Cables

The following table lists details of the cables connected to the EUT.

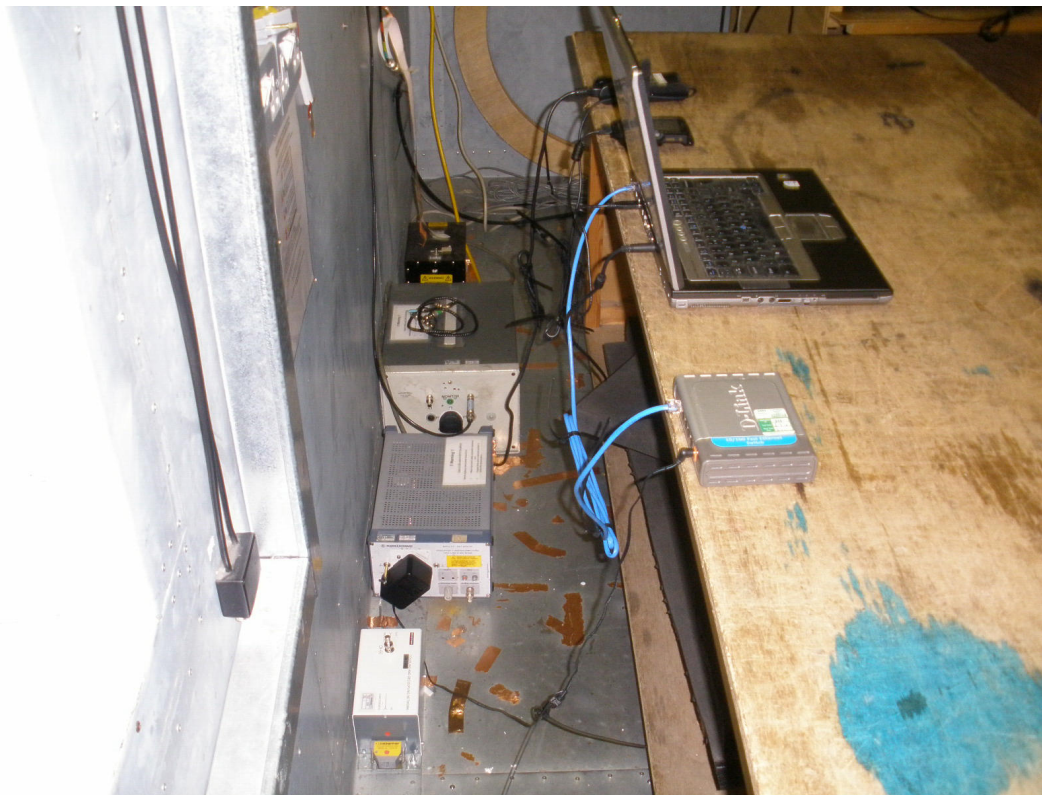
| From            | To              | Cable Type                | Length | Notes |
|-----------------|-----------------|---------------------------|--------|-------|
| Laptop          | EUT             | USB with integral Ferrite | 1m     | #1    |
| Laptop          | Ethernet Switch | Cat5 UTP                  | 2m     | #2    |
| Laptop          | PSU             | 3 core Dell Custom        | 2m     | #3    |
| PSU             | ac supply       | 3 core                    | 1m     | #4    |
| Ethernet Switch | Plug-top PSU    | 2 core                    | 2m     | #5    |

|   |                         |                             |               |
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**Photograph 1 Conducted Emissions - PC Power - Front**



**Photograph 2 Conducted Emissions - PC Power - Back**






|   |                         |                             |                      |
|---|-------------------------|-----------------------------|----------------------|
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|   | Issue No: <b>2</b>      |                             |                      |
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**Photograph 3 Radiated Emissions - Connected to PC - Front**



**Photograph 4 Radiated Emissions - Connected to PC - Back**



|   |                         |                             |               |
|---|-------------------------|-----------------------------|---------------|
|  | Report No: <b>R2810</b> | <b>FCC ID : YISACTIVE10</b> |               |
|   | Issue No: <b>2</b>      |                             |               |
|   | Test No: <b>T3612</b>   | <b>Test Report</b>          | Page: 8 of 18 |


## 2 Test Equipment

The test equipment used during the tests was one or more of the items listed below. Individual test result sheets indicate which items were used.

| Ref No: | Details                               | Serial Number | Cal Date   |
|---------|---------------------------------------|---------------|------------|
| A19     | EMCO 3115 DR Guide (1-18GHz)          | 2431          | 08/10/2008 |
| A23     | EMCO 3115 DR Guide (1-18GHz)          | 9507-4525     | 06/11/2008 |
| A24     | Chase X-wing Bilog CBL6144 26MHz-3GHz | 27590         | 26/01/2009 |
| A5      | Chase Bilog CBL6111A                  | 1760          | 21/01/2010 |
| L1      | EMCO 3825/2 LISN                      | 1358          | 05/11/2009 |
| L2      | R&S ESH3-Z5 LISN                      | 843862/009    | 05/11/2009 |
| PRE7    | LUCIX 0.1GHz to 20GHz                 | 24485         | 06/05/2010 |
| R1      | CHASE LHR 7000                        | 1056          | 02/01/2010 |
| R7      | R&S ESVD                              | 841729/003    | 20/11/2009 |
| R8      | Agilent E7405A Spectrum Analyser      | MY44212494    | 15/09/2009 |

Calibration interval for all items is 12 months - except for items A19, A23 and A24 which have a 24 month interval.



|   |   |                             |                    |
|---|---|-----------------------------|--------------------|
|  | Report No: <b>R2810</b><br>Issue No: <b>2</b> | <b>FCC ID : YISACTIVE10</b> |                    |
|   | Test No: <b>T3612</b>                         |                             | <b>Test Report</b> |

### 3 Test Methods

#### 3.1 Conducted Emissions - ac power

This section describes the general method of performing this test. The specific method used and any deviations from this general method are listed in the appropriate results section.

