



A Test Lab Techno Corp.

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MPE Report



Test Report No.	: 1006FS16
Applicant	: XAC Automation Corporation
Manufacturer	: XAC Automation Corporation
Model Name	: Portable Terminal
Trade Mark	: FDC
Model Number	: FD-400Ti
FCC ID	: MQT-FD400TICDMA
Dates of Test	: Dec. 11, 2008
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.
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Sam Chuang **20100702**
Approve Signer



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Testing Engineer



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1. Description of Equipment Under Test (EUT)

Applicant :

XAC Automation Corporation

4F., NO.30, INDUSTRY E. RD. IX, SCIENCE-BASED INDUSTRIAL PARK, HSIN-CHU,Taiwan, R.O.C.

Manufacturer : XAC Automation Corporation
Manufacturer Address : 4F., NO.30, INDUSTRY E. RD. IX, SCIENCE-BASED.
INDUSTRIAL PARK, HSIN-CHU,Taiwan, R.O.C
Product Name : Portable Terminal
Trade Mark : FDC
Model Name : FD-400Ti
Frequency Range : 824.70 - 848.3 MHz (CDMA/1XEVD0 850)
1851.3 - 1908.8 MHz (CDMA/1XEVD0 1900)
Transmit Power (mean EIRP) : 22.75 dBm CDMA 850
21.61 dBm 1XEVD0 850
23.94 dBm CDMA 1900
22.80 dBm 1XEVD0 1900
Modulation Technique : QPSK / BPSK
Antenna Specification : 0 dBi
Antenna Designation : Internal Antenna
Temperature Range : -30 ~ +70°C

The above equipment was tested by Compliance Certification Services Inc. 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 $S = \frac{PG}{4\pi R^2}$ <p>Where</p> <p>S: power density</p> <p>P: power input to the antenna</p> <p>G: power gain of the antenna in the direction of interest relative to an isotropic radiator.</p> <p>R: distance to the center of radiation of the antenna.</p>



2.1 Test Result

EUT parameter	
Max output power in Watt (TP)	CDMA 850 : 0.188 W 1XEVD0 850 : 0.145 W CDMA 1900 : 0.248 W 1XEVD0 1900 : 0.191 W
Antenna gain (G)	0 dBi

CDMA 850

Frequency (MHz)	Limit (mw)	Distance (cm) [R]	Power (dBm) [P]	ANT Gain (dBi) [G]	Power+Ant Gain (W) [TP]	Power Density [S]	Min. distance (cm)
824.7	0.550	20	22.49	0	0.177	0.035	20
836.5	0.558	20	22.75	0	0.188	0.037	20
848.3	0.566	20	22.44	0	0.175	0.035	20

1XEVD0 850

Frequency (MHz)	Limit (mw)	Distance (cm) [R]	Power (dBm) [P]	ANT Gain (dBi) [G]	Power+Ant Gain (W) [TP]	Power Density [S]	Min. distance (cm)
824.7	0.550	20	21.58	0	0.144	0.029	20
836.5	0.558	20	21.61	0	0.145	0.029	20
848.3	0.566	20	21.58	0	0.144	0.029	20

CDMA 1900

Frequency (MHz)	Limit (mw)	Distance (cm) [R]	Power (dBm) [P]	ANT Gain (dBi) [G]	Power+Ant Gain (W)	Power Density [S]	Min. distance (cm)
1851.2	1.000	20	23.68	0	0.233	0.046	20
1880.0	1.000	20	23.78	0	0.239	0.048	20
1908.7	1.000	20	23.94	0	0.248	0.049	20

1XEVD0 1900

Frequency (MHz)	Limit (mw)	Distance (cm) [R]	Power (dBm) [P]	ANT Gain (dBi) [G]	Power+Ant Gain (W)	Power Density [S]	Min. distance (cm)
1851.2	1.000	20	22.70	0	0.186	0.037	20
1880.0	1.000	20	22.80	0	0.191	0.038	20
1908.7	1.000	20	22.62	0	0.183	0.036	20