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APPENDIX H
OF
TEST REPORT T70719_F

TEST SAMPLE TEST PLAN

FCC ID:	TVN-MDOCR
Manufacturer:	Magellan Technology
Test Sample:	Document Tray Reader
Model:	MDOCR-2505
Serial Number:	Prototype
Date:	30th July 2007

MDOCR-2505

DOCUMENT TRAY READER

EMC Test Plan

USA AND Canada

14 June 2007

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Revision status

Revision	***Date***	***Description***
1.0	May 07	Initial Release.
1.1	June 19	Updated to the correct power supply

1 INTRODUCTION

1.1 PURPOSE

The purpose of this document is to describe the requirements for testing Document Tray Reader (MDOCR-2505) against the relevant requirements of USA and Canada.

1.1 TEST REQUIREMENTS

1.1.1 Test Standards

Testing is to be performed using the procedures and criteria contained in the following standards:

- USA
  FCC Part 15.31, 15.207, 15.225 (Radio/EMC)

- Canada
  (a) RSS-210: Issue 6 (Radio)
  (b) RSS-Gen: Issue 1 (EMC)
  (c) RSS-102: Issue 2 (RF Exposure)

1.2 PRODUCT DESCRIPTION

The Document Tray Reader (MDOCR-2505) is an RFID read/write device which provides the ability to read and write to incoming and outgoing documents in an office environment.

The unit consists of external power supply, USB and Ethernet ports

Power is provided from an external 12VDC power supply.

1.2.1 Ports

The following ports are provided:

- Power port
- USB device port
- RJ45 (Ethernet) port

1.2.2 Antenna

The antenna used with MDOCR-2505 is an internal inductive loop antenna.

1.2.3 Power Supply

The MDOCR-2505 is powered by a single external power supply.

1.3 PRODUCT SPECIFICATIONS

Manufacturer:	Magellan Technology Pty Limited 65 Johnston Street Annandale NSW 2038 Telephone: +61 2 9562 9800 Fax: +61 2 9518 7620
Transmission Frequency:	13.56 MHz

Voltage:	12VDC
Number of Axes:	1
Number of Reply Channels:	2
Command Data Rate Number:	424 kbit/s
Antenna type:	Internal inductive loop
Tag Type:	76 x 45 mm StackTag (ST-T5080-05T-RA)
Dimensions:	380 x 280 x 90mm (L x W x H)
Operating Environment:	Indoors

1.4 PRODUCT BUILD LEVEL

The build level of the MDOCR-2505 under test is as follows:

Model Number:	MDOCR-2505
Serial Numbers:	Production prototype
Part Number:	054-70-000
Microprocessor type:	AT91RM9200
Frequencies:	50 MHz
	27.120 MHz
	18.432 MHz
Real Time Clock:	32,768 kHz
BOM:	54-70-000-BOM Version 1.0 (Master BOM)
	54-10-010-BOM Version D4 (Main Electronics)
Circuit Schematic:	54-10-010-SCH Version D3
Antenna type:	Internal inductive loop
Power Supply:	Cincon type TR36A-12
	Input 100 – 240V, 1.0A, 50-60 Hz
	Output 12VDC, 2.5A
Data Cable:	Ethernet Cable minimum 3 metres

1.4.1 Auxiliary Equipment

The following auxiliary equipment will be used during testing:

- Laptop Toshiba Tecra 8100
- USB A to B cables, shielded cable
- Test tags type ST-T5080-05T-RA

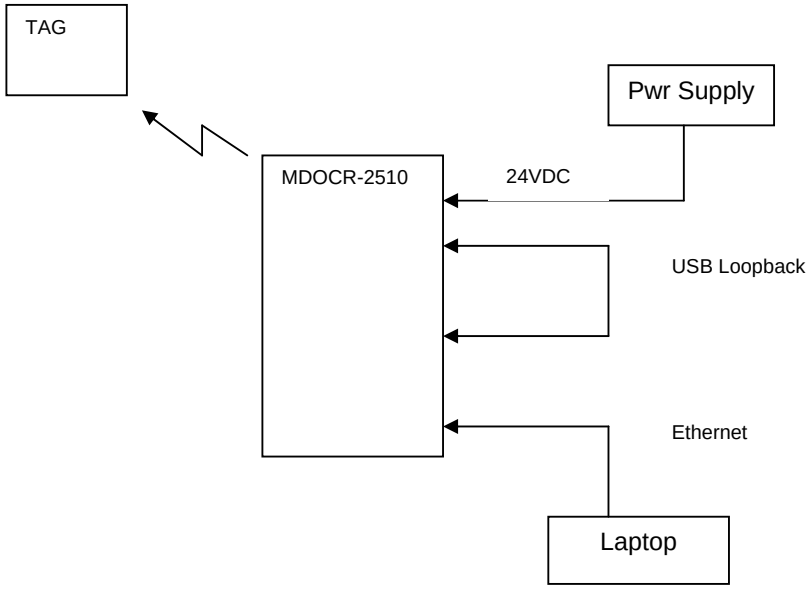
1.5 TESTING

1.5.1 Order of Testing

Radiated emissions testing is required to be completed first, followed by conducted emissions and frequency stability testing.