Bench top EUTs and peripheral equipment are normally placed on a 0.8m high non-conducting bench, positioned 0.4m from one of the metallic walls of a screened room. Floor standing EUTs are normally placed 0.1m above the metallic floor of the screened room. Mains leads are bundled so as not to exceed 1m.

The EUT is powered using a 50ohm/50uH Line Impedance Stabilisation Network (LISN). Peripherals are powered using a second a 50ohm/50uH LISN. These LISNs are bonded to the screened room floor.

With the correct supply voltage applied to the EUT scans are performed on both the live and neutral line outputs of the LISN using quasi-peak detection over the specified frequency range. The results of these scans are shown in the plots section at the end of the report.

Significant emissions identified by the scans are measured and the results tabulated. The table of results is shown in the conducted emissions results section.

Sample calculation:

Final Level (dBuV) = Receiver Reading (dBuV) + Combined Cable & Attenuator Correction Factor (dB)

Example:

@2.98MHz Final Level = 17.1 + 10.1 = 27.2 dBuV

#### 3.2 Radiated Emissions

This section describes the general method of performing this test. The specific method used and any deviations from this general method are listed in the appropriate results section.

Initial scans are performed in a semi-anechoic screened room at a distance of 3m. Scans are performed over the frequency range specified in the test standard with the antenna both horizontally and vertically polarised. During these scans the EUT and peripherals are rotated through 360°. Bench top EUTs are placed on a non-conducting bench at a height of 0.8m above the ground plane. Floor standing EUTs are placed 0.1m above the ground plane. The results of the scans are shown in the plots included at the end of the report. Cables are moved to identify the arrangement that gives highest emission levels.


Significant emissions identified by the scans are measured on an open area test site at the appropriate test distance using a CISPR16 quasi-peak receiver. Maximised readings are obtained by rotating the EUT through 360° and adjusting the height of the antenna from 1m to 4m. Measurements are made with the antenna both horizontally and vertically polarised and the results tabulated.

Sample calculation:

Final Level (dBuV/m) = Receiver Reading (dBuV) + Combined Antenna & Cable Correction Factor (dB 1/m)


Example:

@30.621MHz Final Level = 9.8 + 18.5 = 28.3 dBuV/m

|   |   |                             |                |
|---|---|-----------------------------|----------------|
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## 4 Test Results

The following sections contain tabulated test results. Plots of various scans are included at the back of this section.


|   |   |                             |                |
|---|---|-----------------------------|----------------|
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|   | Test No: <b>T3612</b>                         |                             |                |
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## 4.1 Conducted Emissions (Power) - Results

|                          |        |                  |   |   |
|--------------------------|--------|------------------|---|---|
| Factor Set 1:            | L1_10A | 12_CBL005_CBL039 | - | - |
| Factor Set 2:            | -      | -                | - | - |
| Factor Set 3:            | -      | -                | - | - |
| Test Equipment: R1 L1 L2 |        |                  |   |   |

### Conducted Emissions (Power)

| Company: <b>Satmap Systems Ltd</b> |         |  |            |          | Product: <b>Active 10</b>         |           |                 |                  |                  |                       |                  |       |  |
|------------------------------------|---------|--|------------|----------|-----------------------------------|-----------|-----------------|------------------|------------------|-----------------------|------------------|-------|--|
| Date: <b>02/07/10</b>              |         |  |            |          | Test Eng: <b>Stephen Browning</b> |           |                 |                  |                  |                       |                  |       |  |
| Ports: <b>ac power</b>             |         |  |            |          |                                   |           |                 |                  |                  |                       |                  |       |  |
| Test: <b>ANSI C63.4:2003</b>       |         |  |            |          | using limits of                   |           |                 | <b>FCC B</b>     |                  | <b>=CISPR22(B)</b>    |                  |       |  |
| Ports:                             |         |  |            |          |                                   |           |                 |                  |                  |                       |                  |       |  |
| Test:                              |         |  |            |          | using limits of                   |           |                 |                  |                  |                       |                  |       |  |
| Plot                               | Op Mode | Mod State  | Line (L/N) | Fact Set | Freq. MHz                         | Det qp/av | Rec. Level dBuV | Corr'n Factor dB | Total Level dBuV | Limit FCC(B) dBuV     | Margin FCC(B) dB | Notes |  |
| 1                                  | 1       | 0  | L          | 1        | 2.980                             | qp        | 17.1            | 10.1             | 27.2             | 56.0                  | 28.8             |       |  |
| 1                                  | 1       | 0  | L          | 1        | 2.980                             | av        | 9.0             | 10.1             | 19.1             | 46.0                  | 26.9             |       |  |
| 1                                  | 1       | 0  | L          | 1        | 3.136                             | qp        | 18.0            | 10.2             | 28.2             | 56.0                  | 27.8             |       |  |
| 1                                  | 1       | 0  | L          | 1        | 3.136                             | av        | 8.9             | 10.2             | 19.1             | 46.0                  | 26.9             |       |  |
| 1                                  | 1       | 0  | L          | 1        | 23.130                            | qp        | 23.3            | 10.4             | 33.7             | 60.0                  | 26.3             |       |  |
| 1                                  | 1       | 0  | L          | 1        | 23.130                            | av        | 20.5            | 10.4             | 30.9             | 50.0                  | 19.1             |       |  |
| 2                                  | 1       | 0  | N          | 1        | 2.968                             | qp        | 16.0            | 10.1             | 26.1             | 56.0                  | 29.9             |       |  |
| 2                                  | 1       | 0  | N          | 1        | 2.968                             | av        | 6.9             | 10.1             | 17.0             | 46.0                  | 29.0             |       |  |
| 2                                  | 1       | 0  | N          | 1        | 3.171                             | qp        | 16.7            | 10.2             | 26.9             | 56.0                  | 29.1             |       |  |
| 2                                  | 1       | 0  | N          | 1        | 3.171                             | av        | 9.0             | 10.2             | 19.2             | 46.0                  | 26.8             |       |  |
| 2                                  | 1       | 0  | N          | 1        | 23.130                            | qp        | 23.2            | 10.4             | 33.6             | 60.0                  | 26.4             |       |  |
| 2                                  | 1       | 0  | N          | 1        | 23.130                            | av        | 20.5            | 10.4             | 30.9             | 50.0                  | 19.1             |       |  |
| <b>Results</b>                     |         |  |            |          |                                   |           |                 |                  |                  | <b>Minimum Margin</b> |                  |       |  |
|                                    |         |  |            |          |                                   |           |                 |                  |                  | <b>PASS/FAIL</b>      |                  |       |  |
|                                    |         |  |            |          |                                   |           |                 |                  |                  | <b>19.1</b>           | <b>dB</b>        |       |  |
|                                    |         |  |            |          |                                   |           |                 |                  |                  | <b>PASS</b>           |                  |       |  |
| <b>Notes</b>                       |         | <b>Comments and Observations</b>                   |            |          |                                   |           |                 |                  |                  |                       |                  |       |  |
|                                    |         | Results of scans shown in plots 1 and 2.           |            |          |                                   |           |                 |                  |                  |                       |                  |       |  |
|                                    |         | Measurement made on Laptop PSU ac power port @115V |            |          |                                   |           |                 |                  |                  |                       |                  |       |  |


