1. MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Client Information

Applicant:	Universal Ubiquitous Co., Ltd.
Address of applicant:	Room 658, Building 1, No.1, Lvting Road, Cangqian Street, Yuhang District, Hangzhou City
Manufacturer:	Universal Ubiquitous Co., Ltd.
Address of manufacturer:	Room 658, Building 1, No.1, Lvting Road, Cangqian Street, Yuhang District, Hangzhou City

General Description of EUT	
Product Name:	Face Recognition Terminal
Trade Name:	uni-ubi 宇泛智能
Model No.:	OS-M385C2-V-R23WFC-TEMP05
Adding Model(s):	OS-M385C2-C-R23WFC-TEMP05
Rated Voltage:	DC12V
Power Adapter Model:	MODEL: XED-UL120200CC INPUT: AC100-240V, 0.6A, 50/60Hz; OUTPUT: DC12V, 2A
FCC ID:	2AUI4-OS-M385C2-V-R
Note: The test data is gathered from a production sample provided by the manufacturer. The appearance of others models listed in the report is different from main-test model OS-M375C4-V-R23WFCQ, but the circuit and the electronic construction do not change, declared by the manufacturer.	

Technical Characteristics of EUT	
Support Standards:	802.11b, 802.11g, 802.11n
Frequency Range:	2412-2462MHz for 802.11b/g/n(HT20) 2422-2452MHz for 802.11n(HT40)
RF Output Power:	15.82dBm (Conducted)
Type of Modulation:	DBPSK,BPSK,DQPSK,QPSK,16QAM,64QAM
Data Rate:	1-11Mbps, 6-54Mbps, up to 150Mbps
Quantity of Channels:	11 for 802.11b/g/n(HT20); 7 for 802.11n(HT40)
Channel Separation:	5MHz
Type of Antenna:	Integral Antenna
Antenna Gain:	3.1dBi

1.2 Standard Applicable

According to § 1.1307(b)(1) and KDB 447498 D01 General RF Exposure Guidance v06, system operating under the provisions of this section shall be operating in a manner that the public is not exposed to radio frequency energy level in excess limit for maximum permissible exposure.

(a) Limits for Occupational / Controlled Exposure

Frequency range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm^2)	Averaging Times $\|E\|^2$, $\|H\|^2$ or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	(900/f)*	6
30-300	61.4	0.163	1.0	6
300-1500	/	/	F/300	6
1500-100000	/	/	5	6

(b) Limits for General Population / Uncontrolled Exposure

Frequency range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm^2)	Averaging Times $\|E\|^2$, $\|H\|^2$ or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	F/1500	30
1500-100000	/	/	1	30

Note: f = frequency in MHz: * = Plane-wave equivalents power density

1.3 MPE Calculation Method

$S = (30*P*G) / (377*R^2)$

S = power density (in appropriate units, e.g., mw/cm^2)

P = power input to the antenna (in appropriate units, e.g., mw)

G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor is normally numeric gain.

R = distance to the center of radiation of the antenna (in appropriate units, e.g., cm)

1.4 MPE Calculation Result

WIFI
Maximum Tune-Up output power: 16(dBm)
Maximum peak output power at antenna input terminal: 39.81(mW)
Prediction distance: >20(cm)
Prediction frequency: 2412(MHz)
Antenna gain: 3.1 (dBi)
Directional gain (numeric gain): 2.04
The worst case is power density at prediction frequency at 20cm: 0.0162 (mw/cm^2)
MPE limit for general population exposure at prediction frequency: 1 (mw/cm^2)

Result: Pass