

FCC Test Report

- Product Name : Wireless N Day & Night Pan/Tilt Cloud Camera
- Model No. : DCS-5010L, DCS-5020L
- FCC ID. : KA2CS5020LA1
- Applicant : D-Link Corporation
 Address : No.289, Sinhu 3rd Rd., Neihu District, Taipei City 114, Taiwan, R.O.C.

Date of Receipt	:	2013/02/26
Issued Date	:	2013/03/13
Report No.	:	133011R-RFUSP42V01
Report Version	:	V1.0
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The test results relate only to the samples tested.

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Tes	st	Report Certification Issued Date : 2013/03/13 Report No : 133011B-REUSP42V01				
		QuieTek				
Product Name	:	Wireless N Day & Night Pan/Tilt Cloud Camera				
Applicant	:	D-Link Corporation				
Address	:	No.289, Sinhu 3rd Rd., Neihu District, Taipei City 114, Taiwan, R.O.C.				
Manufacturer	:	(1) ALPHA NETWORKS (DONGGUAN) CO., LTD.(2) Mirac Networks (Dongguan) Co., Ltd.				
Address	:	 Xingang Road, Xin'an Area, Chang An, Dongguan City, Guangdong Province, China Song Lin East Road, Zeng Tian Village, Xin An District, Chang An Town, Dong Guan City, Guang Dong Province, China 				
Model No	•					
	•	KA2CS5020L A1				
FUT Test Voltage	•					
Trade Name	•	D Link				
Applicable Standard	•	D-LIIK				
Applicable Standard	•	ANGLOGA 4: 2000				
T (D) "	_	ANSI C63.4: 2009				
lest Result	:	Complied				
The test results relate only to th The test report shall not be repro	ie sa oduce	mples tested. ed except in full without the written approval of QuieTek Corporation.				
Documented By	:	Demi Chang				
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Reviewed By	:	JuBo Shen				
		(JuBo Shen / Engineer)				
Approved By	:	Roy Wang				
		(Roy Wang / Manager)				

Laboratory Information

We, **QuieTek Corporation**, are an independent RF consultancy that was established the whole facility in our laboratories. The test facility has been accredited/accepted (audited or listed) by the following related bodies in compliance with ISO 17025 specified testing scopes:

Taiwan R.O.C.	:	TAF, Accreditation Number: 1313 NCC, Certificate No : NCC-RCB-07
USA	:	FCC, Registration Number: 365520
Canada	:	IC, Submission No: 150981

The related certificate for our laboratories about the test site and management system can be downloaded from QuieTek Corporation's Web Site:<u>http://www.quietek.com/tw/ctg/cts/accreditations.htm</u>

The address and introduction of QuieTek Corporation's laboratories can be founded in our Web site : http://www.quietek.com/

If you have any comments, Please don't hesitate to contact us. Our contact information is as below:

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1. General Information

1.1. EUT Description

Product Name	Wireless N Day & Night Pan/Tilt Cloud Camera
Product Type	WLAN (1TX, 1RX)
Trade Name	D-Link
Model No.	DCS-5010L, DCS-5020L
Frequency Range -IEEE 802.11b/g	2412~2462MHz
& IEEE 802.11n (20MHz)	
Channel Number (IEEE 802.11b/g	11
& IEEE 802.11n (20MHz))	
Type of Modulation (IEEE 802.11b)	Direct Sequence Spread Spectrum (DSSS)
Type of Modulation (IEEE 802.11g/n)	Orthogonal Frequency Division Multiplexing (OFDM)
Data Speed (IEEE 802.11b)	1Mbps, 2Mbps, 5.5Mbps, 11Mbps
Data Speed (IEEE 802.11g)	6Mbps,9Mbps,12Mbps,18Mbps,24Mbps,36Mbps,48Mbps,54Mbps
Data Speed (IEEE 802.11n_20HT)	Support a subset of the combination of GI, MCS 0~MCS 7 and
	bandwidth defined in 802.11n_20HT
Antenna Gain	2.0dBi
Channel Control	Auto
Antenna Type	Dipole

Component				
LAN Cable	Non-Shielded, 1.5m			
Power Adapter	D-Link, AMS9-1201000FU2			
	I/P: 100-240V~50/60Hz 0.5A			
	O/P: 12V====1.0A			
	Cable Out: Non-Shielded, 3m			

ANT0-TX / RX & Bandwidth

ANT-TX / RX	1 TX	1 RX
Mode/ Channel Bandwidth	20MHz	20MHz
IEEE802.11b	\checkmark	\checkmark
IEEE802.11g	\checkmark	\checkmark
IEEE802.11n_HT20	\checkmark	\checkmark



IEEE 802.11n_HT20

	N _{CBPS}		BPS	N _D	BPS	Data Rate(Mb/s)					
MCS	Modulation	R	N _{BPSCS}				20MHz 40MHz	800ns GI		400ns GI (Note1)	
Index				20MHZ	40MHZ	20MHz		20MHz	40MHz	20MHz	40MHz
0	BPSK	1/2	1	52		26		6.5		7.2	
1	QPSK	1/2	2	104		52		13.0		14.4	
2	QPSK	3/4	2	104		78		19.5		21.7	
3	16-QAM	1/2	4	208		104		26.0		28.9	
4	16-QAM	3/4	4	208		156		39.0		43.3	
5	64-QAM	2/3	6	312		208		52.0		57.8	
6	64-QAM	3/4	6	312		234		58.5		65.0	
7	64-QAM	5/6	6	312		260		65.0		72.2	
	Note 1. Current of 100ms Clip entional on transmit and reasive										

Note 1: Support of 400ns GI is optional on transmit and receive.

Table 1 – MCS parameters for TX Antenna number = 1

Symbol	Explanation
R	Code rate
N _{BPSC}	Number of coded bits per single carrier
N _{CBPS}	Number of coded bits per symbol
N _{DBPS}	Number of data bits per symbol
GI	guard interval

IEEE 802.11b/g & IEEE 802.11n (20MHz) - 2.4GHz

Working Frequency of Each Channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
001	2412 MHz	002	2417 MHz	003	2422 MHz	004	2427 MHz
005	2432 MHz	006	2437 MHz	007	2442 MHz	800	2447 MHz
009	2452 MHz	010	2457 MHz	011	2462 MHz		

Note:

ејек

- This device is a Wireless N Day & Night Pan/Tilt Cloud Camera including 2.4GHz b/g/n_20HT (1x1) transmitting and receiving function.
- 2. The different of the each model is shown as below:

Model No.	Description
DCS-5010L	Black Case
DCS-5020L	White Case

- 3. These test results on a sample of the device are for the purpose of demonstrating Compliance with Part 15 Subpart C Paragraph 15.247.
- 4. Regards to the frequency band operation; the lowest
 imiddle and highest frequency of channel were selected to perform the test, and then shown on this report.
- This device is a composite device in accordance with Part 15 regulations. The receiving function receiving was tested and its test report number is 133011R-RFUSP37V02 under Declaration of Conformity.

1.3. **Test Mode**

QuieTek has verified the construction and function in typical operation. The preliminary tests were performed in different data rate, and to find the worst condition, which was shown in this test report. The following table is the final test mode.

тх	Mode 1: Transm	nit		
Test Items	Mode	Channel	Antenna	Result
Conducted Emission	11n(20MHz)	6	0	Complies
Peak Power Output	b/g	1/ 6/ 11	0	Complies
	11n(20MHz)	1/ 6/ 11	0	Complies
Radiated Emission	b/g	1/ 6/ 11	0	Complies
	11n(20MHz)	1/ 6/ 11	0	Complies
RF antenna conducted test	b/g	1/ 11	0	Complies
	11n(20MHz)	1/ 11	0	Complies
Radiated Emission Band Edge	b/g	1/ 11	0	Complies
	11n(20MHz)	1/ 11	0	Complies
Occupied Bandwidth	b/g	1/ 6/ 11	0	Complies
	11n(20MHz)	1/ 6/ 11	0	Complies
Power Density	b/g	1/ 6/ 11	0	Complies
	11n(20MHz)	1/ 6/ 11	0	Complies

1.4. Tested System Details

The types for all equipments, plus descriptions of all cables used in the tested system (including inserted cards) are:

Product		Manufacturer	Model No.	Serial No.	Power Cord
1	Notebook PC	ACER	PAV70	LUSEW0D0371105F	Non-Shielded, 2.5m
				E221601	one ferrite core bonded
2	Notebook PC	DELL	Precision M65	28G9NIS	Non-Shielded, 1.8m

1.5. Configuration of tested System

		Connectio	n Diagram		
				— A —	
		EUT]		
			N	otebook PC (2)	Notebook PC (1)
	Signal Cable Type		Si	gnal cable Descript	ion
А	LAN Cable		Non-Shielded	, 1.5m	

1.6. EUT Exercise Software

1	Setup the EUT as shown in Section 1.5.
2	Execute the test program "RT3352" on the notebook.
3	Configure the test mode, the test channel, and the data rate.
4	Press "Start TX" to start the continuous transmitting.
5	Verify that the EUT works properly.

1.7. Test Facility

Ambient conditions in the laboratory:

Items	Test Item	Required (IEC 68-1)	Actual
Temperature (°C)		15 - 35	20
Humidity (%RH)	FCC PART 15 C 15.207	25 - 75	50
Barometric pressure (mbar)	Conducted Emission	860 - 1060	950-1000
Temperature (°C)		15 - 35	20
Humidity (%RH)	FCC PART 15 C 15.247	25 - 75	50
Barometric pressure (mbar)	Peak Power Output (DSSS)	860 - 1060	950-1000
Temperature (°C)		15 - 35	20
Humidity (%RH)	FCC PART 15 C 15.247	25 - 75	50
Barometric pressure (mbar)	Radiated Emission (DSSS)	860 - 1060	950-1000
Temperature (°C)	FCC PART 15 C 15.247	15 - 35	20
Humidity (%RH)	RF antenna conducted test	25 - 75	50
Barometric pressure (mbar)	(DSSS)	860 - 1060	950-1000
Temperature (°C)		15 - 35	20
Humidity (%RH)	FCC PART 15 C 15.247	25 - 75	50
Barometric pressure (mbar)	Band Edge (DSSS)	860 - 1060	950-1000
Temperature (°C)		15 - 35	20
Humidity (%RH)	FCC PART 15 C 15.247	25 - 75	50
Barometric pressure (mbar)	Occupied Bandwidth (DSSS)	860 - 1060	950-1000
Temperature (°C)		15 - 35	20
Humidity (%RH)	FCC PART 15 C 15.247	25 - 75	50
Barometric pressure (mbar)	Power Density (DSSS)	860 - 1060	950-1000

2. Conducted Emission

2.1. Test Equipment

The following test equipments are used during the test:

Conducted Emission / SR2

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Artificial Mains Network	R&S	ENV4200	848411/010	2014/01/24
LISN	R&S	ENV216	100092	2013/08/21
Test Receiver	R&S	ESCS 30	825442/014	2013/08/07

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

2.2. Test Setup





2.3. Limits

FCC Part 15 Subpa	FCC Part 15 Subpart C Paragraph 15.207 Limits (dBuV)							
Frequency MHz	QP	AV						
0.15 - 0.50	66-56	56-46						
0.50 - 5.0	56	46						
5.0 - 30	60	50						

Remarks: In the above table, the tighter limit applies at the band edges.

