A Test Lab Techno Corp.

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MPE Report

Test Report No.	：	**0907FS14-01**
Applicant	：	**Applied Wireless Identifications Group Inc.**
Manufacturer	：	**EMMT SYSTEMS CORPORATION**
Model Name	：	**MPR-1910 RFID Reader Module**
Trade Mark	：	**AWID**
Model Number	：	**MPR-1910**
FCC ID	：	**OGSMPR1910**
Dates of Test	：	**July 29, 2009**
Test Specification	：	**47 CFR § 2.1091**
		47 CFR §1.1310
Location of Test Lab.	：	**Chang-an Lab.**

1. The test operations have to be performed with cautious behavior, the test results are as attached.
2. The test results are under chamber environment of A Test Lab Techno Corp. A Test Lab Techno Corp. does not assume responsibility for any conclusions and generalizations drawn from the test results with regard to other specimens or samples.
3. The measurement report has to be written approval of A Test Lab Techno Corp. It may only be reproduced or published in full. This report shall not be reproduced except in full, without the written approval of A Test Lab Techno Corp.
4. This document may be altered or revised by A Test Lab Techno. Corp. personnel only, and shall be noted in the revision section of the document.

Sam Chuang **20090916**
Approval

Alex Wu **20090916**
Testing Engineer

Contents

1. Description of Equipment under Test (EUT)

Applicant：	Applied Wireless Identifications Group Inc.
Applicant Address：	18300 Sutter Blvd, Morgan Hill, CA 95037 USA
Manufacturer：	EMMT SYSTEMS CORPORATION
Manufacturer Address：	TAICHUNG EXPORT PROCESSING ZONE P.O BOX
	1-45, TAN-TZU TAICHUNG. NO.16-1 NAN-ER ROAD,
	TAN-TZU,TAICHUNG HSIEN,TAIWAN R.O.C
Product Name：	MPR-1910 RFID Reader Module
Trade Mark：	AWID
Model Name：	MPR-1910
Frequency Range：	902.6 - 927.4 MHz (RFID)
Maximum Output Power to Antenna：	ISO Link _ Antenna Port 1 : 27.67 dBm
(Conducted)	ISO Link _ Antenna Port 2 : 26.98 dBm
	GEN Link_ Antenna Port 1 : 28.11 dBm
	GEN Link_ Antenna Port 1 : 27.50 dBm
Hardware Version：	V1.14
Software Version：	25.05.t6
Modulation Technique：	FSK
Antenna Specification：	AWID ANT-915CPS-A:
	Balanced Quadruple Circular Polarized Antenna 5.7 dBi
	AWID ANT-915CPS-CP10:
	Compact CP Antenna 1.4 dBi
	PRINTRONIX SL4M-ANT:
	Coupler antenna -12dBi
Temperature Range：	-30 ~ +70°C

The above equipment was tested by A Test Lab Techno Corp. For compliance with the requirements set forth in 47 CFR § 2.1091 & 47 CFR § 1.1310. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties

2. Human Exposure Assessment

Due to the design and installation of this product, it is not possible to conduct SAR evaluation. This is because client either manufactures or supplies the antenna(s) that will be used in the installation of this product. Therefore, this product will be evaluated as a mobile device per 47 CFR §1.1310 titled “Radiofrequency radiation exposure limits”, generally referred to as MPE limits.

In 47 CFR § 2.1091, paragraph (b) defines a mobile device as “a transmitting device designed to be used in other than fixed locations and to generally be used in such a way that a separation distance of at least 20 cm is normally maintained between the transmitter’s radiating structure(s) and the body of the user or nearby persons. ” This product is intended to be installed into a vehicle such that the unit is physically secured at one location. In the installation guide supplied with the product,

Client has made the following statement: “IMPORTANT: To meet the FCC’s RF Exposure Guidelines, the antenna should be installed so there is at least 20 cm of separation between the body of the user and nearby persons and the antenna”. Based on the installation of the transceiver and the antenna, the transmitters radiating structure is more than 20 cm from the user. Thus, this product is a “mobile device” as defined in section § 2.1091 paragraph (b).

Exposure evaluation
Equation from page 18 of OET Bulletin 65, Edition 97-01 $S = \frac{PG}{4\pi R^2}$ Where S: power density P: power input to the antenna G: power gain of the antenna in the direction of interest relative to an isotropic radiator. R: distance to the center of radiation of the antenna.