|   |                         |                             |                |
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## 4.2 Radiated Emissions Results - 30MHz to 275MHz

|                           |            |   |   |               |           |
|---------------------------|------------|---|---|---------------|-----------|
| Factor Set 1:             | A5_FS_10B  | - | - | RG214_25m_09B | 1 m cable |
| Factor Set 2:             | A23_3m_09B | - | - | RG214_25m_09B | 1 m cable |
| Factor Set 3:             | -          | - | - | -             |           |
| Test Equipment: R7 A5 A23 |            |   |   |               |           |

### Radiated Emissions

| Company: Satmap Systems Ltd |         |                                  |        |          | Product: Active 10         |         |                 |                    |                  |                    |                             |                 |                |  |
|-----------------------------|---------|----------------------------------|--------|----------|----------------------------|---------|-----------------|--------------------|------------------|--------------------|-----------------------------|-----------------|----------------|--|
| Date: 25/06/10              |         |                                  |        |          | Test Eng: Stephen Browning |         |                 |                    |                  |                    |                             |                 |                |  |
| Ports:                      |         |                                  |        |          |                            |         |                 |                    |                  |                    |                             |                 |                |  |
| Test: ANSI C63.4:2003       |         |                                  |        |          | using limits of FCC B      |         |                 |                    |                  |                    |                             |                 |                |  |
| Ports:                      |         |                                  |        |          |                            |         |                 |                    |                  |                    |                             |                 |                |  |
| Test:                       |         |                                  |        |          | using limits of            |         |                 |                    |                  |                    |                             |                 |                |  |
| Plot                        | Op Mode | Mod State                        | Dist m | Fact Set | Freq. MHz                  | Ant Pol | Rec. Level dBuV | Corr'n Factor dB/m | Corr'n Factor dB | Total Level dBuV/m | Limit FCC_B dBuV/m          | Margin FCC_B dB | Notes          |  |
| 1                           | 1       | 0                                | 3      | 1        | 30.621                     | V       | 9.8             | 18.5               |                  | 28.3               | 40.0                        | 11.7            |                |  |
| 1                           | 1       | 0                                | 3      | 1        | 30.621                     | H       | 5.7             | 18.5               |                  | 24.2               | 40.0                        | 15.8            |                |  |
| 1                           | 1       | 0                                | 3      | 1        | 79.986                     | V       | 20.6            | 8.5                |                  | 29.1               | 40.0                        | 10.9            |                |  |
| 1                           | 1       | 0                                | 3      | 1        | 79.986                     | H       | 8.6             | 8.5                |                  | 17.1               | 40.0                        | 22.9            |                |  |
| 1                           | 1       | 0                                | 3      | 1        | 160.364                    | V       | 15.9            | 12.2               |                  | 28.1               | 43.5                        | 15.4            |                |  |
| 1                           | 1       | 0                                | 3      | 1        | 160.364                    | H       | 13.2            | 12.2               |                  | 25.4               | 43.5                        | 18.1            |                |  |
| 1                           | 1       | 0                                | 3      | 1        | 166.272                    | V       | 15.6            | 11.7               |                  | 27.3               | 43.5                        | 16.2            |                |  |
| 1                           | 1       | 0                                | 3      | 1        | 166.272                    | H       | 12.9            | 11.7               |                  | 24.6               | 43.5                        | 18.9            |                |  |
| 1                           | 1       | 0                                | 3      | 1        | 250.006                    | V       | 16.7            | 15.0               |                  | 31.7               | 46.0                        | 14.3            |                |  |
| 1                           | 1       | 0                                | 3      | 1        | 250.006                    | H       | 22.7            | 15.0               |                  | 37.7               | 46.0                        | 8.3             |                |  |
| 1                           | 1       | 0                                | 3      | 1        | 266.012                    | V       | 24.1            | 16.1               |                  | 40.2               | 46.0                        | 5.8             |                |  |
| 1                           | 1       | 0                                | 3      | 1        | 266.012                    | H       | 23.0            | 16.1               |                  | 39.1               | 46.0                        | 6.9             |                |  |
| Results                     |         |                                  |        |          |                            |         |                 |                    |                  |                    | Minimum Margin<br>PASS/FAIL |                 | 5.8 dB<br>PASS |  |
| Notes                       |         | Comments and Observations        |        |          |                            |         |                 |                    |                  |                    |                             |                 |                |  |
|                             |         | Results of scan shown in plot 3. |        |          |                            |         |                 |                    |                  |                    |                             |                 |                |  |