2.4. Test Procedure

The EUT was setup according to ANSI C63.4: 2009 and tested according to DTS test procedure of Oct. 2012 KDB558074 for compliance to FCC 47CFR 15.247 requirements. The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface. The EUT and simulators are connected to the main power through a line impedance stabilization network (LISN). The LISN provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs.) Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source.

The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length. Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.

2.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.207: 2011

2.6. Uncertainty

The measurement uncertainty is defined as \pm 2.26 dB.

2.7. Test Result

Site : SR2	Time : 2013/03/06 - 19:29
Limit : CISPR_B_00M_QP	Margin : 10
Probe : SR2_LISN(16A)-3_0822 - Line1	Power : AC 120V/60Hz
EUT : Wireless N Day & Night Pan/Tilt Cloud Camera	Note : Mode 1: Transmit_802.11n 20MHz_CH6



					,,			
		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV)	(dB)	(dBuV)	
1		0.193	9.643	28.510	38.153	-25.755	63.908	QUASIPEAK
2		0.193	9.643	13.940	23.583	-30.325	53.908	AVERAGE
3		0.255	9.660	24.510	34.170	-27.408	61.577	QUASIPEAK
4		0.255	9.660	11.990	21.650	-29.928	51.577	AVERAGE
5		0.478	9.724	22.680	32.405	-23.967	56.372	QUASIPEAK
6		0.478	9.724	11.710	21.435	-24.937	46.372	AVERAGE
7		2.888	9.884	25.550	35.434	-20.566	56.000	QUASIPEAK
8	*	2.888	9.884	16.210	26.094	-19.906	46.000	AVERAGE
9		5.759	9.990	25.550	35.540	-24.460	60.000	QUASIPEAK
10		5.759	9.990	16.370	26.360	-23.640	50.000	AVERAGE
11		23.127	10.171	22.340	32.511	-27.489	60.000	QUASIPEAK
12		23.127	10.171	16.260	26.431	-23.569	50.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.

- 2. " * ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.

Site : SR2	Time : 2013/03/06 - 19:32
Limit : CISPR_B_00M_QP	Margin : 10
Probe : SR2_LISN(16A)-3_0822 - Line2	Power : AC 120V/60Hz
EUT : Wireless N Day & Night Pan/Tilt Cloud Camera	Note : Mode 1: Transmit_802.11n 20MHz_CH6



		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV)	(dB)	(dBuV)	
1		0.154	9.622	32.950	42.572	-23.214	65.786	QUASIPEAK
2		0.154	9.622	16.070	25.692	-30.094	55.786	AVERAGE
3		0.205	9.635	28.530	38.165	-25.253	63.418	QUASIPEAK
4		0.205	9.635	12.620	22.255	-31.163	53.418	AVERAGE
5	*	0.490	9.708	24.690	34.398	-21.772	56.170	QUASIPEAK
6		0.490	9.708	14.480	24.188	-21.982	46.170	AVERAGE
7		3.154	9.880	19.400	29.280	-26.720	56.000	QUASIPEAK
8		3.154	9.880	10.130	20.010	-25.990	46.000	AVERAGE
9		5.591	9.983	19.240	29.223	-30.777	60.000	QUASIPEAK
10		5.591	9.983	10.470	20.453	-29.547	50.000	AVERAGE
11		23.127	10.307	19.010	29.318	-30.682	60.000	QUASIPEAK
12		23.127	10.307	13.780	24.088	-25.912	50.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.

- 2. " * ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.

3. Peak Power Output

3.1. Test Equipment

The following test equipments are used during the test:

Peak Power / SR7

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
EXA Signal Analyzer	Agilent	N9010A-EXA	US47140172	2013/07/31

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

3.2. Test Setup



3.3. Test procedures

The EUT was tested according to DTS test procedure of Oct. 2012 KDB558074, Section 5.2.1.2 Measurement Procedure PK2 for compliance to FCC 47CFR 15.247 requirements.

3.4. Limits

The maximum peak power shall be less 1 Watt.

3.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2011

3.6. Uncertainty

The measurement uncertainty is defined as \pm 1.27 dB.



3.7. Test Result

Product	Wireless N Day & Night Pan/Tilt Cloud Camera						
Test Item	Peak Power Output						
Test Mode	Mode 1: Transmit						
Date of Test	2013/03/06	Test Site	SR7				

IEEE 802.11b											
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result							
1	2412	16.96	1Watt= 30 dBm	Pass							
6	2437	17.61	1Watt= 30 dBm	Pass							
11	2462	15.74	1Watt= 30 dBm	Pass							

The worst emission of data rate is 1Mbps.

Peak Power Output Value (dBm)											
Channel Na			Data	Rate		D · · · · · ·					
Channel No.	Frequency (IVIHZ)	1	2	5.5	11	Required Limit					
1	2412	16.96			-	30 dBm					
6	2437	17.61	17.60	17.59	17.58	30 dBm					
11	2462	15.74			-	30 dBm					

Note: Measure Level =Reading value + cable loss



						<u>Chan</u>	<u>nel 1</u>					
	gilent Spect	rum Analyze	er - Channel	Power								
	an 26.0	50 Ω 000 MHz Ref 2	Input: RF	(#IFGain:Low	AC SE Center F Trig: Fre #Atten: 3	INSE:INT req: 2.4120 e Run 0 dB	000000 GHz Avg Hol Ext Gair	ALIGNAUTO d:> 10/10 h: -11.00 dB	08:32:20 Radio Sto Radio De	PM Mar 06, 2013 d: None wice: BTS	Trac	e/Detector
Lo	9 10 0 					<u> </u>						Clear Write
1. 17 T	20 30	Name of the second								La harrow particular		Average
 -8 -8	10 50 60											Max Hold
-∂ Ce #R	enter 2.4 Res BW 1	12 GHz I MHz			#VI	BW 3 M	Hz		Sp: Sw	an 26 MHz reep 1 ms		Min Hold
	Channe	el Pow 16.9	er 96 dE	3m/ 12.15	MHz	Powe	er Spect -54	ral Den: .77 dB	sity Sm/Hz		Auto	Detector Peak▶ <u>Man</u>
MSG	1							STATU	s			

Channel 6

🗾 Agilent Spectrum Analyzer - Channel Power						
α 50 Ω Α Span 26.000 MHz	C SENSE:INT Center Freq: 2.437000000 GHz Trig: Free Bun Auglied		08:33:31 F Radio Std:	M Mar 06, 2013 None	Trac	e/Detector
Input: RF 😱 #IFGain:Low	#Atten: 30 dB Ext Gain:	: -11.00 dB	Radio Dev	ice: BTS		
10 dB/div Ref 20 dBm						
						Clear Write
-10						
-20						
-30				The International Action		Average
-40						
-50						Max Hold
-60						Maxilolu
-70						
Contor 2 437 CHz				n 26 MUz		Min Hold
#Res BW 1 MHz	#VBW 3 MHz		Swe	ep 1 ms		
Channel Power	Power Spect	ral Dens	ity		Auto	Detector Peak► <u>Man</u>
17.61 dBm/ 12.15 M	/Hz -54.	11 dB	m/Hz			
MSG		STATUS				

Channel 11

D Agilent	Spectrum Ar	alyzer -	Channel	Power			42	0.9					
v Center	50 Ω Freq 2	.4620)00000 1put: RF	0 GHz		C SE Center F Trig: Free	NSE:INT req: 2.46200 e Run	00000 GHz Avg Ho	ALIGN AUTO 2 1d:>10/10	08:36:02 F Radio Std	M Mar 06, 2013 None	Trac	e/Detector
10 dB/di	v Re	ef 20	dBm	#IFGain:L	.ow	#Atten: 3	0 dB	Ext Gai	in: -11.00 dB	Radio Dev	rice: BTS		
				_									Clear Write
-10 -20 -30 ~~~~	Conservation and and a second										anne Marrien with		Average
-40													Max Hold
- ⁷⁰ Center #Res B	2.462 G	Hz z				#VE	з м з мн	z		Spa Swe	n 26 MHz ep 1 ms		Min Hold
Cha	innel P 1	owei 5.7	r 4 dE	3m/ 12	.14 N	/IHz	Power	-55	tral Dens 5.98 dB	ity m/Hz		Auto	Detector Peak► <u>Man</u>
MSG									STATUS				

Product	Wireless N Day & Night Pan/Tilt Cloud Camera						
Test Item	Peak Power Output						
Test Mode	Mode 1: Transmit						
Date of Test	2013/03/06 Test Site SR7						

IEEE 802.11g				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2412	15.07	1Watt= 30 dBm	Pass
6	2437	14.68	1Watt= 30 dBm	Pass
11	2462	14.20	1Watt= 30 dBm	Pass

The worst emission of data rate is 6Mbps.

Peak Power Output (dBm)												
Channel	Frequency			Required								
No	(MHz)	6	12	54	Limit							
1	2412	15.07							1 Watt=30dBm			
6	2437	14.68	14.67	14.61	1 Watt=30dBm							
11	2462	14.20							1 Watt=30dBm			

Note: Measure Level =Reading value + cable loss



				<u>C</u>	nannel 1					
🗊 Agilent Spe	ctrum Analyzer - (Channel Pow	er							
Span 26	50 Ω .000 MHz Inj Ref 20 c	put: RF #IF	Gain:Low	Center Freq: 3 Trig: Free Ru #Atten: 30 dB	NT 2.412000000 Gi n Avg ł Ext G	ALIGNAUTO Hz Hold:>10/10 ∂ain: -11.00 dB	08:37:08 Radio Std Radio Dev	PM Mar 06, 2013 I: None vice: BTS	Trac	e/Detector
10 0										Clear Write
-20 ********* -30							V	[┡] ╋┰┉╼╋╾┈ _{Ѵ┣╾} ╍		Average
-40										Max Hold
- ⁷⁰ Center 2. #Res BW	412 GHz 1 MHz			#VBW	3 MHz		Spa Swe	an 26 MHz eep 1 ms		Min Hold
Chanr	nel Power		an a	P	ower Spe	ectral Dens	sity		Auto	Detector Peak▶ <u>Man</u>
MSG	15.07	/ dBm	/ 16.39	ЛНZ	ć-	status	m/Hz			



				<u>C</u>	hannel 6					
D Agile	ent Spectrum Anal	yzer - Channe	l Power							
Spar	50 Ω 1 26.000 Mi	Iz Input: RF	#IFGain:Low	AC SENSE: Center Freq: Trig: Free Ru #Atten: 30 dB	NT 2.437000000 GH n Avg F Ext G	ALIGNAUTO Hz Hold:>10/10 Bain: -11.00 dB	08:39:34 Radio Std Radio Dev	PM Mar 06, 2013 : None vice: BTS	Trac	e/Detector
Log - 10 - 0 -		diameter and the second	R(TP~							Clear Write
-10 - -20 ~ -30 -	marphan									Average
-40 - -50 - -60 -										Max Hold
-70 Cente #Res	er 2.437 GH BW 1 MHz	z		#VBW	3 MHz		Spa Swe	ın 26 MHz eep 1 ms		Min Hold
Cł	nannel Po 14	wer .68 di	Bm/ 16.39	P MHz	ower Spe -5	ctral Dens 7.51 dB	sity m/Hz		Auto	Detector Peak▶ <u>Man</u>
MSG						STATU	5		S -	



