FCC Spot Check Test Report

FCC ID	:	**MXF-WLTFQT141GN**
Equipment	:	**Cat4 Indoor CPE**
Model No.	:	**WLTFQT-141GN**
Brand Name	:	**Gemtek**
Multiple Listing	:	**Refer to item 1.1.1 for more details.**
Applicant	:	**Gemtek Technology Co., Ltd.**
Address	:	**No. 15-1 Zhonghua Road, Hsinchu Industrial Park, Hukou, Hsinchu, Taiwan, 30352.**
Standard	:	**47 CFR FCC Part 22 Subpart H** **47 CFR FCC Part 24 Subpart E**
Received Date	:	**May 17, 2018**
Tested Date	:	**Jun. 04, 2018**

We, International Certification Corp., would like to declare that the tested sample has been evaluated and in compliance with the requirement of the above standards. The test results contained in this report refer exclusively to the product. It may be duplicated completely for legal use with the approval of the applicant. It shall not be reproduced except in full without the written approval of our laboratory.

Reviewed by: **Approved by:**

Along Chen / Assistant Manager **Gary Chang / Manager**

Testing Laboratory 2732

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Release Record

Report No.	Version	Description	Issued Date
FG851703	Rev. 01	Initial issue	Jun. 27, 2018

1 General Description

1.1 Information

1.1.1 Product Details

The following models are provided to this EUT.

Brand Name	Model Name	Product Name	Description
Gemtek	WLTFQT-141GN	Cat4 Indoor CPE	Main tested model.
Blu-Castle	BC-4GMCPGa		For marketing purpose.
✦ All models are electrically identical, different model names are for marketing purpose.			

1.1.2 Specification of the Equipment under Test (EUT)

Operating Band	GPRS: 824.2 ~ 848.8 MHz WCDMA: 826.4 ~ 846.6 MHz
Modulation	GPRS: GMSK WCDMA / HSDPA / HSUPA / DC-HSDPA: QPSK (uplink)
Multislot Class	33
3GPP Release Version	R5 / R6 / R8

Operating Band	GPRS: 1850.2 ~ 1909.8 MHz WCDMA: 1852.4 ~ 1907.6 MHz
Modulation	GPRS: GMSK WCDMA / HSDPA / HSUPA / DC-HSDPA: QPSK (uplink)
Multislot Class	33
3GPP Release Version	R5 / R6 / R8

1.1.3 Antenna Details

Type	Gain (dBi)	Connector	Remark
Monopole	1.56	No	GPRS/WCDMA850
Monopole	2.5	No	GPRS/WCDMA1900

1.1.4 Power Supply Type of Equipment under Test (EUT)

Power Supply Type	12Vdc from adapter

1.1.5 Accessories

Accessories		
No.	**Equipment**	**Description**
1	Adapter	Brand: APD Model: WA-12M12FU Power Rating: I/P: 100-240Vac, 50-60Hz, 0.5A Max O/P: 12Vdc, 1A Power Line: 1.2m non-shielded without core
2	RJ45 cable	EEKSONG, 1.5m non-shielded without core

1.1.6 Channel List

GPRS 850		
	Channel	**Frequency (MHz)**
Low	128	824.2
Middle	190	836.6
High	251	848.8

WCDMA 850		
	Channel	**Frequency (MHz)**
Low	4132	826.4
Middle	4182	836.4
High	4233	846.6

GPRS 1900		
	Channel	**Frequency (MHz)**
Low	512	1850.2
Middle	661	1880.0
High	810	1909.8

WCDMA 1900		
	Channel	**Frequency (MHz)**
Low	9262	1852.4
Middle	9400	1880.0
High	9538	1907.6

2 Referencing Test Data

2.1 Introduction

The variant model (FCC ID: MXF-WLTFQT141GN) references the test data of original model (FCC ID: MXF-BC4GMCPG).

Reference FCC ID	Equipment Class	Frequency bands	Reference Report Title
MXF-BC4GMCPG	PCB	GPRS/WCDMA850	FR6N0501P22
	PCB	GPRS/WCDMA1900	FR6N0501P24

FCC ID: MXF-BC4GMCPG / MXF-WLTFQT141GN use the same internal printed circuit board, antenna and software version for Wi-Fi function.

Applicant takes full responsibility that the test data as referenced below represents compliance for the FCC ID: MXF-WLTFQT141GN.

2.2 Difference

Difference between FCC ID: MXF-BC4GMCPG / MXF-WLTFQT141GN is only remove external antenna and adding frequency bands and enabling LTE and Wi-Fi function by software setting .No hardware modification on PCB.

