

FCC RF Exposure Report

FCC ID	:	2ABLK-844FX-X		
Equipment	:	GigaCenter		
Model No.	:	844FB-1;844F-1;844FB-2;844F-2 (refer to item 1.1.1 for more details)		
Brand Name	:	Calix Inc		
Applicant	:	Calix Inc		
Address	:	1035 N. McDowell Blvd. Petaluma, CA 94954		
Standard	:	47 CFR FCC Part 2.1091		
Received Date	:	Jan. 10, 2017		
Tested Date	:	Feb. 08 ~ Mar. 07, 2017		

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:

ong Cher





Along Cherly/ Assistant Manager Gary Chang / Manager



Table of Contents

1	GENERAL DESCRIPTION	4
1.1	Information	4
2	MPE EVALUATION OF MOBILE DEVICES	5
2.1	LIMITS FOR GENERAL POPULATION/UNCONTROLLED EXPOSURE	5
2.2	MPE EVALUATION FORMULA	5
2.3	MPE EVALUATION RESULTS	6
3	TEST LABORATORY INFORMATION	7



Release Record

Report No.	Version	Description	Issued Date
FA712305-01	Rev. 01	Initial issue	Apr. 17, 2017



1 General Description

1.1 Information

The device has 4 configurations as below table.

RF function is identical to each configuration. Differences between 4 configurations are only non-RF function by depopulation of components without PCB Modifications.

Model Name	844FB-1	844FB-2	844F-1	844F-2		
LAN / WAN function	4 LAN ports	4 LAN ports	4 LAN ports	4 LAN ports		
LAN / WAN IUICION		1WAN port		1WAN port		
G.fast function	bonding G.fast	bonding G.fast	Single G.fast	Single G.fast		
Power Supply	1. Adapter	Adapter (DC jack)	1. Adapter	Adapter (DC jack)		
Power Supply	2. UPS		2. UPS			
Housing Type	Housing 1	Housing 2	Housing 1	Housing 2		
Frequency band (GHz)	z) 2.412 ~ 2.462 / 5.18 ~ 5.24 / 5.26 ~ 5.32 / 5.5 ~ 5.72 / 5.745 ~ 5.825					
Bean forming mode	Supported Master USB3.0					
Master or Client						
USB function						
VOIP function	VOIP (FXS)					

Note: Four models (844FB-1, 844FB-2, 844F-1 and 844F-2) had been covered during the pretest, and found that 844F-1 was the worst case and was selected for final test.



2 MPE EVALUATION OF MOBILE DEVICES

Human exposure to RF emissions from mobile devices (47 CFR §2.1091) may be evaluated based on the MPE limits adopted by the FCC for electric and magnetic field strength and/or power density, as appropriate, since exposures are assumed to occur at distances of 20 cm or more from persons.

2.1 LIMITS FOR GENERAL POPULATION/UNCONTROLLED EXPOSURE

Frequency Range (MHz)	Power Density (mW /cm ²)	Averaging Time (minutes)
300~1500	F/1500	30
1500~100000	1.0	30

2.2 MPE EVALUATION FORMULA

$$\mathsf{Pd} = \frac{Pt}{4 * Pi * R^2}$$

Where

Pd= Power density in mW/cm² Pt= EIRP in mW Pi= 3.1416 R= Measurement distance



2.3 MPE EVALUATION RESULTS

Non-beamforming mode

Frequency Range (MHz)	Maximum Conducted Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
5260~5320	23.80	-0.8	20	0.040	1
5500~5700	23.89	-0.5	20	0.043	1

Beamforming mode

Frequency Range (MHz)	Maximum Conducted Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
5260~5320	23.50	5.22	20	0.148	1
5500~5700	23.69	5.52	20	0.166	1

Note:

Directional gain for 5.26 ~ 5.32 GHz = -0.8 dBi + $10^{*}\log(4/1) = 5.22$ dBi Directional gain for 5.50 ~ 5.70 GHz = -0.5 dBi + $10^{*}\log(4/1) = 5.52$ dBi



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 <u>http://www.icertifi.com.tw</u>.

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

Tel: 886-3-271-8666 Fax: 886-3-318-0155 Email: ICC_Service@icertifi.com.tw

—END—