Channel 11

🐌 Agilent Spectrum Analyzer - Chann	nel Power				
LXI 50 Ω	AC	C SENSE:INT	ALIGN AUTO	08:45:24 PM Mar 06, 2013	Trans/Detector
RBW 1.0000 MHz		Center Freq: 2.46200	0000 GHz	Radio Std: None	Trace/Delector
Input: R	F 😱	Trig: Free Run	Avg Hold:>10/10		
	#IFGain:Low	#Atten: 30 dB	Ext Gain: -11.00 dB	Radio Device: BTS	
10 dB(div Ref 20 dBm					
	1 1	() ()			
40					
					Clear Write
0				Nr.	
				N.	
-10				- ^N .	
an hourse and a first of the second s				The Marine -	
-20 80 4 8 1					Average
-30					, troi ago
-40		· · · · · · · · · · · · · · · · · · ·			
-50		· · · · · · · · · · · · · · · · · · ·			Max Hold
-60					
-70		· · · · · · · · · · · · · · · · · · ·		<u>a</u>	
Center 2462 GHz				Spap 26 MHz	Min Hold
#Dec BW 1 MHz		#\/B\A/ 3 MU	7	Sween 1 mc	
#Res DW T WINZ		#VOVV JIVIN	2	Sweep 1113	
					Detector
Channel Power		Power	Spectral Dens	sitv	Detector
onamer r oner		1 0 11 01	opoulai bolic	, in y	Peak▶
					Auto <u>Man</u>
14.20 c	IBm/ 16 41 M	1H7	-58 01 dB	m/Hz	
14.20 0		1112		110112	
MSG			STATUS	5	

Product	Wireless N Day & Night Pan/Tilt Cloud Camera				
Test Item	Peak Power Output				
Test Mode	Mode 1: Transmit				
Date of Test	2013/03/06	Test Site	SR7		

IEEE 802.11n 20MHz

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2412	14.00	1Watt= 30 dBm	Pass
6	2437	13.50	1Watt= 30 dBm	Pass
11	2462	12.53	1Watt= 30 dBm	Pass

The worst emission of data rate is 19.5 Mbps.

Peak Power Output (dBm)										
MCS	MCS Index 16 17 18 19 20 21 22 23						Required			
Channel	Frequency		Data Rate						Limit	
No	(MHz)	19.5	39	58.5	78	117	156	175.5	195	
1	2412	14.00								30dBm
6	2437	13.50	13.48	13.47	13.46	13.45	13.43	13.42	13.41	30dBm
11	2462	12.53								30dBm



					<u>Chanr</u>	nel 1					
💴 Agilent Spec	trum Analyze	r - Channel	Power								
10 dB/div	50 Ω 000 MHz Ref 2	Input: RF 0 dBm	#IFGain:Low	AC SE Center Fr Trig: Free #Atten: 30	NSE:INT 'eq: 2.4120 ≱ Run) dB	000000 GHz Avg Hold Ext Gain	ALIGN AUTO d:>10/10 : -11.00 dB	08:46:59 Radio Sto Radio De	PM Mar 06, 2013 I: None vice: BTS	Trac	e/Detector
Log 10 0					~~			- Very			Clear Write
-10 -20									- Almontal Hite		Average
-40 -50											Max Hold
-70 Center 2.4 #Res BW	12 GHz 1 MHz			#VE	SW 3 MI	Hz		Spa Sw	an 26 MHz eep 1 ms		Min Hold
Chann	el Pow 14.0	er DO de	3m/ 17.38	MHz	Powe	er Spect - 58 .	ral Dens . 44 dB	sity sm/Hz		Auto	Detector Peak▶ <u>Man</u>
MSG							STATU	s			



					<u>Chan</u>	<u>nel 6</u>					
D Agilent S	pectrum Analyze	er - Channel	Power					-		an.	
(X) Span 2 10 dB/div	50 Ω 26.000 MHz Ref 2	Input: RF	#IFGain:Low	AC Center Trig: Fr #Atten:	sense:INT Freq: 2.437(ree Run 30 dB	000000 GHz Avg Hold Ext Gain	ALIGN AUTO 4:> 10/10 : -11.00 dB	08:48:46 Radio Sto Radio De	PM Mar 06, 2013 I: None vice: BTS	Trac	e/Detector
						,					Clear Write
-20	melder -								mouthinger		Average
-40 -50 -60											Max Hold
-70 Center #Res B\	2.437 GHz N 1 MHz			#\	/вw:зм	Hz		Spa Sw	an 26 MHz eep 1 ms		Min Hold
Chai	nnel Pow 13.	er 50 di	3m/ 17.49	9 MHz	Powe	er Spect -58.	ral Dens .94 dB	sity m/Hz		Auto	Detector Peak► <u>Man</u>
MSG							STATU	S			



Channel 11

💴 Agilent S	Spectrum Ana	lyzer - Chann	el Power					ana			
xx Sweep	50 Ω Time 1.	00 ms		AC S	ENSE:INT Freq: 2.4620	00000 GHz	ALIGN AUTO	12:36:55 Radio Ste	PM Mar 07, 2013 1: None	Trac	e/Detector
		Input: RF	: #IFGain:Low	Trig: Fro #Atten: 3	ee Run 30 dB	Avg Hole Ext Gain	d:>10/10 :: -11.00 dB	Radio De	vice: BTS		
10 dB/div	Ref	<u>30 dBm</u>					1				
20								3 3 3		2	Clear Write
10							· · · · · · · · · · · · · · · · · · ·				
-10		out the second						- No			75.
-20	- Jan Martin								hy h		Average
-30	heur.								NUM MANNY	-	
-40											Max Hold
-50											
Contor	2 462 CH	-							DD 26 MUz		Min Hold
#Res B	2.402 GH W 1 MHz	2		#V	BW 3 MH	lz		Sw	eep 1 ms		
Cha	nnel Po	wer			Powe	r Spect	ral Dens	sity		Auto	Detector Peak▶ <u>Man</u>
	12	2. 53 d	Bm/ 17.48	MHz		-59	. 91 dB	m/Hz			
MSG							STATUS	5			

4. Radiated Emission

4.1. Test Equipment

The following test equipments are used during the test:

Radiated Emission / CB1

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Bilog Antenna	SCHAFFNER	CBL6112B	2895	2013/08/14
Double Ridged	Schwarzback	BBHA 9120	D743	2014/02/17
Guide Horn Antenna				
Pre-Amplifier	MITEQ	AMF-4D-005180-24-10P	888003	2013/12/02
Pre-Amplifier	QuieTek	AP-025C	CHM-0706049	2014/02/19
Spectrum Analyzer	Agilent	E4440A	MY46187335	2014/01/27
k Type Cable	Huber Suhner	Sucoflex 102	25623/2	2014/02/21

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

4.2. Test Setup

Under 1GHz Test Setup:







QuieTer

4.3. Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

FCC Part 15 Subpart C Paragraph 15.209 Limits							
Frequency	dDu <i>l Un</i> a	dDu\//m					
MHz	aBuv/m	ubuv/m					
30-88	100	40					
88-216	150	43.5					
216-960	200	46					
Above 960	500	54					

Remarks: E field strength (dBuV/m) = 20 log E field strength (uV/m)

4.4. Test Procedure

The EUT was setup according to ANSI C63.4: 2009 and tested according to DTS test procedure of Oct. 2012 KDB558074 for compliance to FCC 47CFR 15.247 requirements. The EUT and its simulators are placed on a turn table which is 0.8 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.

Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.4: 2009 on radiated measurement.

On any frequency or frequencies below or equal to 1000 MHz, the limits shown are based on measuring equipment employing a quasi-peak detector function and on any frequency or frequencies above 1000 MHz the radiated limits shown are based upon the use of measurement instrumentation employing an average detector function. When average radiated emission measurement are included emission measurement below 1000 MHz, there also is a limit on the radio frequency emissions, as measured using instrumentation with a peak detector function, corresponding to 20 dB above the maximum permitted average limit. The bandwidth below 1GHz setting on the field strength meter is 120 kHz and above 1GHz is 1MHz.

4.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2011

4.6. Uncertainty

The measurement uncertainty $30MHz \sim 1GHz$ as $\pm 3.43dB$ $1GHz \sim 26.5Ghz$ as $\pm 3.65dB$

4.7. Test Result

30MHz-1GHz Spurious

Site : CB1	Time : 2013/03/06 - 16:04
Limit : FCC_CLASS_B_03M_QP	Margin : 6
Probe : CB1_FCC_EFS_30-1G-1_0901 - HORIZONTAL	Power : AC 120V/60Hz
EUT :Wireless N Day & Night Pan/Tilt Cloud Camera	Note : Mode 1: Transmit _802.11b_CH06



- 1. All Reading Levels are Quasi-Peak value.
- 2. "*", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.

Site : CB1	Time : 2013/03/06 - 16:08
Limit : FCC_CLASS_B_03M_QP	Margin : 6
Probe : CB1_FCC_EFS_30-1G-1_0901 - VERTICAL	Power : AC 120V/60Hz
EUT :Wireless N Day & Night Pan/Tilt Cloud Camera	Note : Mode 1: Transmit _802.11b_CH06



- 1. All Reading Levels are Quasi-Peak value.
- 2. " * ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.

Site : CB1	Time : 2013/03/06 - 16:26
Limit : FCC_CLASS_B_03M_QP	Margin : 6
Probe : CB1_FCC_EFS_30-1G-1_0901 - HORIZONTAL	Power : AC 120V/60Hz
EUT :Wireless N Day & Night Pan/Tilt Cloud Camera	Note : Mode 1: Transmit _802.11g_CH06



- 1. All Reading Levels are Quasi-Peak value.
- 2. "*", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.

Site : CB1	Time : 2013/03/06 - 16:30
Limit : FCC_CLASS_B_03M_QP	Margin : 6
Probe : CB1_FCC_EFS_30-1G-1_0901 - VERTICAL	Power : AC 120V/60Hz
EUT :Wireless N Day & Night Pan/Tilt Cloud Camera	Note : Mode 1: Transmit _802.11g_CH06



- 1. All Reading Levels are Quasi-Peak value.
- 2. "*", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.

Site : CB1	Time : 2013/03/06 - 16:42
Limit : FCC_CLASS_B_03M_QP	Margin : 6
Probe : CB1_FCC_EFS_30-1G-1_0901 - HORIZONTAL	Power : AC 120V/60Hz
EUT :Wireless N Day & Night Pan/Tilt Cloud Camera	Note : Mode 1: Transmit _802.11n 20MHz_CH06



- 1. All Reading Levels are Quasi-Peak value.
- 2. " * ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.
| Site : CB1 | Time : 2013/03/06 - 16:46 |
|---|---|
| Limit : FCC_CLASS_B_03M_QP | Margin : 6 |
| Probe : CB1_FCC_EFS_30-1G-1_0901 - VERTICAL | Power : AC 120V/60Hz |
| EUT :Wireless N Day & Night Pan/Tilt Cloud Camera | Note : Mode 1: Transmit _802.11n 20MHz_CH06 |



- 1. All Reading Levels are Quasi-Peak value.
- 2. " * ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.