|   |                         |                             |                |
|---|-------------------------|-----------------------------|----------------|
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### 4.3 Radiated Emissions Results - 275MHz to 2GHz

|                           |            |   |   |               |           |
|---------------------------|------------|---|---|---------------|-----------|
| Factor Set 1:             | A5_FS_10B  | - | - | RG214_25m_09B | 1 m cable |
| Factor Set 2:             | A23_3m_09B | - | - | RG214_25m_09B | 1 m cable |
| Factor Set 3:             | -          | - | - | -             |           |
| Test Equipment: R7 A5 A23 |            |   |   |               |           |

#### Radiated Emissions

| Company: Satmap Systems Ltd |         |  |        |          | Product: Active 10         |         |                 |                    |                  |                    |                    |                 |        |  |  |
|-----------------------------|---------|--|--------|----------|----------------------------|---------|-----------------|--------------------|------------------|--------------------|--------------------|-----------------|--------|--|--|
| Date: 25/06/10              |         |  |        |          | Test Eng: Stephen Browning |         |                 |                    |                  |                    |                    |                 |        |  |  |
| Ports:                      |         |  |        |          |                            |         |                 |                    |                  |                    |                    |                 |        |  |  |
| Test: ANSI C63.4:2003       |         |  |        |          | using limits of            |         |                 |                    | FCC B            |                    |                    |                 |        |  |  |
| Ports:                      |         |  |        |          |                            |         |                 |                    |                  |                    |                    |                 |        |  |  |
| Test:                       |         |  |        |          | using limits of            |         |                 |                    |                  |                    |                    |                 |        |  |  |
| Plot                        | Op Mode | Mod State                                | Dist m | Fact Set | Freq. MHz                  | Ant Pol | Rec. Level dBuV | Corr'n Factor dB/m | Corr'n Factor dB | Total Level dBuV/m | Limit FCC_B dBuV/m | Margin FCC_B dB | Notes  |  |  |
| 2                           | 1       | 0  | 3      | 1        | 500.003                    | V       | 12.6            | 22.2               |                  | 34.8               | 46.0               | 11.2            |        |  |  |
| 2                           | 1       | 0  | 3      | 1        | 500.003                    | H       | 12.1            | 22.2               |                  | 34.3               | 46.0               | 11.7            |        |  |  |
| 2                           | 1       | 0  | 3      | 1        | 531.991                    | V       | 19.5            | 23.1               |                  | 42.6               | 46.0               | 3.4             |        |  |  |
| 2                           | 1       | 0  | 3      | 1        | 531.991                    | H       | 22.0            | 23.1               |                  | 45.1               | 46.0               | 0.9             |        |  |  |
| 2                           | 1       | 0  | 3      | 1        | 797.942                    | V       | 11.3            | 28.1               |                  | 39.4               | 46.0               | 6.6             |        |  |  |
| 2                           | 1       | 0  | 3      | 1        | 797.942                    | H       | 11.5            | 28.1               |                  | 39.6               | 46.0               | 6.4             |        |  |  |
| 2                           | 1       | 0  | 3      | 1        | 931.698                    | V       | 5.0             | 31.1               |                  | 36.1               | 46.0               | 9.9             |        |  |  |
| 2                           | 1       | 0  | 3      | 1        | 931.698                    | H       | 2.9             | 31.1               |                  | 34.0               | 46.0               | 12.0            |        |  |  |
| 3                           | 1       | 0  | 3      | 2        | 1662.500                   | V       | 14.0            | 35.2               |                  | 49.2               | 54.0               | 4.8             | pk     |  |  |
| 3                           | 1       | 0  | 3      | 2        | 1662.500                   | H       | 15.0            | 35.2               |                  | 50.2               | 54.0               | 3.8             | pk     |  |  |
| 3                           | 1       | 0  | 3      | 2        | 1662.500                   | V       | 1.2             | 35.2               |                  | 36.4               | 54.0               | 17.6            | av     |  |  |
| 3                           | 1       | 0  | 3      | 2        | 1662.500                   | H       | 1.2             | 35.2               |                  | 36.4               | 54.0               | 17.6            | av     |  |  |
| Results                     |         |  |        |          |                            |         |                 |                    |                  |                    | Minimum Margin     |                 | 0.9 dB |  |  |
|                             |         |  |        |          |                            |         |                 |                    |                  |                    | PASS/FAIL          |                 | PASS   |  |  |
| Notes                       |         | Comments and Observations                |        |          |                            |         |                 |                    |                  |                    |                    |                 |        |  |  |
|                             |         | Results of scans shown in plots 4 and 5. |        |          |                            |         |                 |                    |                  |                    |                    |                 |        |  |  |



|   |                         |                      |                |
|---|-------------------------|----------------------|----------------|
|  | Report No: <b>R2810</b> | FCC ID : YISACTIVE10 |                |
|   | Issue No: <b>2</b>      |                      |                |
|   | Test No: <b>T3612</b>   | Test Report          | Page: 14 of 18 |

Chase EMS 6.21

|       |
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| Notes |
|-------|

