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APPENDIX G
OF
TEST REPORT T160221_F

TEST SAMPLE TEST PLAN

FCC ID: 2ACXQ-PSC-6040
Manufacturer: Sato Vicinity Pty Ltd
Test Sample: RFID Smart Cabinet
Model Number: PSC-6040
Serial Number: Production Prototype

Date: 14th April 2016

PJM RFID Smart Cabinet
(PSC-6040)

EMC Test Plan

USA

1 March 2016

Author : Tai Wai Pong

Revision Number: 1.1

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Revision status

Revision	Date	Description
1.0	Jan 16	Initial Release.
1.1	Mar 16	Added Verification Testing

1 INTRODUCTION

1.1   PURPOSE

The purpose of this document is to describe the requirements for testing PJM RFID Smart Cabinet Model PSC-6040 against the relevant requirements of USA.

1.1   TEST REQUIREMENTS

1.1.1 Test Standards

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

- USA
FCC Part 15.107, 15.109, 15.31, 15.207, 15.225 (Radio/EMC)

1.2   PRODUCT DESCRIPTION

The Smart Cabinet PSC-6040 is an RFID read/write cabinet designed to meet the requirements to manage tagging, monitor, and control a huge number of items. It is designed to work in office, medical and production environment.

The Smart Cabinet PSC-6040 will read and write to all PJM StackTag labels located in within the shelves.

The unit consists of IEC main plug, and Ethernet ports. It has a built-in WiFi module.

Power is provided from an external MAINS.

1.2.1 Ports

The following ports are provided on the product:

- Power port
- RJ45 (Ethernet) port
- WiFi antenna

1.3   PRODUCT SPECIFICATIONS

Manufacturer	Sato Vicinity Pty Ltd 8 Guihen Street Annandale NSW 2038 Telephone: +61 2 9562 9800 Fax: +61 2 9518 7620
Transmission Frequency	13.56 MHz
Voltage	100 – 240 Vac
Number of Shelf	6
Number of Reply Channels	8
Command Data Rate Number	424 kbit/s
Tag Type	PJM Stack Tags : • CC • Half CC • DIA4
Antenna	Inductive loop antenna
OS	Android
Display	10.1" with touch screen
Dimension	1785 x 706 x 575 mm
Weight	90 kg
Operating Environment	Indoors

1.4   PRODUCT BUILD INFORMATION

The build information of the PSC-6040 under test is as follows:

Model Number   095-70-1000

Serial Numbers   Production prototype

RFID Transmitter Component
Microprocessor type   AT91RM9200
Frequencies   50MHz, 27.12MHz, 18.432MHz
Transmission Frequencies   13.56 MHz (RFID)
Real Time Clock   32,768 kHz

Cabinet Component
Microprocessor type   Exynos5422
Frequencies   2GHz, 1.5GHz, 32.768kHz
Power Supply   Manufacturer: Cincon Electronics
                       Model: TRG100A120
                       Input: 90-264V
                       Freq: 47 – 63Hz
                       Output: 12V, 8.34A
                       EMC: FCC class B compliant
                       Safety: UL60950-1 compliant

Data Cable   Ethernet cable minimum 3m in length

1.4.1 Auxiliary Equipment

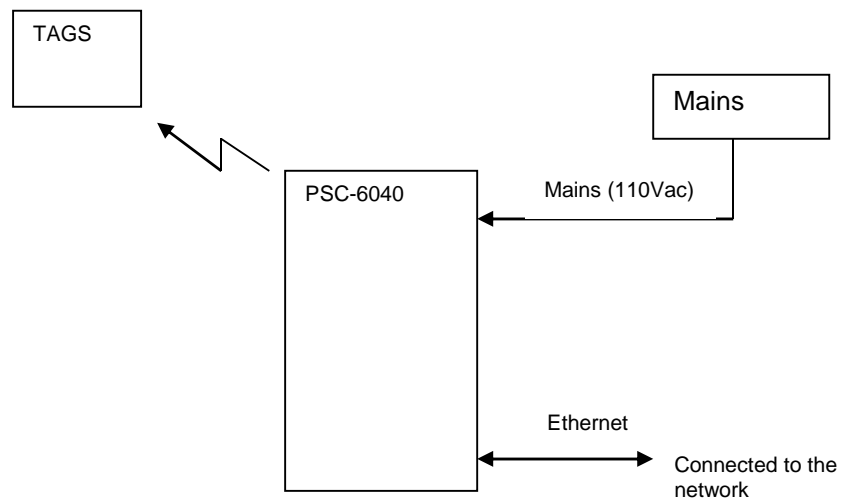The following auxiliary equipment will be used during testing:

- PJM Tags

1.5   TESTING

1.5.1 Order of Testing

Radiated emissions testing are required to be completed first, followed by conducted emissions testing.

1.5.2 Test Method and EUT Configuration

The PSC-6040 will be tested with all ports connected as depicted below.

1.5.3 EUT Operation

During testing, the PSC-6040 will operate as a standalone system.

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

2 separate testing is required, namely

- certification testing for RFID component (intentional transmitter) and
- verification testing for unintentional transmitter (the rest of the cabinet components, including the embedded PC component)

2 USA REQUIREMENTS

2.1 PRODUCT CLASSIFICATION

The PSC-6040 is classified as a short range radio device.

2.2 TEST CONFIGURATION and OPERATION

The test configuration and operation for PSC-6040 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 PSC-6040 must satisfy the requirement of FCC Part 15.31, 15.207 and 15.225 for intentional radiators.

2.3.2 Non-Intentional Radiator Testing

The PSC-6040 must satisfy the requirement of FCC Part 15.107, 15.109 for non-intentional radiators. This is the verification testing portion.

2.4 PERFORMANCE CRITERIA

PSC-6040 must meet the limits required for compliance.

2.5 TEST REPORTS

Provided PSC-6040 meets the requirements, FCC Part 15 test reports are required (soft copy only)

Test Reports are not required if the PSC-6040 does not meet the requirements.

2.6 CERTIFICATION

Application, via a TCB, is to be made to FCC for intentional radiator certification on completion of testing.

3 SUMMARY OF TESTING AND REPORT REQUIREMENTS

The following Tables provide a summary of all required testing.

TABLE 4.1 TEST SUMMARIES

TESTS		CERTIFICATION
	USA	
Radio/emissions	Applicable standard: FCC Part 15.107, 15.109, 15.31, 15.207, 15.225	Required for USA

TABLE 4.2 – REPORT SUMMARY

COUNTRY	REQUIRED REPORT	COMMENT
USA	Radio/EMC/EMR –FCC Pt 15	