Above 1GHz Spurious

Site : CB1	Time : 2013/03/07 - 13:51
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : AC 120V/60Hz
EUT :Wireless N Day & Night Pan/Tilt Cloud Camera	Note : Mode 1: Transmit _802.11b_CH01



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2013/03/07 - 13:54
Limit : FCC_SpartC_15.247_H_03M_AV	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : AC 120V/60Hz
EUT :Wireless N Day & Night Pan/Tilt Cloud Camera	Note : Mode 1: Transmit _802.11b_CH01



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2013/03/07 - 14:06
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : AC 120V/60Hz
EUT :Wireless N Day & Night Pan/Tilt Cloud Camera	Note : Mode 1: Transmit _802.11b_CH01



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2013/03/07 - 14:09
Limit : FCC_SpartC_15.247_H_03M_AV	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : AC 120V/60Hz
EUT :Wireless N Day & Night Pan/Tilt Cloud Camera	Note : Mode 1: Transmit _802.11b_CH01



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2013/03/07 - 14:29
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : AC 120V/60Hz
EUT :Wireless N Day & Night Pan/Tilt Cloud Camera	Note : Mode 1: Transmit _802.11b_CH06



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2013/03/07 - 14:32
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : AC 120V/60Hz
EUT :Wireless N Day & Night Pan/Tilt Cloud Camera	Note : Mode 1: Transmit _802.11b_CH06



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2013/03/07 - 14:33
Limit : FCC_SpartC_15.247_H_03M_AV	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : AC 120V/60Hz
EUT :Wireless N Day & Night Pan/Tilt Cloud Camera	Note : Mode 1: Transmit _802.11b_CH06



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2013/03/07 - 14:48
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : AC 120V/60Hz
EUT :Wireless N Day & Night Pan/Tilt Cloud Camera	Note : Mode 1: Transmit _802.11b_CH11



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2013/03/07 - 14:54
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : AC 120V/60Hz
EUT :Wireless N Day & Night Pan/Tilt Cloud Camera	Note : Mode 1: Transmit _802.11b_CH11



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2013/03/07 - 15:01
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : AC 120V/60Hz
EUT :Wireless N Day & Night Pan/Tilt Cloud Camera	Note : Mode 1: Transmit _802.11g_CH01



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2013/03/07 - 15:07
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : AC 120V/60Hz
EUT :Wireless N Day & Night Pan/Tilt Cloud Camera	Note : Mode 1: Transmit _802.11g_CH01



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2013/03/07 - 15:08
Limit : FCC_SpartC_15.247_H_03M_AV	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : AC 120V/60Hz
EUT :Wireless N Day & Night Pan/Tilt Cloud Camera	Note : Mode 1: Transmit _802.11g_CH01



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2013/03/07 - 15:21
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : AC 120V/60Hz
EUT :Wireless N Day & Night Pan/Tilt Cloud Camera	Note : Mode 1: Transmit _802.11g_CH06



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2013/03/07 - 15:28
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : AC 120V/60Hz
EUT :Wireless N Day & Night Pan/Tilt Cloud Camera	Note : Mode 1: Transmit _802.11g_CH06



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2013/03/07 - 15:34
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : AC 120V/60Hz
EUT :Wireless N Day & Night Pan/Tilt Cloud Camera	Note : Mode 1: Transmit _802.11g_CH11



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2013/03/07 - 15:40
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : AC 120V/60Hz
EUT :Wireless N Day & Night Pan/Tilt Cloud Camera	Note : Mode 1: Transmit _802.11g_CH11



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2013/03/07 - 15:45
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : AC 120V/60Hz
EUT :Wireless N Day & Night Pan/Tilt Cloud Camera	Note : Mode 1: Transmit _802.11n 20MHz_CH01



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2013/03/07 - 15:55
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : AC 120V/60Hz
EUT :Wireless N Day & Night Pan/Tilt Cloud Camera	Note : Mode 1: Transmit _802.11n 20MHz_CH01



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2013/03/07 - 16:01
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : AC 120V/60Hz
EUT :Wireless N Day & Night Pan/Tilt Cloud Camera	Note : Mode 1: Transmit _802.11n 20MHz_CH06



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2013/03/07 - 16:06
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : AC 120V/60Hz
EUT :Wireless N Day & Night Pan/Tilt Cloud Camera	Note : Mode 1: Transmit _802.11n 20MHz_CH06



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2013/03/07 - 16:12
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : AC 120V/60Hz
EUT :Wireless N Day & Night Pan/Tilt Cloud Camera	Note : Mode 1: Transmit _802.11n 20MHz_CH11



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.

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_		60.0																					I	
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			(MHz)		(dB)			(dBuV)			(dB	uV/m)			(dB)		(dBuV/	m)					
	1		4924	4.920		-0.	.949		4	6.820			45	.871		-28.12	9	74	.000		F	PEAK		
	2		738	2.080	6.794		36.190		42.983		42.983		-31.017		42.983 -3		7 74.0		.000	00		PEAK		
	3		986	5.080	8.765		.765		3	7.140	45.906				.906	-28.094		4	74	.000		F	PEAK	
	4	*	1230	1.250		10	.793		3	6.060			46	.853		-27.14	7	74	.000		F	PEAK		

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.

5. **RF** antenna conducted test

5.1. Test Equipment

The following test equipments are used during the test:

RF antenna conducted test / SR7

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Spectrum Analyzer	R&S	FSP	100561	2014/02/03

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

5.2. Test Setup

RF Antenna Conducted Measurement:



5.3. Limits

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on an RF conducted or radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

5.4. Test Procedure

The EUT was setup according to ANSI C63.4: 2009 and tested according to DTS test procedure of Oct. 2012 KDB558074 for compliance to FCC 47CFR 15.247 requirements Set RBW = 100 kHz, Set VBW> RBW, scan up through 10th harmonic.

5.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2011

5.6. Uncertainty

Conducted is defined as ± 1.27dB

5.7. Test Result

Product	Wireless N Day & Night Pan/Tilt Cloud Camera						
Test Item	RF antenna conducted test						
Test Mode	Mode 1: Transmit						
Date of Test	2013/03/06	Test Site	SR7				

IEEE 802.11b, Duty Cycle: 1										
Channel No.	Frequency (MHz)	Measure Level (dBc)	Limit (dBc)	Result						
1	2412	32.142	≥20	Pass						
11	2462	49.190	≥20	Pass						

Channel 01 (2412MHz)

D Agi	ilent S	ipect	rum	Analyzer -	Swept S	A			- 12	15		2.55				
₩ Mar	ker	14	50 s 1	2 5.4000	00000	0 MH	z	AC	SEI	NSE:INT	Av	g Type	ALIGNAUTO	04:51:21 TRA	PM Mar 07, 2013 CE 1 2 3 4 5 6	Peak Search
10 di	B/div		Rei	۱۲ f 10.00	uput: RF	PNO IFGai	: Fast in:Low	-	#Atten: 30) dB	Ext	Gain:	-11.00 dB	Mkr1 1 32	5.4 MHz .142 dB	Next Peak
-10.0 -20.0										^^	provide from	<u>i</u> <u>∆</u> 2 \/\	1			Next Right
-30.0 -40.0 -50.0	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	1.111	-m-1	all million and	man	n hair a line from the	,enev.th	veder		л Л			J. Ward	Lucante	Viengyustesserve	Next Left
-60.0 -70.0 -80.0																Marker Delta
Cen #Re MKR	ter 2 s B\ MODE Δ2	2.40 N 1	000 00 501	0 GHz kHz (∆)	×	15.4	#VE	SW 3	30 kHz 7 32.142	dB	FUNCTION	FU	Sweep	Span [•] 27.6 ms	100.0 MHz (1001 pts) ION VALUE	Mkr→CF
2 3 4 5 6 7	F	1	f		2	.397 3 (GHz		28.390 di	3m						Mkr→RefLvl
8 9 10 11 12																More 1 of 2
MSG													STATUS	;		



Channel 11 (2462MHz)

D Agi	lent S	ipect	rum	Analyzer -	Swept SA		N	100	13	2.9		- 910				
₩ Mar	ker	1 4	50 s 2 - 2	2 26.325	000000) MHz	A		NSE:INT	Avg 1	ALIGN AU ype: Log-P	170 05 W r	:06:42 PM TRACE	4 Mar 07, 201: 1 2 3 4 5 (5	Peak Search
10 di	3/div	,	Ref	In F 10.00 (put: RF	PNO: Fas IFGain:Lo	t 😱 w	#Atten: 30	≥Run)dB	Ext G	ain: -11.00 d ΔΝ	в //kr1 -:	26.32 49	25 MHz 0.19 dB		NextPeak
Log 0.00 -10.0 -20.0		6 O			M	14	12	When y						*		Next Right
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-60.0 -70.0 -80.0																Marker Delta
Star #Re MKR	t 2.4 s B\ MODE A2	137 N 1	00 00 SCI	GHz kHz (A)	× -26	#\ .325 MHz	/BW (Δ)	 Y 49.19	dB	NCTION	Swee	Stoj p 20.7	p 2.51 ms (1 Functio	200 GHz 1001 pts NVALUE		Mkr→CF
2 3 4 5 6 7	F	1	f		2.487	550 GHz		-46.44 dl	3m							Mkr→RefLvl
8 9 10 11 12																More 1 of 2
MSG											ST	ATUS				

Product	Wireless N Day & Night Pan/Tilt Cloud Camera						
Test Item	RF antenna conducted test						
Test Mode	Mode 1: Transmit						
Date of Test	2013/03/06	Test Site	SR7				

IEEE 802.11g, Duty Cycle: 1									
Channel No.	Frequency (MHz)	Measure Level (dBc)	Limit (dBc)	Result					
1	2412	31.24	≥20	Pass					
11	2462	43.63	≥20	Pass					

Channel 01 (2412MHz)

🕦 Agilent Spectrum Analyzer - Swept SA				
Marker 1 Δ 14.200000000 MHz		ALIGNAUTO Avg Type: Log-Pwr	04:56:27 PM Mar 07, 2013 TRACE 1 2 3 4 5 6	Peak Search
Input: RF PNO: Fast IFGain:Low 10 dB/div Ref 10.00 dBm	#Atten: 30 dB	Ext Gain: -11.00 dB	Mkr1 14.2 MHz 31.24 dB	Next Peak
Log 0.00 -10.0	pletyleseed	μ 1Δ2 opelinetylenst	*	Next Right
-30.0 -40.0 -50.0	North Contraction of the Contrac	halphreyel	Might group and and a second second	Next Left
-60.0				Marker Delta
Center 2.40000 GHz #Res BW 100 kHz #V MKR MODE TRO SOL X 1 Δ2 1 f (Δ) 14.2 MHz	BW Υ FUNCT (Δ) 31.24 dB	Sweep	Span 100.0 MHz 27.6 ms (1001 pts) FUNCTION VALUE	Mkr→CF
2 F 1 f 2.399 1 GHz 3 - - - - 4 - - - - 5 - - - - 6 - - - -	-32.91 dBm			Mkr→RefLvi
i i 8				More 1 of 2
MSG		STATUS	; 	



Channel 11 (2462MHz)

Marker 1 Δ -23.550000000 MHz Ac SENSE:INT ALIGN AUTO 05:09:04 PM Mar 07, 2013 Peak Search Input: RF PNO: Fast Trig: Free Run Avg Type: Log-Pwr TRACE 12.3.4.5.6 Peak Search Input: RF PNO: Fast Trig: Free Run Ext Gain: -11.00 dB DET P NNNN Log
Input: RF PNO: Fast Thig. Free Kun IFGain: Low Ext Gain: -11.00 dB DET P NNNNN ΔMkr1 -23.550 MHz 43.63 dB A3.63 dB Next P 10 dB/div Ref 10.00 dBm 1Δ2 * Next P 0.00 10.0 1Δ2 * Next Ri -10.0 -10.0 -10.0 -10.0 -10.0 -10.0
Log 1Δ2 * 0.00
-40.0 -50.0
-60.0 -70.0 -80.0
Start 2.43700 GHz Stop 2.51200 GHz #Res BW 100 kHz #VBW Sweep 20.7 ms (1001 pts) MKR MODE TRC SCL × Y FUNCTION FUNCTION WIDTH FUNCTION VALUE 1 Δ2 1 f (Δ) -23.550 MHz (Δ) 43.63 dB
2 F 1 f 2.490 550 GHz -45.89 dBm 3 - - - - 4 - - - - 5 - - - - 6 - - - - 7 - - - -
8

