



RF Exposure Evaluation

FCC ID: 2BVF8WTI4200

Applicant: Worldwide Telecommunications Inc

Address: 4505 Las Virgenes Road, Suite 115, Calabasas, California 91302, United States

Manufacturer: HOMTECS M2M TECHNOLOGY COMPANY LIMITED

Address: 201, F5 Building, TCL Science Park, NO.1001, Zhongshan Park Road, Shuguang Community, Xili Street, Nanshan District, Shenzhen, China 518052

EUT: Industrial Router

Trade Mark:  WTI WIRELESS

Model Number: 4200,4230,4240,4250,4260

Date of Receipt: Apr 02, 2026

Test Date: Apr 02, 2026 - May 14, 2025

Date of Report: Apr 13, 2026

Prepared By: Shenzhen DL Testing Technology Co., Ltd.

Address: 101-201, Building C, Shuanghuan, No.8, Baoqing Road, Baolong Industrial Zone, Baolong Street, Longgang District, Shenzhen, Guangdong, China

Applicable Standards: 47CFR§1.1310, 47CFR§1.1307
FCC CFR 47 part2 2.1091
KDB 447498 D01 General RF Exposure Guidance v06

Test Result: Pass

Report Number: DLE-260408032R-1

Prepared (Test Engineer): Alisa Song

Reviewer (Supervisor): Jack Bu

Approved (Manager): Jade Yang



This test report is based on a single evaluation of one sample of above mentioned products. It is not permitted to be duplicated in extracts without written approval of Shenzhen DL Testing Technology Co., Ltd.



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1. Product Information

Product Name:	Industrial Router
Trademark	WTI WIRELESS
Model No.:	4200,4230,4240,4250,4260
Model Difference	Differences in shell mold opening and product production batches are not the same, no product function differences, will not affect the test.
Power supply:	Model No:GQ24-120150-DU Input:100-240V ~50/60Hz 1.0A Max Output: 12V--- 1.5A
Hardware Version	4200
Software Version	0.2.3
Sample Number:	DLE-260408032R-101
FCC ID:	2BVF8WTI4200
Contains modular FCC ID:	XMR201808EC25AF
WIFI 2.4G	
Operation Frequency:	2412~2462 MHz for 802.11b/g/nHT20 2422~2452 MHz for 802.11nHT40
Channel numbers:	11 Channels for 802.11b/g/n(HT20) 7 channels for 802.11nHT40
Channel separation:	5MHz
Modulation technology:	802.11b: DSSS (CCK, DQPSK, DBPSK) 802.11g/n(20/40): OFDM(QPSK, BPSK, 16-QAM, 64-QAM)
Antenna Type:	ANT : External Antenna
Antenna gain:	ANT : 1.6 dBi

Note:

- 1.For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.
- 2.The EUT's all information provided by client.

2. Test laboratory information

Test Lab:	Shenzhen DL Testing Technology Co., Ltd. 101-201, Building C, Shuanghuan, No.8, Baoqing Road, Baolong
Address:	Industrial Zone, Baolong Street, Longgang District, Shenzhen, Guangdong, China
FCC Test Firm Registration Number:	854456
Designation Number:	CN1307



IC Registered No.: 27485

CAB ID.: CN0118

3. MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $y \pm U$, where expanded uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95 %.

No.	Item	Uncertainty
1	Conducted Emission Test	$\pm 2.56\text{dB}$
2	RF power,conducted	$\pm 0.42\text{dB}$
3	Spurious emissions,conducted	$\pm 2.76\text{dB}$
4	All emissions,radiated(<30MHz)	$\pm 3.54\text{dB}$
5	All emissions,radiated(<1G)	$\pm 3.65\text{dB}$
6	All emissions,radiated(>1G)	$\pm 4.89\text{dB}$
7	Occupied bandwidth	$\pm 1.28\text{MHz}$
8	PSD	$\pm 0.69\text{dB}$
9	Temperature	$\pm 0.5^{\circ}\text{C}$
10	Humidity	$\pm 2\%$



4. METHOD OF MEASUREMENT

4.1 APPLICABLE STANDARD

ANSI C95.1 – 1999: IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz.

FCC KDB447498 D01 General RF Exposure Guidance v06: Mobile and Portable Device, RF Exposure, Equipment Authorization Procedures.

FCC CFR 47 part1 1.1310: Radio frequency radiation exposure limits

FCC CFR 47 part2 2.1091: Radiofrequency radiation exposure evaluation: mobile devices

The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)

4.2 LIMITS

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3–3.0	614	1.63	*(100)	6
3.0–30	1842/f	4.89/f	*(900/f ²)	6
30–300	61.4	0.163	1.0	6
300–1500			f/300	6
1500–100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3–1.34	614	1.63	*(100)	30
1.34–30	824/f	2.19/f	*(180/f ²)	30
30–300	27.5	0.073	0.2	30
300–1500			f/1500	30
1500–100,000			1.0	30

f = frequency in MHz

Friis transmission formula: $P_d = (P_{out} * G) / (4 * \pi * r^2)$

Where

P_d = power density in mW/cm², P_{out} = output power to antenna in mW;

G = gain of antenna in linear scale, $\pi = 3.1416$;

R = distance between observation point and center of the radiator in cm

P_d is the limit of MPE, 1 mW/cm². If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.



Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

EVALUATION RESULTS

WIFI(Peak) ANT

Frequency (MHz)	11b		
	2412	2437	2462
Target (dBm)	17.0	17.0	16.0
Tolerance $\pm$ (dB)	1.0	1.0	1.0
Frequency (MHz)	11g		
	2412	2437	2462
Target (dBm)	17.0	17.0	17.0
Tolerance $\pm$ (dB)	1.0	1.0	1.0
Frequency (MHz)	11n(HT20)		
	2412	2437	2462
Target (dBm)	17.0	17.0	17.0
Tolerance $\pm$ (dB)	1.0	1.0	1.0
Frequency (MHz)	11n(HT40)		
	2412	2437	2462
Target (dBm)	18.0	17.0	17.0
Tolerance $\pm$ (dB)	1.0	1.0	1.0



MPE Result

Modulation Type	Output power		Antenna Gain (dBi)	Antenna Gain (linear)	MPE (mW/cm ²)	MPE Limits (mW/cm ²)
	dBm	mW				
2.4GWIFI ANT	18.0	63.096	1.6	1.445	0.02617	1.0000
4G LTE ANT	25.0	312.226	1.08	2.3	0.1429	1.0000

Remark:

1. Output power (Peak) including turn-up tolerance;
2. MPE evaluate distance is 20cm from user manual provide by manufacturer.

Simultaneous MPE Result

2.4GWIFI ANT MPE (Ratio)	4G LTE ANT MPE (Ratio)	simultaneous MPE (Ratio)	MPE Limits (Ratio)
0.02617	0.1429	0.16907	1.0000

Remark: antenna gain=2.4G:1.6dBi

****END OF REPORT****