2.1 Test Result

ISO Link _ Antenna Port 1

Antenna Model No.	Frequency (MHz)	Limit (mw)	Distance[R] (cm)	Power [P] (dBm)	ANT Gain [G] (dBi)	Power + Ant Gain [TP] (W)	Power Density [S]	Min. distance (cm)
AWID ANT-915CPS-A	902.6	1.000	20	27.64	5.7	2.158	0.429	20
	915.0	1.000	20	27.67	5.7	2.173	0.432	20
	927.4	1.000	20	26.28	5.7	1.578	0.314	20
AWID ANT-915CPS-C P10	902.6	1.000	20	27.64	1.4	0.802	0.160	20
	915.0	1.000	20	27.67	1.4	0.807	0.161	20
	927.4	1.000	20	26.28	1.4	0.586	0.117	20
PRINTRONIX SL4M-ANT	902.6	1.000	20	27.64	-12.0	0.037	0.007	20
	915.0	1.000	20	27.67	-12.0	0.037	0.007	20
	927.4	1.000	20	26.28	-12.0	0.027	0.005	20

ISO Link _ Antenna Port 2

Antenna Model No.	Frequency (MHz)	Limit (mw)	Distance[R] (cm)	Power [P] (dBm)	ANT Gain [G] (dBi)	Power + Ant Gain [TP] (W)	Power Density [S]	Min. distance (cm)
AWID ANT-915CPS-A	902.6	1.000	20	26.70	5.7	1.738	0.346	20
	915.0	1.000	20	26.98	5.7	1.854	0.369	20
	927.4	1.000	20	25.75	5.7	1.396	0.278	20
AWID ANT-915CPS-C P10	902.6	1.000	20	26.70	1.4	0.646	0.129	20
	915.0	1.000	20	26.98	1.4	0.689	0.137	20
	927.4	1.000	20	25.75	1.4	0.519	0.103	20
PRINTRONIX SL4M-ANT	902.6	1.000	20	26.70	-12.0	0.030	0.006	20
	915.0	1.000	20	26.98	-12.0	0.031	0.006	20
	927.4	1.000	20	25.75	-12.0	0.024	0.005	20

GEN Link _ Antenna Port 1

Antenna Model No.	Frequency (MHz)	Limit (mw)	Distance[R] (cm)	Power [P] (dBm)	ANT Gain [G] (dBi)	Power + Ant Gain [TP] (W)	Power Density [S]	Min. distance (cm)
AWID ANT-915CPS-A	902.6	1.000	20	27.48	5.7	2.080	0.414	20
	915.0	1.000	20	28.11	5.7	2.404	0.479	20
	927.4	1.000	20	26.59	5.7	1.694	0.337	20
AWID ANT-915CPS-CP10	902.6	1.000	20	27.48	1.4	0.773	0.154	20
	915.0	1.000	20	28.11	1.4	0.893	0.178	20
	927.4	1.000	20	26.59	1.4	0.630	0.125	20
PRINTRONIX SL4M-ANT	902.6	1.000	20	27.48	-12.0	0.035	0.007	20
	915.0	1.000	20	28.11	-12.0	0.041	0.008	20
	927.4	1.000	20	26.59	-12.0	0.029	0.006	20

GEN Link _ Antenna Port 2

Antenna Model No.	Frequency (MHz)	Limit (mw)	Distance[R] (cm)	Power [P] (dBm)	ANT Gain [G] (dBi)	Power + Ant Gain [TP] (W)	Power Density [S]	Min. distance (cm)
AWID ANT-915CPS-A	902.6	1.000	20	27.38	5.7	2.032	0.405	20
	915.0	1.000	20	27.42	5.7	2.051	0.408	20
	927.4	1.000	20	27.50	5.7	2.089	0.416	20
AWID ANT-915CPS-CP10	902.6	1.000	20	27.38	1.4	0.755	0.150	20
	915.0	1.000	20	27.42	1.4	0.762	0.152	20
	927.4	1.000	20	27.50	1.4	0.776	0.155	20
PRINTRONIX SL4M-ANT	902.6	1.000	20	27.38	-12.0	0.035	0.007	20
	915.0	1.000	20	27.42	-12.0	0.035	0.007	20
	927.4	1.000	20	27.50	-12.0	0.035	0.007	20