Product	Wireless N Day & Night Pan/Tilt Cloud Camera						
Test Item	RF antenna conducted test						
Test Mode	Mode 1: Transmit						
Date of Test	2013/03/06	Test Site	SR7				

IEEE 802.11n (20MHz), Duty Cycle: 1										
Channel No.	Frequency (MHz)	Measure Level (dBc)	Limit (dBc)	Result						
1	2412	34.51	≥20	Pass						
11	2462	41.48	≥20	Pass						

Channel 1 (2412MHz)

D Agilent	Spectru	ım Analyzer	- Swept SA								
w Marker	r 1 Δ	^{50 Ω} 17.000	000000 M	Hz	AC SE		Avg Type	ALIGN AUTO : Log-Pwr	05:00:23 P	M Mar 07, 2013	Peak Search
10 dB/di	v F	lef 10.00	dBm	NO: Fast C Gain:Low	#Atten: 30) dB	Ext Gain:	-11.00 dB Δ	Mkr1 17 34	.0 MHz 4.51 dB	Next Peak
-10.0						per de la chardraige	1∆2	N		*	Next Right
-30.0	مواندرانيوس	and for the properties	hundrer	have been	.trawnsriter 21	and the second s		Company Marty	With the street	Jan Marine Ma	Next Left
-60.0 -70.0 -80.0											Marker Delta
Center #Res B MKR MODE	2.400 W 10	000 GHz 0 kHz € f (∆)	× 17	# VB .0 MHz (2	W Y 34.51	dB	NCTION FUT	Sweep	Span 1 27.6 ms (00.0 MHz 1001 pts) N VALUE	Mkr→CF
2 F 3 4 5 6 7	1	f	2.396	3 GHz	-37.40 dl	3m					Mkr→RefLvl
8 9 10 11 12											More 1 of 2
MSG								STATUS			



Channel 11 (2462MHz)

D Agilent Spectrum Analyzer - Swept SA				
Μarker 1 Δ -20.250000000 MHz		ALIGN AUTO Avg Type: Log-Pwr	05:10:09 PM Mar 07, 2013 TRACE 1 2 3 4 5 6	Peak Search
Input: RF PNO: Fast IFGain:Low	#Atten: 30 dB	Ext Gain: -11.00 dB	r1 -20.250 MHz	Next Peak
10 dB/div Ref 10.00 dBm			41.48 dB	
	ΙΔ2		*	
-10.0	harmethearmethe			Next Right
-20.0				
-40.0	Martin	W //		Next Left
-50.0 malenale and a second second	" "เม้า "เห็นสารระบุญญาแก	2 mm manune	hand a state and the second	
-60.0				
-80.0				Marker Delta
Start 2 42700 CHz		8	Stop 2 51200 CHz	
#Res BW 100 kHz #V	BW	Sweep 3	20.7 ms (1001 pts)	Mkr⊸CE
		TION FUNCTION WIDTH	FUNCTION VALUE	
Δz 1 1 (Δ) -20.230 MHz 2 F 1 f 2.483 500 GHz 3	-46.83 dBm			
				Mkr→RefLvl
6 7				
8 9				More
10 11				1 of 2
12		STATIS		



glient Spectrum Analyzer - Swept SA ac sense::NT ALIGNAUTO 05:23:17 PM Mar07, 2013 Screen Image Input: RF PHO: Fast Trig: Free Run Arg Type: Log-PWr Image Screen Image Allon Autor 00 degrad 0 Attract 1: 23:45 fs Screen Image Blotiv Ref 20.00 dBm Attract 1: 23:45 fs Marce 1: 23:45 fs Screen Image dBlotiv Ref 20.00 dBm 42.72 dB Attract 1: 41.00 dB Screen Image attract 1: 41.00 dB Screen Image Screen Image Screen Image attract 1: 41.00 dB Screen Image Attract 1: 41.00 dB Screen Image attract 1: 41.00 dB Screen Image Screen Image Screen Image attract 1: 41.00 dB Screen Image Screen Image Screen Image attract 1: 41.00 dB Screen Image Screen Image Screen Image attract 1: 41.00 dB Screen Image Screen Image Screen Image attract 1: 41.00 dB Screen Image Screen Image Screen Image attract 30 MHz #VBW Screen Image Screen Image Attract 1: 50 SG CHz X <t< th=""><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th>•</th><th></th><th></th><th></th><th></th><th>,</th><th></th><th></th><th></th></t<>								•					,			
Soc Autonation Screen Image urker 1 A -14.53254000000 CHZ Input RF Trig: Free Run IFGain:Low Aug Type: Log-Pwr Ext Gain: -11.00 dB Trig: Free Run Aug Type: Log-Pwr Trig: Free Run Itex Gain: -11.00 dB Theme Flat Monochrom dB/div Ref 20.00 dBm 42.72 dB Aug Type: Log-Pwr Trig: Free Run Itex Gain: -11.00 dB Theme Flat Monochrom dB/div Ref 20.00 dBm 42.72 dB X Save As 0 102 X X Save As 0 102 X Save As 0 102 X Stop 25.00 GHz Sweep 0 X YBW Sweep 6.88 s (1001 pts) 10 10.935 GHz 41.73 dBm 41.73 dBm 1 1 1 1 1 1 1 1 1 1 1 1	🛛 Agilent	Spect	rum Ana	alyzer - S	wept SA											
Input: RF PNO: Fast Trig: Free Run Ext Gain: -11.00 dB Trig: Free Run dB/div Ref 20.00 dBm 42.72 dB 42.72 dB Fild Monochrom 0 102 102 102 102 102 102 0 102 <	<u>a</u>	_	50 Ω	F005	4000	0000		AC SI	ENSE:I	NT	0	,	ALIGN AUTO	05:23:17	PM Mar 07, 2013	Screen Imag
Implicit is Figure 1000 #Atten: 30 dB Ext Gain: -11.00 dB Derip NNNN AMKr1 -14.533 GHz 42.72 dB Atten: 30 dB 42.72 dB Implicit is Implicit is Implicit is Implicit is Implicit is Implicit is Im	larke	r 1 Z	1 -14	.5325	4000	PNO-1	GHZ	Trig: Fre	e Ru	n	Avgi	ype.	Log-Pwr	Т	YPE MWWWWW	
ΔMkr1 -14.533 GHz 42.72 dB Fiat Monochrom 42.72 dB 0 1Δ2 1 1 1 1 1 1 Save As 0 1 1 1 1 1 1 1 Save As 0 1 1 1 1 1 1 Save As 0 1 1 1 1 1 1 Save As 1 1 1 1 1 1 1 Save As 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 <t< td=""><td></td><td></td><td></td><td>mp</td><td>ac ra</td><td>IFGain</td><td>Low</td><td>#Atten: 3</td><td>10 dB</td><td></td><td>Ext G</td><td>ain: -</td><td>11.00 dB</td><td></td><td>DET PNNNNN</td><td>Theme</td></t<>				mp	ac ra	IFGain	Low	#Atten: 3	10 dB		Ext G	ain: -	11.00 dB		DET PNNNNN	Theme
dB/div Ref 20.00 dBm 42.72 dB 0 1Δ2 x 0 1Δ2 x 0 x													ΔMk	r1 -14.	533 GHz	Flat Monochron
B 1Δ2 x x x Save As 0 1	10 dB/div Ref 20.00 dBm 42.72 dB															
No	log		1.1.4	2											*	
MODE X Y Function Function value A2 1 f 16.935 GHz 41.73 dBm 5000 GHz A2 1 f 16.935 GHz 41.73 dBm 5000 GHz A1 f 16.935 GHz 41.73 dBm 5000 GHz 5000 GHz A2 1 f 16.935 GHz 41.73 dBm 5000 GHz A1 f 16.935 GHz 41.73 dBm 5000 GHz 5000 GHz A2 1 f 16.935 GHz 41.73 dBm 5000 GHz 5000 GHz A1 f 16.935 GHz 41.73 dBm 5000 GHz 5000 GHz 5000 GHz A2 1 f 1 16.935 GHz 41.73 dBm 5000 GHz 5000 GHz A1 1 1 1 1 1 1 1	10.0		φ ^{1Δ.}	2												Save A
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0 0	20.0					-			-			_			-	
Δ2 1 f 1.4.533 GHz 41.73 dBm F 1 f 16.935 GHz 41.73 dBm F 1 f 16.935 GHz 41.73 dBm	30.0		_	5.		-			+				15		-	
Δ2 Δ3	0.0											V			and	
Mode Final Mode Function Funct	0.0	Monthon	man	Lunch	when	the strands	the second	unanda	Jaluara .	hallahand	morene	1/2	have the allowed the last	- derenance		
Mode Fine Stop 25.00 GHz art 30 MHz #VBW Sweep 6.88 s (1001 pts) MODE #VBW Sweep 6.88 s (1001 pts) MODE FIG 1.14.533 GHz (Δ) 42.72 dB F 1 f 16.935 GHz -41.73 dBm A 1 1 1 1 A 1 1 1 1 A 1 1 1 1	0.0			Contraction of the second		-	1 - C. B. C.									
Δ Δ	0.0								1							
x x y Function Function width MODE FC Scale x Y MODE FC Scale Function Function width F 1 f 16.935 GHz -41.73 dBm F 1 f 16.935 GHz -41.73 dBm	0.0								-			8				
Mode File Sweep 6.88 s (1001 pts) Mode File Sec X Y Function Function value F 1 f 16.935 GHz -41.73 dBm -	tart 3	0 MI	17						-			0.2		Ston	25.00 CHz	
Mode TRC X Y Function Function value A2 1 f (Δ) -14.533 GHz (Δ) 42.72 dB Function value F 1 f 16.935 GHz -41.73 dBm - - A A - - - - - - A -	Res B	W 1	00 kH	z			#VBW						Sweep	6.88 s	(1001 pts)	
MUDE No. Y Y PORCHON PORCHON WIDTH PORCHON VALUE Q2 1 f (Δ) 42.72 dB P<										2101		2111			()	
F 1 f 16.935 GHz 41.73 dBm I I I IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII			f (A	1	-14	1533 G	Hz (A)	42 73	2 dB	FUN	LTION	FUN	CTION WIDTH	FUNC	ION VALUE	
	2 F	1	f	010	16	5.935 G	Hz	-41.73 c	IBm							
Image: Status Image: Status	3															
Image: Status Image: Status	5															
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STATUS	9															
STATUS	1											5				
STATUS	2															
	G												STATUS			

2412MHz (30MHz-25GHz)-802.11b

2462MHz (30MHz-25GHz) -802.11b

🎾 Agilent Sp	ectrum Analyzer -	Swept SA									
Marker 1	^{50 Ω} Δ 20.6751	60000000 GHz	AC SEN	ISE:INT A	⊿ vg Type:	LIGN AUTO Log-Pwr	05:20:58 P	M Mar 07, 2013	Peak Search		
10 dB/div	المعند ا معند المعند المعند معند المعند المعن معند المعند الم										
10.0 0.00								*	Next Right		
-20.0				Lang Strike State Strand	and the second	and and and a start of the	and the state of the	<u>1Δ2</u>	Next Left		
-50.0 -60.0 -70.0	bernen								Marker Delta		
Start 30 I #Res BW MKR MODE I 1 △2	VIHz 100 kHz Re scu 1 f (Δ)	#V × 20.675 GHz	BW ¥ (∆) -37.96 (FUNCTION	FUNC	Sweep	Stop 2 6.88 s (5.00 GHz 1001 pts) NVALUE	Mkr→CF		
2 F 3 4 5 6 7		2.452 GHz	-0.15 dE	3m					Mkr→RefLvl		
8 9 10 11 12									More 1 of 2		
MSG						STATUS					



