Dynamic Frequency Selection (DFS) Test Report

Product Name	: ConnectCore 6 Plus
Trade Name	: DIGI
Model No.	: CC-WMX-KK8D-TN
FCC ID.	: MCQ-CCIMX6P
IC ID.	: 1846A-CCIMX6P

Applicant : DIGI INTERNATIONAL INC

Address : 11001 Bren Road East Minnetonka, MN 55343 (USA)

Date of Receipt	:	Dec. 11, 2017
Issued Date	:	Feb. 13, 2018
Report No.	:	17C0115R-RFUSP09V00
Report Version	:	V1.0



The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standard through the calibration report of the equipment and evaluated measurement uncertainty herein. This report must not be used to claim product endorsement by TAF or any agency of the government. The test report shall not be reproduced without the written approval of DEKRA Testing and Certification Co., Ltd.



DFS Test Report

Issued Date: Feb. 13, 2018 Report No.: 17C0115R-RFUSP09V00



Product Name	:	ConnectCore 6 Plus
Applicant	:	DIGI INTERNATIONAL INC
Address	:	11001 Bren Road East Minnetonka, MN 55343 (USA)
Manufacturer	:	DIGI INTERNATIONAL INC
Model No.	:	CC-WMX-KK8D-TN
FCC ID.	:	MCQ-CCIMX6P
IC ID.	:	1846A-CCIMX6P
EUT Rated Voltage	:	AC 100-240V, 50/60Hz
EUT Test Voltage	:	AC 120V/60Hz
Trade Name	:	DIGI
Applicable Standard	:	FCC CFR Title 47 Part 15 Subpart E 15.407 (h): 2015
		KDB 905462 D02V02, KDB 905462 D04V01, KDB 905462
		D06V02
		FCC 16-24
		RSS-247 Issue 2 (2017-02)
Laboratory Name	:	Hsin Chu Laboratory
Address	:	No.372-2, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu
		County 31061, Taiwan
		TEL: +886-3-582-8001 / FAX: +886-3-582-8958
Test Result	:	Complied
Documented By	:	1 yours
		aya Jung
	_	(Lyla Yang / Engineering Adm. Specialist)
Ta ata d Du	_	
Tested By	:	clemens tang
	_	(Clemens Fang / Engineer)
Approved By	:	Roy Wang
	_	(Roy Wang / Director)



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1. General Information

1.1. EUT Description

Product Name	ConnectCore 6 Plus				
Trade Name	DIGI				
Model No.	CC-WMX-KK8D-TN				
Frequency Range/	IEEE 802.11a/	5180~5240MHz / 4 Channels			
Channel Number	IEEE 802.11n (20MHz) /	5260~5320MHz / 4 Channels			
	IEEE 802.11ac (20MHz)	5500~5700MHz / 11 Channels			
		5745~5825MHz / 5 Channels			
	IEEE 802.11n (40MHz) /	5190~5230MHz / 2 Channels			
	IEEE 802.11ac (40MHz)	5270~5310MHz / 2 Channels			
		5510~5670MHz / 5 Channels			
		5755~5795MHz / 2 Channels			
	IEEE 802.11ac (80MHz)	5210~5210MHz / 1 Channel			
		5290~5290MHz / 1 Channel			
		5530~5610MHz / 2 Channel			
		5775~5775MHz / 1 Channel			
	Canada not be capable of transmitting in the band 5600-5650MHz				
Type of Modulation	IEEE 802.11 a/n/ac	Orthogonal Frequency Division Multiplexing (OFDM)			
Data Speed	IEEE 802.11a	6, 9, 18, 24, 36, 48, 54Mbps			
	IEEE 802.11n	Support a subset of the combination of GI,			
		MCS 0~MCS 7 and bandwidth defined in 802.11n			
	IEEE 802.11ac	Support a subset of the combination of GI,			
		MCS 0~MCS 9 and bandwidth defined in 802.11ac			
DFS Function	□ Master	Slave (Without Radar Detection)			
TPC Function	⊠ <500mW not required	$\Box \geq 500 mW$ employ a TPC			
Communication Mode	☑ IP Based Systems	□ Frame Based System □ Other System			

Antenna Information				
MFR. / Model No.	Linx Technologies Inc. / ANT-DB1-RAF-RPS			
Antenna Type	dipole Antenna			
Antenna Gain	4.6 dBi			

Accessories Information				
Power Adatper	GlobTek [®] , Inc., GT-46180-1605			
	I/P : 100-240V∼, 50-60Hz, 0.6A			
	O/P : 5V===3.2A, 16W			
	Cable Out: Non-Shielded, 1.2m			

802.11a/n-20MHz Center Working Frequency of Each Channel:

Working Frequency of Each Channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
36	5180 MHz	40	5200 MHz	44	5220 MHz	48	5240 MHz
52	5260 MHz	56	5280 MHz	60	5300 MHz	64	5320 MHz
100	5500 MHz	104	5520 MHz	108	5540 MHz	112	5560 MHz
116	5580 MHz	120	5600 MHz	124	5620 MHz	128	5640 MHz
132	5660 MHz	136	5680 MHz	140	5700 MHz	149	5745 MHz
153	5765 MHz	157	5785 MHz	161	5805 MHz	165	5825 MHz

Marking Frequency of Feel Obernel

802.11n-40MHz Center Working Frequency of Each Channel:

Working Frequency of Each Channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz	54	5270MHz	62	5310 MHz
102	5510 MHz	110	5550 MHz	118	5590MHz	126	5630 MHz
134	5670 MHz	151	5755 MHz	159	5795 MHz		

802.11ac-80MHz Center Working Frequency of Each Channel:

Working Frequency of Each Channel

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
42	5210 MHz	58	5290 MHz	106	5530 MHz	122	5610 MHz
155	5775 MHz						

Test Mode



1.2. Standard Requirement

FCC Part 15.407:

U-NII devices operating in the 5.25-5.35 GHz band and the 5.47-5.725 GHz band shall employ a TPC mechanism. The U-NII device is required to have the capability to operate at least 6 dB below the mean EIRP value of 30dBm. A TPC mechanism is not required for systems with an E.I.R.P. of less than 500mW.

U-NII devices operating in the 5.25-5.35 GHz and 5.47-5.725 GHz bands shall employ a DFS radar detection mechanism to detect the presence of radar systems and to avoid co-channel operation with radar systems.

1.3. UNII Device Description

- (1) The EUT operates in the following DFS band:
 - 1. 5250-5350 MHz
 - 2. 5470-5725 MHz
- (2) Below are the available 50 ohm antenna assemblies and their corresponding gains.
 0dBi gain was used to set the -63 dBm threshold level (-64dBm +1 dB) during calibration of the test setup.

Antenna Information	
MFR. / Model No.	Linx Technologies Inc. / ANT-DB1-RAF-RPS
Antenna Type	dipole Antenna
Antenna Gain	4.6 dBi

(3) DFS operation description:

WLAN traffic is generated by streaming the video file "ipef.exe" from the Master device to the Slave device in full motion video mode using the media player with the V2.61 Codec package.

(4) This device does not exceed 27dBm eirp, so no transmit power control is implemented.



1.4. Test Equipment

DFS / SR11-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date	
Spectrum Analyzer	Agilent	N9010A	US47140172	2017/07/26	2018/07/25	
ESG Vector Signal	Agilopt	E1120C	MV/5005750	2017/05/24	2019/05/22	
Generator	Aglient	E4430C	101140090709	2017/03/24	2016/05/25	
MXG Vector Signal	Kovsight		MV52052549	2017/01/10	2018/04/00	
Generator	Reysign	IND TOZD	101103002040	2017/04/10	2010/04/09	
Wideband Radio	DVC		150246	2017/04/10	2019/04/19	
Communication Tester	ΓαΟ	CIVIV/500	150240	2017/04/19	2010/04/18	
Signal & Spectrum	DVC		101040	2019/01/10	2010/01/00	
Analyzer	Γαο	F3V4U	101049	2010/01/10	2019/01/09	
EXA Signal Analyzer	Keysight	N9010A	MY51440132	2017/03/13	2018/03/12	

Instrument	Manufacturer	Туре No.	Serial No
Laptop PC	DELL	Vostro A860	CD8BMH1
Laptop PC	ASUS	K45VD	0343G3110M
ATT (Qty: 3)	Mini-Circuits	BW-S3W2 DC-18GHz	0025
RF Cable (Qty: 6)	Schaffner		25494/6
Laptop PC	DELL	Vostro A860	CD8BMH1
Laptop PC	ASUS	K45VD	0343G3110M

Software	Manufacturer	Function
Agilent DFS_TEST V6.9	Agilent	Radar Signal Generation Software



1.5. Test Setup



1.6. DFS Requirements Prior to Use of a Channel

	Operational Mode						
Requirement	Master	Client Without Radar Detection	Client With Radar Detection				
Non-Occupancy Period	Yes	Not required	Yes				
DFS Detection Threshold	Yes	Not required	Yes				
Channel Availability Check Time	Yes	Not required	Not required				
Uniform Spreading	Yes	Not required	Not required				
U-NII Detection Bandwidth	Yes	Not required	Yes				

1.7. DFS requirements during normal operation

	Operational Mode						
Poquiromont		Client	Client				
Requirement	Master	Without Radar	With Radar				
		Detection	Detection				
DFS Detection Threshold	Yes	Not required	Yes				
Channel Closing Transmission Time	Yes	Yes	Yes				
Channel Move Time	Yes	Yes	Yes				
U-NII Detection Bandwidth	Yes	Not required	Yes				

1.8. DFS Detection Thresholds

(1) Interference Threshold value, Master or Client incorporating In-Service Monitoring

Maximum Transmit Power	Value (see note)
≥200 milliwatt	-64 dBm
EIRP < 200 milliwatt and	62 dBm
power spectral density < 10 dBm/MHz	-62 (1911)
EIRP < 200 milliwatt that do not meet the	64 dBm
power spectral density requirement	

Note 1: This is the level at the input of the receiver assuming a 0 dBi receive antenna.