Characteristic		FCC ID: MXF-WLTFQT141GN	FCC ID: MXF-BC4GMCPG
Wireless function	Frequency band	824 ~ 849 MHz 1850 ~ 1910 MHz 1710 ~ 1755 MHz* 2412 ~ 2462 MHz*	824 ~ 849 MHz 1850 ~ 1910 MHz
	Mode	GPRS WCDMA LTE* Wi-Fi*	GPRS WCDMA
	Antenna	Monopole / Internal antenna	Monopole / Internal antenna Dipole / External antenna
I/O port	Lan port	4	4
	Telephone port	1	1

Note: Enabling by software setting without population of components

2.3 Spot Check Verification Data

Test item	Mode	FCC ID: MXF-BC4GMCPG	FCC ID: MXF-WLTFQT141GN	Difference (dB)
Conducted Power (dBm)	GPRS 850	32.93	32.83	0.10
	WCDMA 850	25.85	25.49	0.36
	GPRS 1900	30.17	30.12	0.05
	WCDMA 1900	25.59	25.12	0.47
RSE (dBm)	GPRS 850	-42.14	-42.83	0.69
	WCDMA 850	-48.53	-48.71	0.18
	GPRS 1900	-39.35	-39.97	0.62
	WCDMA 1900	-36.36	-37.15	0.79

2.4 Reference

Equipment Class	Reference FCC ID	Type Grant	Reference application	Reference Report Title
PCB	MXF-BC4GMCPG	Original	MXF-WLTFQT141GN	FR6N0501P22
PCB	MXF-BC4GMCPG	Original	MXF-WLTFQT141GN	FR6N0501P24

2.5 The Equipment List

Test Item	RF Conducted				
Test Site	(TH01-WS)				
Instrument	**Manufacturer**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Spectrum Analyzer	R&S	FSV40	101063	Apr. 16, 2018	Apr. 15, 2019
Power Meter	Anritsu	ML2495A	1241002	Oct. 16, 2017	Oct. 15, 2018
Power Sensor	Anritsu	MA2411B	1207366	Oct. 16, 2017	Oct. 15, 2018
AC POWER SOURCE	APC	AFC-500W	F312060012	Dec. 01, 2017	Nov. 30, 2018
Measurement Software	Sporton	Sporton_1	1.3.30	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

Test Item	Radiated Emission				
Test Site	966 chamber1 / (03CH01-WS)				
Instrument	**Manufacturer**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Radio Communication Analyzer	Anritsu	MT8820C	6201240341	Apr. 08, 2018	Apr. 07, 2019
Spectrum Analyzer	R&S	FSV40	101498	Dec. 04, 2017	Dec. 03, 2018
Receiver	R&S	ESR3	101658	Nov. 20, 2017	Nov. 19, 2018
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-522	Jul. 25, 2017	Jul. 24, 2018
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1096	Dec. 20, 2017	Dec. 19, 2018
Loop Antenna	R&S	HFH2-Z2	100330	Nov. 13, 2017	Nov. 12, 2018
Loop Antenna Cable	KOAX KABEL	101354-BW	101354-BW	Dec. 07, 2017	Dec. 06, 2018
Preamplifier	EMC	EMC02325	980225	Jul. 28, 2017	Jul. 27, 2018
Preamplifier	Agilent	83017A	MY39501308	Oct. 06, 2017	Oct. 05, 2018
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16140/4	May 09, 2018	May 08, 2019
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16019/4	Dec. 07, 2017	Dec. 06, 2018
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16139/4	Dec. 07, 2017	Dec. 06, 2018
LF cable 1M	EMC	EMCCFD400-NM-NM-1000	16052	Dec. 07, 2017	Dec. 06, 2018
LF cable 3M	Woken	CFD400NL-LW	CFD400NL-001	Dec. 07, 2017	Dec. 06, 2018
LF cable 10M	Woken	CFD400NL-LW	CFD400NL-002	Dec. 07, 2017	Dec. 06, 2018
Radio Communication Analyzer	Anritsu	MT8820C	6201240341	Apr. 08, 2018	Apr. 07, 2019
Measurement Software	AUDIX	e3	6.120210g	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

3 Test laboratory information

Established in 2012, ICC provides foremost EMC & RF Testing and advisory consultation services by our skilled engineers and technicians. Our services employ a wide variety of advanced edge test equipment and one of the widest certification extents in the business.

International Certification Corp (EMC and Wireless Communication Laboratory), it is our definitive objective is to institute long term, trust-based associations with our clients. The expectation we set up with our clients is based on outstanding service, practical expertise and devotion to a certified value structure. Our passion is to grant our clients with best EMC / RF services by oriented knowledgeable and accommodating staff.

Our Test sites are located at Linkou District and Kwei Shan District. Location map can be found on our website http://www.icertifi.com.tw.

Linkou	**Kwei Shan**	**Kwei Shan Site II**
Tel: 886-2-2601-1640	Tel: 886-3-271-8666	Tel: 886-3-271-8640
No. 30-2, Ding Fwu Tsuen, Lin Kou District, New Taipei City, Taiwan, R.O.C.	No. 3-1, Lane 6, Wen San 3rd St., Kwei Shan District, Tao Yuan City 333, Taiwan, R.O.C.	No. 14-1, Lane 19, Wen San 3rd St., Kwei Shan District, Tao Yuan City 333, Taiwan, R.O.C.

If you have any suggestion, please feel free to contact us as below information.

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