		5	,			\						
								Swept SA	Analyzer	pectrum	gilent S	A a
Peak Search	M Mar 07, 2013 E 1 2 3 4 5 6	05:24:38 P	ALIGNAUTO	Avg Typ	EINT	C SENS) GHz	4000000	2 3.0463	50 : 1Δ-	rker	<mark>.x/</mark> Mai
		DE	1/100 -11.00 dB	Avg Hold Ext Gain:	lun B	#Atten: 30 d	10: Fast 🕞 Gain:Low	iput: RF P IFO	1			
NextPear	46 GHz .433 dB	kr1 -3.0 41.	ΔMI					dBm	7 20.00	Re	IB/div	10 d
												Log
Next Righ			(1Δ2	4		10.0
										T		0.00
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												-20.0
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2412MHz (30MHz-25GHz)-802.11g

2462MHz (30MHz-25GHz) -802.11g

D Agilent	Spectrum An	alyzer - Swept SA									
w Marke	50Ω r1Δ-5.	093880000	000 GHz		EINT	Avg Type	ALIGNAUTO : Log-Pwr	05:17:48 P TRAC	M Mar 07, 2013	Peak Search	
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2412MHz (30MHz-25GHz)-802.11n(20MHz)

2462MHz (30MHz-25GHz) -802.11n(20MHz)

🎾 Agilent Sp	ectrum Analyzer -	Swept SA						
₩ Marker '	50 Ω 1 Δ -4.04514	40000000 GHz	AC SEN	ISE:INT Av	ALIGNAUTO g Type: Log-Pwr	05:15:28 F	M Mar 07, 2013 E 1 2 3 4 5 6	Peak Search
10 dB/div	Ref 20.00	uput: RF PNO: Fast IFGain:Low	/ #Atten: 30	dB Ex	: Gain: -11.00 dB ΔM	kr1 -4.0	45 GHz 4.92 dB	Next Peak
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2 F 3 4 5 6	1 f	6.497 GHz	-44.63 dE	5m				Mkr→RefLvl
9 10 11 12								More 1 of 2
MSG					STATUS	3		

6. Radiated Emission Band Edge

6.1. Test Equipment

The following test equipments are used during the test:

Radiated Emission Band Edge / CB1

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Double Ridged Guide	Schwarzback	BBHA 9120	D743	2014/02/17
Horn Antenna				
Spectrum Analyzer	Agilent	E4440A	MY46187335	2014/01/27
k Type Cable	Huber Suhner	Sucoflex 102	25623/2	2014/02/21

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

6.2. Test Setup





6.3. Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

6.4. Test Procedure

The EUT was setup according to ANSI C63.4: 2009 and tested according to DTS test procedure of Oct. 2012 KDB558074 for compliance to FCC 47CFR 15.247 requirements. The EUT and its simulators are placed on a turn table which is 0.8 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.

Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.4: 2009 on radiated measurement.

6.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2011

6.6. Uncertainty

The measurement uncertainty ± 3.9 dB above 1GHz
6.7. Test Result

Radiated is defined as

Site : CB1	Time : 2013/03/05 - 20:41
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : AC120V/60Hz
EUT : Wireless N Day & Night Pan/Tilt Cloud Camera	Note : Mode 1: Transmit_802.11b_2412MHz



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/03/05 - 20:49
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : AC120V/60Hz
EUT : Wireless N Day & Night Pan/Tilt Cloud Camera	Note : Mode 1: Transmit_802.11b_2412MHz



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/02/28 - 18:01
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : AC120V/60Hz
EUT : Wireless N Day & Night Pan/Tilt Cloud Camera	Note : Mode 1: Transmit_802.11b_2412MHz



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/02/28 - 17:59
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : AC120V/60Hz
EUT : Wireless N Day & Night Pan/Tilt Cloud Camera	Note : Mode 1: Transmit_802.11b_2412MHz



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/03/04 - 09:17
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : AC120V/60Hz
EUT : Wireless N Day & Night Pan/Tilt Cloud Camera	Note : Mode 1: Transmit_802.11b_2462MHz



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/03/04 - 09:18
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : AC120V/60Hz
EUT : Wireless N Day & Night Pan/Tilt Cloud Camera	Note : Mode 1: Transmit_802.11b_2462MHz



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/03/04 - 08:50
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : AC120V/60Hz
EUT : Wireless N Day & Night Pan/Tilt Cloud Camera	Note : Mode 1: Transmit_802.11b_2462MHz



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/03/04 - 08:48
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : AC120V/60Hz
EUT : Wireless N Day & Night Pan/Tilt Cloud Camera	Note : Mode 1: Transmit_802.11b_2462MHz



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/03/05 - 21:1
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : AC120V/60Hz
EUT : Wireless N Day & Night Pan/Tilt Cloud Camera	Note : Mode 1: Transmit_802.11g_2412MHz



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/03/05 - 21:13
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : AC120V/60Hz
EUT : Wireless N Day & Night Pan/Tilt Cloud Camera	Note : Mode 1: Transmit_802.11g_2412MHz



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/02/28 - 18:10
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : AC120V/60Hz
EUT : Wireless N Day & Night Pan/Tilt Cloud Camera	Note : Mode 1: Transmit_802.11g_2412MHz



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/02/28 - 18:09
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : AC120V/60Hz
EUT : Wireless N Day & Night Pan/Tilt Cloud Camera	Note : Mode 1: Transmit_802.11g_2412MHz



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/03/04 - 09:14	
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6	
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : AC120V/60Hz	
EUT : Wireless N Day & Night Pan/Tilt Cloud Camera	Note : Mode 1: Transmit_802.11g_2462MHz	



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/03/04 - 09:15	
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6	
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : AC120V/60Hz	
EUT : Wireless N Day & Night Pan/Tilt Cloud Camera	Note : Mode 1: Transmit_802.11g_2462MHz	



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/03/04 - 08:51	
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6	
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : AC120V/60Hz	
EUT : Wireless N Day & Night Pan/Tilt Cloud Camera	Note : Mode 1: Transmit_802.11g_2462MHz	



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/03/04 - 08:54	
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6	
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : AC120V/60Hz	
EUT : Wireless N Day & Night Pan/Tilt Cloud Camera	Note : Mode 1: Transmit_802.11g_2462MHz	



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/03/05 - 21:24
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : AC120V/60Hz
EUT : Wireless N Day & Night Pan/Tilt Cloud Camera	Note : Mode 1: Transmit_802.11n 20MHz_2412MHz



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/03/05 - 21:32	
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6	
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : AC120V/60Hz	
EUT : Wireless N Day & Night Pan/Tilt Cloud Camera	Note : Mode 1: Transmit_802.11n 20MHz_2412MHz	



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/02/28 - 18:18	
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6	
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : AC120V/60Hz	
EUT : Wireless N Day & Night Pan/Tilt Cloud Camera	Note : Mode 1: Transmit_802.11n20M_2412MHz	



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/02/28 - 18:16	
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6	
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : AC120V/60Hz	
EUT : Wireless N Day & Night Pan/Tilt Cloud Camera	Note : Mode 1: Transmit_802.11n20M_2412MHz	



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/03/04 - 09:11	
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6	
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : AC120V/60Hz	
EUT : Wireless N Day & Night Pan/Tilt Cloud Camera	Note : Mode 1: Transmit_802.11n20M_2462MHz	



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/03/04 - 09:12	
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6	
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : AC120V/60Hz	
EUT : Wireless N Day & Night Pan/Tilt Cloud Camera	Note : Mode 1: Transmit_802.11n20M_2462MHz	



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2013/03/04 - 09:00	
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6	
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : AC120V/60Hz	
EUT : Wireless N Day & Night Pan/Tilt Cloud Camera	Note : Mode 1: Transmit_802.11n20M_2462MHz	



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.

7. Occupied Bandwidth

7.1. Test Equipment

The following test equipments are used during the test:

Occupied Bandwidth / SR7

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Spectrum Analyzer	R&S	FSP	100561	2014/02/03

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

7.2. Test Setup



7.3. Test Procedures

The EUT was setup according to ANSI C63.4: 2009; tested according to DTS test procedure of Oct. 2012 KDB558074 for compliance to FCC 47CFR 15.247 requirements. Set RBW = 1% of EBW, Span greater than RBW.

7.4. Limits

The 6 dB bandwidth must be greater than 500 kHz.

7.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2011

7.6. Uncertainty

The measurement uncertainty is defined as $\pm 150 \text{Hz}$

7.7. Test Result

Product	Wireless N Day & Night Pan/Tilt Cloud Camera						
Test Item	Occupied Bandwidth						
Test Mode	Mode 1: Transmit						
Date of Test	2013/03/06	Test Site	SR7				

802.11 b											
Channel No.	Frequency (MHz)	Measurement Level (MHz)	Required Limit (MHz)	Result							
1	2412	12.15	≧0.5	Pass							
6	2437	12.15	≧0.5	Pass							
11	2462	12.14	≧0.5	Pass							

<u>Channel 1</u>

🇊 Agil	lent Spec	trum Analyzer -	Occupied BW									
w Ref	Value	50 Ω 30.00 dB	Sm nput: RF #IF	Gain:Low	AC SE Center Fi Trig: Free #Atten: 30	NSE:INT req: 2.41200 e Run 0 dB	0000 GHz Avg Hold Ext Gain:	ALIGN AUTO > 10/10 -11.00 dB	07:56:52 Radio Sto Radio De	PM Mar 06, 2013 1: None vice: BTS	Trac	e/Detector
10 dE Log 20 -	Sidiv				www	provent in the second s						Clear Write
-10 - -20 -		- Ma		~~~~			-Vm	hy hy		И. с.,		Average
-40 s	provent and the second							N _N	,	V		Max Hold
Cent #Res	ter 2.4 s BW	12 GHz 300 kHz			#VE	SW 1 MH	z		Spa Sw	an 40 MHz eep 1 ms		Min Hold
0	Occupied Bandwidth Total Power 19.65 dBm 14.900 MHz								Auto	Detector Peak► <u>Man</u>		
TT X	ransm dB Ba	it Freq Er Indwidth	ror	-18161 12.15 M	Hz ЛHz	OBW P x dB	ower	99 -6.	9.00 % 00 dB			
MSG								STATUS				

📕 Agilent Spectrum Analyzer - Occupied BW 08:12:35 PM Mar 06, 2013 50 Ω XI SENSE:INT ALIGN AUTO 81 Trace/Detector Center Freq 2.437000000 GHz Center Freq: 2.437000000 GHz Radio Std: None Avg|Hold:>10/10 Trig: Free Run Input: RF Ģ Ext Gain: -11.00 dB #Atten: 30 dB **Radio Device: BTS** #IFGain:Low 10 dB/div Ref 30 dBm Log 20 **Clear Write** 10 www. mm C tr -10 Average -20 wary. man -30 min www. -40 Max Hold -50 -60 **Min Hold** Center 2.437 GHz Span 40 MHz #Res BW 300 kHz **#VBW 1 MHz** Sweep 1 ms **Total Power** 18.61 dBm Detector **Occupied Bandwidth** Peak > 14.861 MHz Auto Man -3384 Hz **OBW Power** 99.00 % **Transmit Freq Error** x dB Bandwidth 12.15 MHz -6.00 dB x dB MSG STATUS