Analyse 100702 C1L T3612 CDP SatMap Active10 pc 115V

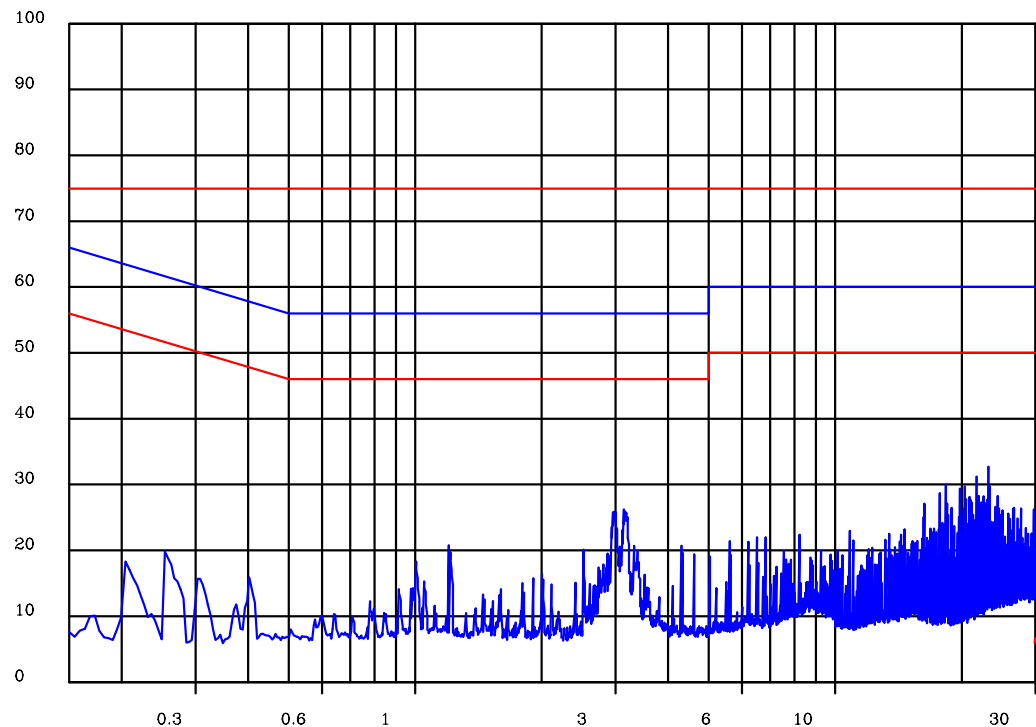
Test: 150kHz-30MHz (L1+CSET001) dBuV

RF level

dBuV

100702 C1L T

Quasi-peak



Log Freq. (0.15 - 30)MHz


Limit EN 55022 B Radiated Emiss

## PLOT 1 Conducted Emissions - PC power - Live

|                                      |                     |                 |                  |
|--------------------------------------|---------------------|-----------------|------------------|
| Company:                             | Satmap Systems Ltd. | Product:        | Active10         |
| Date:                                | 02 Jul 10           | Test Engineer:  | Stephen Browning |
| Test:                                | FCC pt 15           | Limit:          | FCC (B) QP       |
| Notes:                               |                     |                 |                  |
| Measured on PC power supply at 115V. |                     |                 |                  |
| Equip:R1,L1, L2, AB002               |                     |                 |                  |
| Line:                                | Live                | Attenuator:     | 10dB PAD         |
| Detector:                            | QuasiPeak           | Operating Mode: | 1                |
| LISN:                                | EMCO                | Mod. State:     | 0                |
| Filename:                            | C07024F4.plt        |                 |                  |

## Frequency List ( MHz )

|  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

|   |                         |                      |                |
|---|-------------------------|----------------------|----------------|
|  | Report No: <b>R2810</b> | FCC ID : YISACTIVE10 |                |
|   | Issue No: <b>2</b>      |                      |                |
|   | Test No: <b>T3612</b>   | Test Report          | Page: 15 of 18 |

Chase EMS 6.21

|       |
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| Notes |
|-------|