1.5.2 Test Method and EUT Configuration

The MDOCR-2505 will be tested as a tabletop unit with all ports connected as depicted below.



1.5.3 EUT Operation

During testing, the MDOCR-2505 will be connected and operating and the unit will be transmitting.

The unit will be polling the test tags during the test cycle.

Ethernet:
The EUT will be connected via an Ethernet cable to a host PC in the test area. The host PC will connect to a server application on the EUT. Approximately twice a second, the host PC communicates with the server application to check the connection state of the USB host, the USB device, and the RFID functionality of the reader. This information will slowly scroll upward on the host PC display and will look as follows:

e.g.

```
 8: USB host: online, USB device: online, RFID: online,
 9: USB host: online, USB device: online, RFID: online,
 10  USB host: online, USB device: online, RFID: online,
 11  USB host: online, USB device: online, RFID: online,
 12  USB host: online, USB device: online, RFID: online,
ERROR - network connection is offline
```

The number on the left is the number of seconds since the device was started, the last error indicates that the Ethernet connection to the EUT has been lost either due to EUT reset or Ethernet connection lost. Whenever there is an error, the host PC will play a short sound to alert the tester that an error has occurred.

USB host:
The USB host will be looped back to the USB device via an extension cable. The EUT test software will monitor this device for unintended disconnection.

USB device:
USB device will be constantly pulled by the USB host (both USB ports are being exercised constantly during the test). The EUT test software will monitor this device for unintended disconnection.

2 USA REQUIREMENTS

2.1 PRODUCT CLASSIFICATION

The MDOCR-2505 is classified as a short range radio device.

2.2 TEST CONFIGURATION and OPERATION

The test configuration and operation for MDOCR-2505 is detailed in Paragraph 1.5.

2.3 TEST REQUIREMENTS

A summary of all test requirements is given in Section 4 of this document

2.3.1 Intentional Radiator Testing

The MDOCR-2505 must satisfy the requirements of FCC Part 15.31, 15.207 and 15.225 for intentional radiators.

Conducted emissions testing and frequency tolerance testing is to be performed on completion of radiated emissions testing.

2.4 PERFORMANCE CRITERIA

MDOCR-2505 must meet the limits required for compliance.

2.5 TEST REPORTS

Provided MDOCR-2505 meets the requirements, an FCC 15 test report is required (soft copy only).

Test Reports are not required if the MDOCR-2505 does not meet the requirements.

2.6 CERTIFICATION

FCC certification, via a TCB is required on completion of testing.

3 CANADIAN REQUIREMENTS

3.1 PRODUCT CLASSIFICATION

The MDOCR-2505 is classified as a short range radio device

3.2 TEST CONFIGURATION and OPERATION

The test configuration and operation for MDOCR-2505 is detailed in Paragraph 1.5.

3.3 TEST REQUIREMENTS

A summary of all test requirements is given in Section 4 of this document.

3.3.1 Intentional Radiator Testing

The MDOCR-2505 must satisfy the requirements of RSS-210, RSS-102 and RSS-Gen.

Results are to be obtained from USA testing.

3.4 PERFORMANCE CRITERIA

MDOCR-2505 must meet the limits required for compliance.

3.5 TEST REPORTS

Provided MDOCR-2505 meets the requirements, combined RSS-210, RSS-102 and RSS-Gen test report is required (soft copy only).

Test report must include a statement relating to power level evaluation for compliance with RSS-102.

Test Reports are not required if the MDOCR-2505 does not meet the requirements.

3.6 CERTIFICATION

Industry Canada certification, via a TCB is required on completion of testing.

4 SUMMARY OF TESTING AND REPORT REQUIREMENTS

The following Tables provide a summary of all required testing.

TABLE 4.1 TEST SUMMARY

TESTS	REQUIREMENTS		
	USA	CANADA	CERTIFICATION
Radio/emissions	Applicable. FCC Part 15.31, 15.207, 15.225	Applicable – obtain results from USA testing RSS-210 (Issue 6) RSS-102 RSS-Gen (Issue 1)	Required for USA and Canada

TABLE 4.2– REPORT SUMMARY

COUNTRY	REQUIRED REPORT	COMMENT
USA	Radio/EMC/EMR – FCC Part 15	
Canada	Radio/EMC/EMR – RSS-210, RSS-Gen, RSS-102	Report generated from USA results