🗊 Agilent Spe	ctrum Analyzer - Occu	pied BW							
w Center Fi	^{50 Ω} req 2.4620000	000 GHz	C SENSE:INT Center Freq: 2.46 Trig: Free Run	2000000 GHz AvalHolo	ALIGN AUTO	08:08:02 Radio Std	PM Mar 06, 2013 : None	Trac	e/Detector
10 dB/div	Ref 30 dBm	۳ #IFGain:Low	#Atten: 30 dB	Ext Gain	: -11.00 dB	Radio Dev	vice: BTS		
20 10				~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~				Ì	Clear Write
0 -10 -20		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	- V		Wy Harrison				Average
-30 -40 papara	www.					~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Im		Max Hold
-60 Center 2. #Res BW	462 GHz 300 kHz		#VBW 11	ЛНz		Spa Swe	un 40 MHz eep 1 ms	1	Min Hold
Occur	bied Bandwig	_{dth} 14.843 MH	Total IZ	Power	19.61	1 dBm		Auto	Detector Peak► <u>Man</u>
Transr x dB B	nit Freq Error andwidth	-7634 12.14 M	Hz OBW IHz x dB	Power	99 -6.	9.00 % 00 dB			
MSG					STATUS	6			

Product	Wireless N Day & Night Pan/Tilt Cloud Camera						
Test Item	Occupied Bandwidth						
Test Mode	Mode 1: Transmit						
Date of Test	2013/03/06 Test Site SR7						

IEEE 802.11g											
Channal Na	Frequency	Measurement Level	Required Limit	Deput							
Channel No.	(MHz)	(MHz)	(MHz)	Result							
1	2412	16.39	≧0.5	Pass							
6	2437	16.39	≧0.5	Pass							
11	2462	16.41	≧0.5	Pass							

D Agi	lent Spectru	ım Analyzer -	Occupied BW									
ы Spai	n 40 00	οΩ)0 MHz		4	⊾c SE Center F	NSE:INT req: 2.41200	0000 GHz	ALIGN AUTO	08:14:45 Radio Std	M Mar 06, 2013 None	Trac	e/Detector
		In	iput: RF #IF	Gain:Low	HAtten: 3	e Run 0 dB	Avg Hold: Ext Gain:	:>10/10 -11.00 dB	Radio Dev	rice: BTS		
10 dE	3/div	Ref 30	dBm									
20 -		-										Clear Write
10		, e			6	0						
0. -10		r -		and the second	when	- Alandar - Alandar	- Too How Too to	h				
-20		1			1			\ -\				Average
-30			No					<u> </u>				
-40 50	ᡯᠼᡘᢤᢔ᠆ᡁᡃᡶᡘ᠇ᡒᢂᢔ	Alminer of the way	<u>'</u> ~~						W	᠊ᠯᡛᠬ᠋ᡃᡟᡟᡣᢦᠾ <i>ᢦ</i> ᡀᠵᡃᡅᢣ᠋᠇		Max Hold
-60		-										
Cent	ter 2.41	2 GHz							Spa	n 40 MHz		Min Hold
#Res	s BW 30	00 kHz			#VE	BW 1 MH	z		Swe	ep 1 ms		
0	ccupie	d Banc	lwidth			Total P	ower	13.52	2 dBm			Detector
			16.5	560 MI	Ηz						Auto	Man
Tr	ransmit	Freq Er	ror	-22152	Hz	OBW P	ower	99	9.00 %			
х	dB Ban	dwidth		16.39 N	1Hz	x dB		-6.	00 dB			
MSG								STATUS				
Wag								514105	'			



<u>Channel 6</u>

DAgilent Spectro	um Analyzer - Occupied	BW							
Center Free	^{50 Ω} 2.437000000	GHz	SENSE:INT Center Freq: 2.43700 Trig: Free Run	م 00000 GHz AvaiHold:>	10/10	08:15:38 F Radio Std:	M Mar 06, 2013 None	Trac	e/Detector
	Input: RF	#IFGain:Low	#Atten: 30 dB	Ext Gain: -1	11.00 dB	Radio Dev	ice: BTS		
10 dB/div	Ref 30 dBm								
20 10									Clear Write
-10 -20		por en lineau er ri	white man and a second	monorm	\				Average
-30 -40 ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	American and a second and the second				V. Mone	ᡃᡗᡶᠼᡔᡘᠨᡶᡵ᠋ᠴᠬᠯᡌᡃᠬ᠋᠋ᢪ	ัสหารณาปิโห _{สร}		Max Hold
-80 Center 2.43 #Res BW 30	7 GHz 00 kHz		#VBW 1 MH	z		Spa Swe	n 40 MHz ep 1 ms		Min Hold
Occupie	ed Bandwidth 16	.537 MH	Total P Z	ower	12.90	dBm		Auto	Detector Peak► <u>Man</u>
Transmit	Freq Error	-9909 H	Iz OBW F	ower	99	.00 %			
x dB Bar	ndwidth	16.39 MH	lz xdB		-6.0	00 dB			
MSG					STATUS				



💴 Agilent Spe	ctrum Analyzer - Occupied	BW					an	
🚧 Center F	50 Ω req 2.462000000 Input: RF	GHz #IFGain:Low	SENSE:INT Center Freq: 2.46200 Frig: Free Run Atten: 30 dB	3ENSE:INT] ALIGN AUTO 08:16:08 PM Mar06, 2 Freq: 2.462000000 GHz Radio Std: None ee Run Avg Hold:>10/10 30 dB Ext Gain: -11.00 dB Radio Device: BTS		:08 PM Mar 06, 2013 Std: None Device: BTS	Trac	e/Detector
10 dB/div	Ref 30 dBm		1					
20 10								Clear Write
-10 -20			wfreilinet nu vie verwerter	Bernalding throwing a	×.			Average
-30 -40 tate	wand walk of the form	_			"na the the lange	hillde and the stand of the sta		Max Hold
-60 Center 2. #Res BW	.462 GHz 300 kHz		#VBW 1 MH	lz	S	pan 40 MHz weep 1 ms		Min Hold
Occu	bied Bandwidth 16	.656 MH:	Total P Z	ower	15.21 dBm	I	Auto	Detector Peak► <u>Man</u>
Transr x dB B	nit Freq Error andwidth	-51455 H 16.41 MH	z OBWF z xdB	ower	99.00 % -6.00 dE			
MSG					STATUS			

Product	Wireless N Day & Night Pan/Tilt Cloud Camera						
Test Item	Occupied Bandwidth						
Test Mode	Mode 1: Transmit						
Date of Test	2013/03/06 Test Site SR7						

IEEE 802.11n (20MHz)											
Channel No	Frequency	Measurement Level	Required Limit	Deput							
Channel No.	(MHz)	Result									
1	2412	17.38	≧0.5	Pass							
6	2437	17.49	≧0.5	Pass							
11	2462	17.48	≧0.5	Pass							

💴 Agilent Sp	ectrum	Analyzer	- Occupie	i BW									
₩ Center F	50 s req	2 2.412	00000) GHz	AC	Center F	NSE:INT req: 2.41200 e Run	0000 GHz		08:17:55 Radio Std	M Mar 06, 2013 : None	Trac	e/Detector
		1	nput: RF	#IFGain:L	.ow	#Atten: 3	0 dB	Ext Gain	: -11.00 dB	Radio Dev	vice: BTS		
10 dB/div	F	Ref 30	dBm						2				
20 10													Clear Write
0	1			mour	๛๚๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛	ᠬ᠉ᢛᢦᡊᡃᢧᢇᢝᡃ	- Congrand hours	1 mar mary ray	mr.				
-10													Average
-30			ſ						J. May				
-40 rmph	wald	vኲ _{ራትራ} ቍለ _{ኬል}	W new N						^{`\U} \\#	howwww.	Winner		Max Hold
-50 ——				-0									
-60													
Center 2 #Res BW	2.412	GHz kHz				#VE	SW 1 MH	z		Spa Swe	n 40 MHz ep 1 ms		Min Hold
Occu	pied	Ban	dwidt	h			Total P	ower	15.20) dBm			Detector
			17	.552	MH	z						Auto	Man
Trans	mit F	req Eı	ror	-2	7897	Hz	OBW P	ower	99	9.00 %			
x dB l	Band	width		17	.38 M	Hz	x dB		-6.	00 dB			
MSG									STATUS				
									512105				2



<u>Channel 6</u>

D Agilent	Spectrum	Analyzer -	Occupied BW	l.			32		90			
₩ Center	50 Freq	Ω 2.4370	00000 G	Hz _	AC SE Center F	ENSE:INT req: 2.43700	00000 GHz	ALIGN AUTO	08:18:50 F Radio Std	M Mar 06, 2013 : None	Trac	e/Detector
		In	put: RF #IF	Gain:Low	#Atten: 3	0 dB	Ext Gain	: -11.00 dB	Radio Dev	ice: BTS		
10 dB/di	v	Ref 30 c	Bm	1	L	1	1					
20 — 10 —							2				2	Clear Write
0 -10 -20				www.and	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		har hunner	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~				Average
-30 -40 ��	"Jl-www.wh	w-norpellonation							^{hu} luke Muluen	under the stand of the second stand stan		Max Hold
-60 Center #Res B	2.437 W 300	GHz) kHz			#VI	BW 1 MH	z		Spa Swe	n 40 MHz ep 1 ms		Min Hold
Occ	Occupied Bandwidth 17.548 MH					Total Power 14.25 d		ō dBm		Auto	Detector Peak► <u>Man</u>	
Tran	Transmit Freq Error -19276 I				6 Hz	Hz OBW Power		99.00 %				
x dB	x dB Bandwidth 17.49 Mi			MHz	x dB -6		-6.	-6.00 dB				
MSG								STATUS				



🗊 Agilent Sp	ectrum Analyzer - Occupied	BW						
₩ Preamp	50 Ω Gain -11.00 dB	AC	SENSE:INT Center Freq: 2.46200 Trig: Free Run	ALIGN AUTO 0000 GHz AvalHold:>10/10	12:34:33 PM Mar Radio Std: Nor	107, 2013	Trace	Detector
	Input: RF	#IFGain:Low	#Atten: 30 dB	Ext Gain: -11.00 dB	Radio Device:	BTS		
10 dB/div	Ref 20 dBm		0					
10				here and her			c	lear Write:
-10		/						Average
-30 -40	handle marken that the second				- Bear and a second a se	~~~ ~~~ ~~		
-50 -60								Max Hold
-70 Center 2 #Res BW	2.462 GHz (300 kHz		#VBW 1 MH	7	Span 40 Sween	0 MHz 1 ms		Min Hold
Occu	pied Bandwidth	י 540 MH	Total P	ower 17.3	0 dBm		Auto	Detector Peak▶ Man
Trans	mit Freq Error	-7626 H	z OBW P	ower 9	9.00 %			
x dB E	Bandwidth	lz xdB -6		-6.00 dB				
MSG				STATU	s		-	

8. Power Density

8.1. Test Equipment

The following test equipment is used during the test:

Power Density / SR7

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Spectrum Analyzer	R&S	FSP	100561	2014/02/03

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

8.2. Test Setup

IEEE 802.11 b / g / a / n (20M / 40M) MODE



8.3. Limits

The peak power spectral density conducted from the intentional radiated to the antenna shall not be greater than +8dBm in any 3kHz band during any time interval of continuous transmission.