Analyse 100702 C2N T3612 CDP SatMap Active10 pc 115V

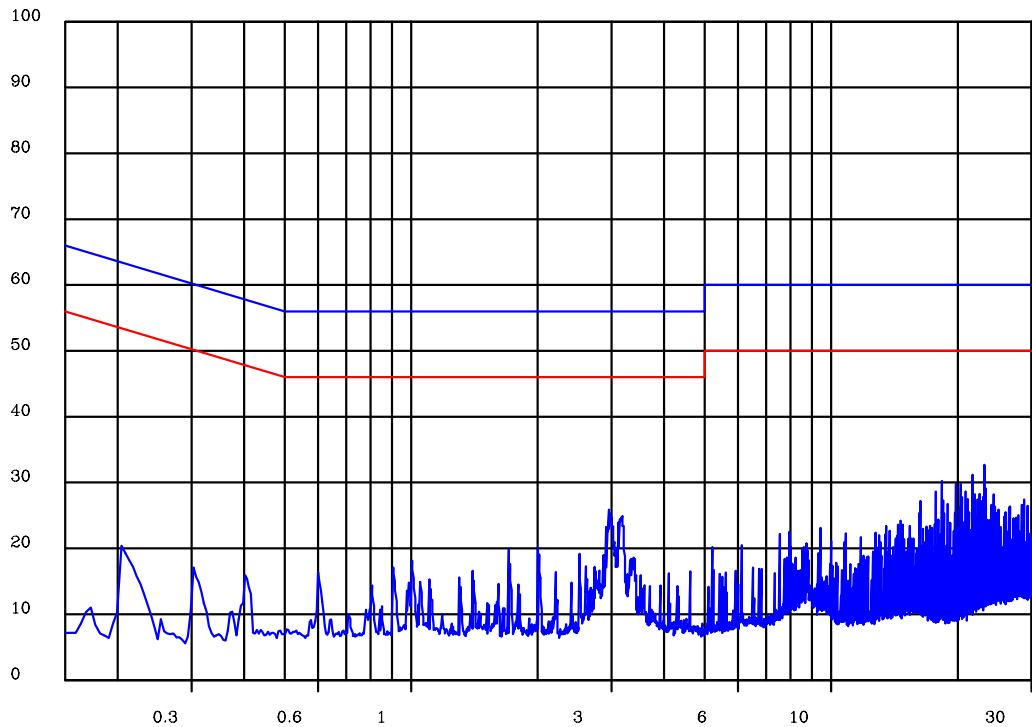
Test: 150kHz-30MHz (L1+CSET001) dBuV

RF level

dBuV

100702 C2N T

Quasi-peak



Log Freq. (0.15 - 30)MHz


Limit CISPR22B (AV) AC POWER

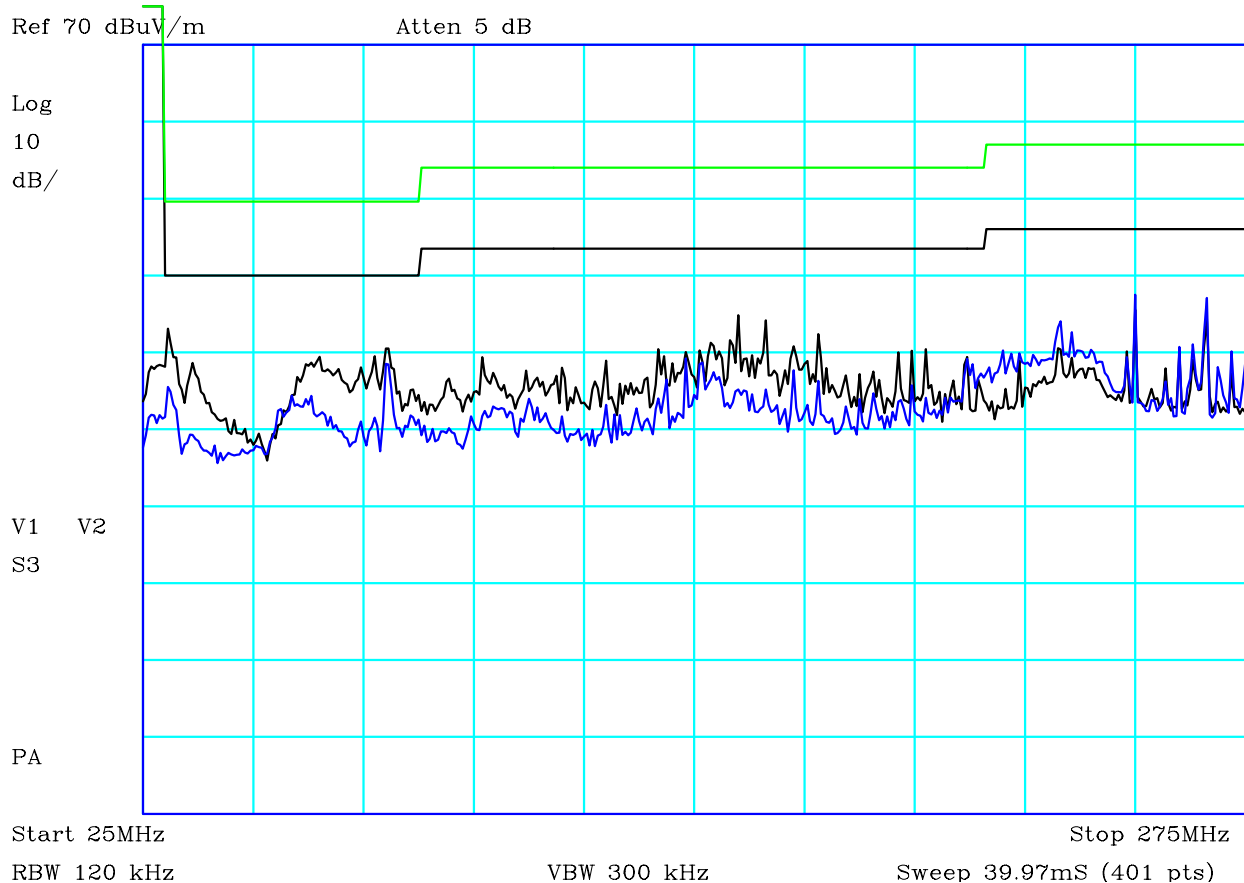
## PLOT 2 Conducted Emissions - PC power - Neutral

|                                      |                     |                 |                  |
|--------------------------------------|---------------------|-----------------|------------------|
| Company:                             | Satmap Systems Ltd. | Product:        | Active10         |
| Date:                                | 02 Jul 10           | Test Engineer:  | Stephen Browning |
| Test:                                | FCC pt 15           | Limit:          | FCC (B) QP       |
| Notes:                               |                     |                 |                  |
| Measured on PC power supply at 115V. |                     |                 |                  |
| Equip:R1,L1, L2, AB002               |                     |                 |                  |
| Line:                                | Neutral             | Attenuator:     | 10dB PAD         |
| Detector:                            | QuasiPeak           | Operating Mode: | 1                |
| LISN:                                | EMCO                | Mod. State:     | 0                |
| Filename:                            | C0702504.plt        |                 |                  |

## Frequency List ( MHz )

|  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |


|   |                         |                             |                |
|---|-------------------------|-----------------------------|----------------|
|  | Report No: <b>R2810</b> | FCC ID : <b>YISACTIVE10</b> |                |
|   | Issue No: <b>2</b>      |                             |                |
|   | Test No: <b>T3612</b>   | <b>Test Report</b>          | Page: 16 of 18 |