8.4. Test Procedures

The EUT was setup according to ANSI C63.4: 2009; tested according to DTS test procedure of Oct. 2012 KDB558074 for compliance to FCC 47CFR 15.247 requirements. Set RBW= 100 kHz, Set VBW= 300 kHz, Sweep time=Auto, Set detector=Peak detector

8.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2011

8.6. Uncertainty

The measurement uncertainty is defined as ±1.27dB.

8.7. Test Result

Product	Wireless N Day & Night Pan/Tilt Cloud Camera						
Test Item	Power Density						
Test Mode	Mode 1: Transmit						
Date of Test	2013/03/06	Test Site	SR7				

IEEE 802.11b									
Channel Ne	Frequency Reading Lev		Measure Level	Limit	Desult				
Channel No.	(MHz)	(dBm)	(dBm)	(dBm)	Result				
1	2412	5.361	-9.839	≦8	Pass				
6	2437	5.721	-9.479	≦8	Pass				
11	2462	3.479	-11.721	≦8	Pass				

Note: Measure Level = Reading level + BWCF = Reading level -15.2 dB

Bandwidth correction factor (BWCF) = 10log (3 kHz/100kHz)

D Agi	lent Spec	trum Analyzer -	Swept SA								
w Mar	ker 1	^{50 Ω} 2.4109600	000000 G	Hz	C SE	NSE:INT	Avg Type	ALIGN AUTO : Log-Pwr	09:03:14 P TRAC TYF	M Mar 06, 2013	Peak Search
10 di	10 dB/div Ref 20.00 dBm Input: RF PNO: Fast PNO: Fast Atten: 20 dB Avg roid: >100/100 Det PNNNN Mkr1 2.410 960 GHz 5.361 dBm								Next Peak		
10.0						ሌ በ ሊ.ብ ፓ	. A. D				Next Right
0.00 -10.0			www	MWW		V	www.hu	Vw	N		Next Left
-20.0 -30.0		- M							N N N N N		Marker Delta
-40.0		M								M	Mkr→CF
-50.0											Mkr→RefLvl
-70.0 Cen	ter 2.4	1200 GHz							Span 2	6.00 MHz	More 1 of 2
#Re: ^{MSG}	s BW	100 KHZ		#VBW	300 kHz			Sweep 2	2.53 ms (1001 pts)	


Ch	an	nel	6

D Agi	lent Spec	trum Analy	rzer - Swe	pt SA		ne -				Mari		
<mark>ы</mark> Mar	ker 1	^{50 Ω}	88000)000 G	iHz	C SEI	NSE:INT	Avg Type	ALIGNAUTO	09:05:33 P	M Mar 06, 2013 E 1 2 3 4 5 6	Peak Search
10 di	3/div	Ref 20	Input: .00 dBI	RF PI IFC M	NO: Fast 🌩 Gain:Low	Atten: 20	e Run dB	Avg Hold: Ext Gain:	-11.00 dB -Mkr1	2.437 9 5.72	88 GHz 21 dBm	NextPeak
10.0					mala	www	1	Wallak a -				Next Right
0.00 -10.0			M	M			/		Muy	w.		Next Left
-20.0 -30.0	~~~~	N	n.).							N N	A 100	Marker Delta
-40.0 -50.0	\rightarrow	<u>//</u>									Vhy /	Mkr→CF
-60.0												Mkr→RefLvl
Cen #Re	ter 2.4 s BW	.3700 G 100 kHz	Hz		#VBW	300 kHz			Sweep	Span 2 2.53 ms (6.00 MHz 1001 pts)	More 1 of 2
MSG									STATU	s		



💭 Agilent Spectrum Analyzer - Swept SA				
₩ 50 Ω Marker 1 2.463482000000		ALIGN AUTO	09:06:57 PM Mar 06, 2013 TRACE 1 2 3 4 5 6	Peak Search
Input: RF	PN0: Fast 🖵 Trig: Free Run FGain:Low Atten: 20 dB	Avg Haid:>100/100 Ext Gain: -11.00 dB Mkr1 2	2.463 482 GHz 3.479 dBm	Next Peak
10.0	1 ⁻			Next Right
0.00 -10.0	- Martin Martin	Manda Manda		Next Left
-20.0				Marker Delta
-40.0 -40.0			May	Mkr→CF
-60.0				Mkr→RefLvl
Center 2.46200 GHz #Res BW 100 kHz	#VBW 300 kHz	Sweep 2	Span 26.00 MHz .53 ms (1001 pts)	More 1 of 2

Product	Wireless N Day & Night Pan/Tilt Cloud Camera							
Test Item	Power Density							
Test Mode	Mode 1: Transmit	Mode 1: Transmit						
Date of Test	2013/03/06 Test Site SR7							

IEEE 802.11g												
Channel No.	Frequency	Reading Level	Measurement	Limit	Popult							
Channel No.	(MHz)	(dBm)	(dBm)	(dBm)	Result							
1	2412	2.105	-13.095	≦8	Pass							
6	2437	1.656	-13.544	≦8	Pass							
11	2462	0.534	-14.666	≦8	Pass							

Note: Measure Level = Reading level + BWCF = Reading level -15.2 dB

Bandwidth correction factor (BWCF) = 10log (3 kHz/100kHz)





<u>Channel 6</u>

D Agilent S	pectrum Analyzer - !	Swept SA							12	
Marker	50 Ω 1 2.4382480	00000 G	Hz	c se]	NSE:INT	Avg Type	ALIGNAUTO	09:08:33 P	M Mar 06, 2013 E 1 2 3 4 5 6	Peak Search
10 dB/div	Ref 20.00 c	put: RF PN IFG d Bm	l0: Fast 😱 ain:Low	Atten: 20	e Run dB	Avg Hold: Ext Gain:	>100/100 -11.00 dB Mkr1	2.438 2 1.6	48 GHz 56 dBm	Next Peak
10.0			0		▲ ¹					Next Right
0.00 -10.0	, p ⁴		Annahunan	winding	promineral	www.	ngml-nent			Next Left
-20.0	A A A A A A A A A A A A A A A A A A A							North North	w/~~~	Marker Delta
-40.0									ι -μ. ή _Φ	Mkr→CF
-60.0										Mkr→RefLvl
Center : #Res B\	2.43700 GHz № 100 kHz		#VBW	300 kHz			Sweep	Span 2 2.53 ms (6.00 MHz 1001 pts)	More 1 of 2
MSG							STATU	5		



DAgilent Spectrum Analyzer	Swept SA		19. 19.	
Marker 1 2.463222	000000 GHz	ENSE:INT ALIGN AUTO Avg Type: Log-Pwr	09:09:10 PM Mar 06, 2013 TRACE 1 2 3 4 5 6	Peak Search
10 dB/div Ref 20.00	nput: RF PN0: Fast Free Irig: Free IFGain:Low Atten: 2	e Run Avg Hold:>100/100 0 dB Ext Gain: -11.00 dB Mkr1	2.463 222 GHz 0.534 dBm	NextPeak
10.0				Next Right
-10.0	m than her from the man and the second	produced and the contraction for the		Next Left
-20.0			N	Marker Delta
-40.0 -50.0				Mkr→CF
-60.0				Mkr→RefLvi
Center 2.46200 GHz #Res BW 100 kHz	#VBW 300 kHz	z Sweep	Span 26.00 MHz 2.53 ms (1001 pts)	More 1 of 2

QuieTek

Product	Wireless N Day & Night Pan/Tilt Cloud Camera							
Test Item	Power Density							
Test Mode	Mode 1: Transmit	Mode 1: Transmit						
Date of Test	2013/03/06	Test Site	SR7					

IEEE802.11n_20MHz												
Channel No.	Frequency (MHz)	Reading Level (dBm)	Measure Level (dBm)	Limit (dBm)	Result							
1	2412	0.113	-15.087	≦8	Pass							
6	2437	0.461	-14.739	≦8	Pass							
11	2462	-1.680	-16.880	≦8	Pass							

Note: Measure Level = Reading level + BWCF = Reading level -15.2 dB

Bandwidth correction factor (BWCF) = 10log (3 kHz/100kHz)

D Agi	lent Spec	trum Analy	rzer - Sv	vept SA						22		
ы Mar	ker 1	^{50 Ω}	1800	00000	SHz	AC SE	NSE:INT	Avg Type	ALIGNAUTO	09:10:22 F	M Mar 06, 2013 E 1 2 3 4 5 6	Peak Search
10 di	3/div	Ref 20	Inpu .00 dl	it: RF F IF BM	'NO: Fast 🕞 Gain:Low	Atten: 20	dB	AvgjHold: Ext Gain:	-11.00 dB Mkr1	2.415 7 0.1	18 GHz 13 dBm	NextPeak
10.0								▲1				Next Right
0.00 -10.0			min	L. www.	Mumbur	handhar	pmMnr	Irmun	walnul	mmy 1		Next Left
-20.0 -30.0		- Contraction										Marker Delta
-40.0	and and a	1, AMAN N									Mung Maday A	Mkr→CF
-60.0												Mkr→RefLvl
-70.0 Cen	ter 2.4	1200 G	Hz		#\/D\\				Sweet	Span 2	6.00 MHz	More 1 of 2
#RC	2 0 4 4				#VDV	JUU KHZ			STATUS	2.33 1115 (ioo i pisj	



D Agi	lent Spec	trum Analyzer -	Swept SA							02	
₩ Marl	ker 1	^{50 Ω} 2.4382480	00000	GHz			Avg Type	ALIGNAUTO	09:11:33	PM Mar 06, 2013	Peak Search
10 dE	3/div	In Ref 20.00 (d B m	PNO: Fast 🍙 Gain:Low	Atten: 20	dB	Ext Gain:	-11.00 dB Mkr1	2.438 2 0.4	248 GHz 61 dBm	Next Peak
10.0					X	1	×		0		Next Right
0.00 -10.0			him	Andrew	malin	pontun	hunhan	linghand	March 1		Next Left
-20.0 -30.0		- John Star							h h		Marker Delta
-40.0	www	Wy M								"huyanyyyyy	Mkr→CF
-60.0											Mkr→RefLvl
-70.0 Cent #Re:	ter 2.4 s BW	-3700 GHz 100 kHz		#VBW	300 kHz			Sweep	Span 2 2.53 ms (26.00 MHz 1001 pts)	More 1 of 2
MSG		na na se						STATU	s		



D Agi	lent Spec	ctrum Analyzer -	Swept SA		00	15	- 15			10	
Marl	ker 1	^{50 Ω}	00000	GH7	c se	NSE:INT	Avg Type	ALIGNAUTO	12:40:41 F	M Mar 07, 2013	Peak Search
10 di	3/div	Ref 23.50	put: RF	PNO: Fast 😱 FGain:Low	┘ Trig: Free #Atten: 30	≘Run)dB	Ext Gain:	-11.00 dB Mkr1	2.463 2 -1.6	48 GHz 80 dBm	Next Peak
Log 13.5			S							*	Next Right
3.50 -6.50		. ~~	Armpollow	when hand	bushing	1-	Aronthe	boordowed	(mm-		Next Left
-16.5 -26.5											Marker Delta
-36.5	www	mand							- No	and and a	Mkr→CF
-40.5											Mkr→RefLvl
-66.5 Cen #Res	ter 2.4 s BW	6200 GHz		#VBW				Sweep	Span 2 2.53 ms (6.00 MHz 1001 pts)	More 1 of 2
MSG		nan tanan mila - Alan San San San San						STATUS	3		