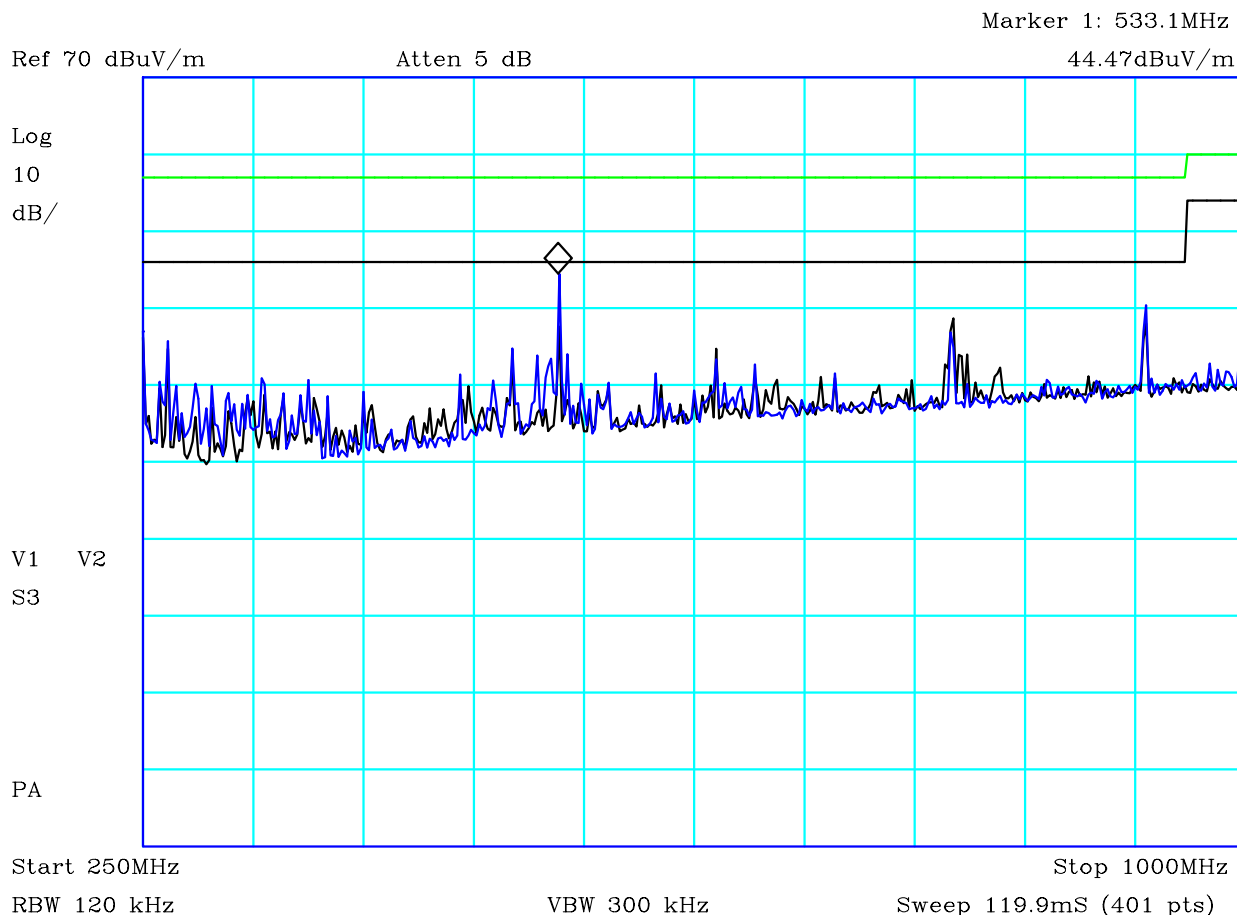


CF1:A24\_3m\_090306 CF2:CBL059\_CBL062\_CBL065\_CBL060\_090306

### PLOT 3 Radiated Emissions - Connected to PC - 25MHz to 275MHz

|   |                     |                     |                  |
|---|---------------------|---------------------|------------------|
| Company:  | Satmap Systems Ltd. | Product:            | Active10         |
| Date:   | 25/06/2010          | Test Eng:           | Stephen Browning |
| Method:   |                     | Method:             |                  |
| Limit1:(BLK)  | FCC(B)@3m           | Limit2:(GRN)        | FCC(A)@3m        |
| Limit3:   |                     | Limit4:             |                  |
| Vertical : Black Trace, Horizontal : Blue Trace.<br>R9.2 EUT connected via USB to Dell Precision laptop.<br>Satmap Admin Application running on Laptop.<br>D-Link switch present. |                     |                     |                  |
| Facility:   | Anech_2             | Height              | 1m               |
| Distance  | 3m                  | Polarisation        | V+H              |
| Angle   | 0-360               | File:               | H0525742         |
| Mode:   | 1                   | Modification State: | 0                |


|   |                         |                             |                       |
|---|-------------------------|-----------------------------|-----------------------|
|  | Report No: <b>R2810</b> | <b>FCC ID : YISACTIVE10</b> |                       |
|   | Issue No: <b>2</b>      |                             |                       |
|   | Test No: <b>T3612</b>   | <b>Test Report</b>          | Page: <b>17 of 18</b> |

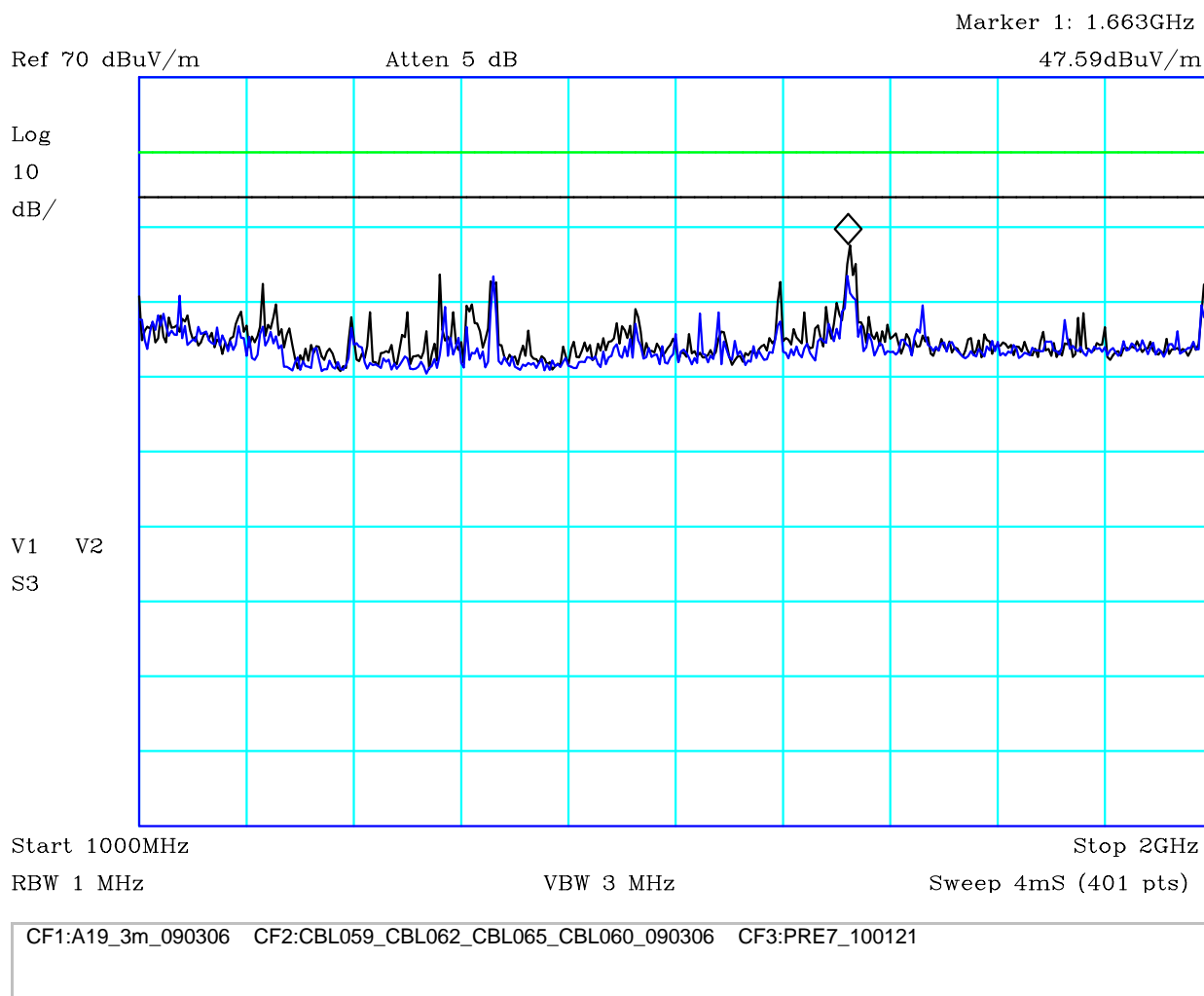


CF1:A24\_3m\_090306 CF2:CBL059\_CBL062\_CBL065\_CBL060\_090306

#### PLOT 4 Radiated Emissions - Connected to PC - 250MHz to 1GHz

|   |                     |                     |                  |
|---|---------------------|---------------------|------------------|
| Company:  | Satmap Systems Ltd. | Product:            | Active10         |
| Date:   | 25/06/2010          | Test Eng:           | Stephen Browning |
| Method:   |                     | Method:             |                  |
| Limit1:(BLK)  | FCC(B)@3m           | Limit2:(GRN)        | FCC(A)@3m        |
| Limit3:   |                     | Limit4:             |                  |
| Vertical : Black Trace, Horizontal : Blue Trace.<br>R9.2 EUT connected via USB to Dell Precision laptop.<br>Satmap Admin Application running on Laptop.<br>D-Link switch present. |                     |                     |                  |
| Facility:   | Anech_2             | Height              | 1m               |
| Distance  | 3m                  | Polarisation        | V+H              |
| Angle   | 0-360               | File:               | H0525758         |
|   |                     | Mode:               | 1                |
|   |                     | Modification State: | 0                |

|   |                         |                             |                |
|---|-------------------------|-----------------------------|----------------|
|  | Report No: <b>R2810</b> | FCC ID : <b>YISACTIVE10</b> |                |
|   | Issue No: <b>2</b>      |                             |                |
|   | Test No: <b>T3612</b>   | Test Report                 | Page: 18 of 18 |



## PLOT 5 Radiated Emissions - Connected to PC - 1GHz to 2GHz

|              |                     |              |                  |
|--------------|---------------------|--------------|------------------|
| Company:     | Satmap Systems Ltd. | Product:     | Active10         |
| Date:        | 25/06/2010          | Test Eng:    | Stephen Browning |
| Method:      |                     | Method:      |                  |
| Limit1:(BLK) | FCC(B)@3m           | Limit2:(GRN) | FCC(A)@3m        |
| Limit3:      |                     | Limit4:      |                  |

Vertical : Black Trace, Horizontal : Blue Trace.  
R9.2 EUT connected via USB to Dell Precision laptop.  
Satmap Admin Application running on Laptop.  
D-Link switch present.

|           |         |              |          |                     |   |
|-----------|---------|--------------|----------|---------------------|---|
| Facility: | Anech_2 | Height       | 1m       | Mode:               | 1 |
| Distance  | 3m      | Polarisation | V+H      | Modification State: | 0 |
| Angle     | 0-360   | File:        | H05257FD |                     |   |