Note 2: Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response.

Note3: EIRP is based on the highest antenna gain. For MIMO devices refer to KDB Publication 662911 D01.

(2) DFS Response requirement values

Parameter	Value
Non-Occupancy Period	30 Minutes
Channel Availability Check Time	60 Seconds
Parameter Non-Occupancy Period Channel Availability Check Time Channel Move Time Channel Closing Transmission Time U-NII Detection Bandwidth	10 seconds
	See Note 1.
	200 milliseconds + an aggregate of 60
Channel Closing Transmission Time	milliseconds over remaining 10 second period.
	See Notes 1 and 2.
Parameter Non-Occupancy Period Channel Availability Check Time Channel Move Time Channel Closing Transmission Time U-NII Detection Bandwidth	Minimum 100% of the U-NII 99% transmission
	power bandwidth. See Note 3.

Note 1: *Channel Move Time* and the *Channel Closing Transmission Time* should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst.

- **Note 2:** The *Channel Closing Transmission Time* is comprised of 200 milliseconds starting at the beginning of the *Channel Move Time* plus any additional intermittent control signals required to facilitate a *Channel* move (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions.
- **Note 3:** During the *U-NII Detection Bandwidth* detection test, radar type 0 should be used. For each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.

1.9. Radar Test Waveforms

This section provides the parameters for required test waveforms, minimum percentage of successful detections, and the minimum number of trials that must be used for determining DFS conformance. Step intervals of 0.1 microsecond for Pulse Width, 1 microsecond for PRI, 1 MHz for chirp width and 1 for the number of pulses will be utilized for the random determination of specific test waveforms.

Radar	Pulse	PRI	Number of Pulses	Minimum	Minimum
Туре	Width	(µsec)		Percentage of	Number
	(µsec)			Successful	of
				Detection	Trials
0	1	1428	18	See Note 1	See Note
					1
1	1	Test A: 15 unique	$\left(\left(1 \right) \right)$	60%	30
		PRI values	$(\frac{360}{360})$		
		randomly selected	Roundup		
		from the list of 23	19.10		
		PRI values in	PRI		
		Table 5a	((µsec))		
		Test B: 15 unique			
		PRI values			
		randomly selected			
		within the range			
		of 518-3066			
		μ sec, with a			
		minimum			
		increment of 1			
		μ sec,			
		excluding PRI			
		values			
		selected in			
		Test A			
2	1-5	150-230	23-29	60%	30
3	6-10	200-500	16-18	60%	30
4	11-20	200-500	12-16	60%	30
Aggregate	(Radar Types	1-4)		80%	120
Note 1: Sho	ort Pulse Ra	adar Type 0 shoul	d be used for the d	letection band	width
test, cha	nnel move t	ime, and channel	closing time tests.		

(1) Short Pulse Radar Test Waveforms

A minimum of 30 unique waveforms are required for each of the Short Pulse Radar Types 2 through 4. If more than 30 waveforms are used for Short Pulse Radar Types 2 through 4, then each additional waveform must also be unique and not repeated from the previous waveforms. If more than 30 waveforms are used for Short Pulse Radar Type 1, then each additional waveform is 905462 D02 UNII DFS Compliance Procedures v01 Page 10 generated with Test B and must also be unique and not repeated from the previous date of B.



(2) Long Pulse Radar Test Signal

Radar Waveform	Bursts	Pulses Per Burst	Pulse Width (usec)	Chirp Width (MHz)	PRI (usec)	Minimum Percentage of Successful Detection	Minimum Trials
5	8-20	1-3	50-100	5-20	1000-2000	80%	30

The parameters for this waveform are randomly chosen. Thirty unique waveforms are required for the long pulse radar test signal. If more than 30 waveforms are used for the long pulse radar test signal, then each additional waveform must also be unique and not repeated from the previous waveforms.

Each waveform is defined as follows:

- 1) The transmission period for the Long Pulse Radar test signal is 12 seconds.
- There are a total of 8 to 20 Bursts in the 12 second period, with the number of Bursts being randomly chosen. This number is Burst_Count.
- 3) Each Burst consists of 1 to 3 pulses, with the number of pulses being randomly chosen. Each Burst within the 12 second sequence may have a different number of pulses.
- 4) The pulse width is between 50 and 100 microseconds, with the pulse width being randomly chosen. Each pulse within a Burst will have the same pulse width. Pulses in different Bursts may have different pulse widths.
- 5) Each pulse has a linear FM chirp between 5 and 20 MHz, with the chirp width being randomly chosen. Each pulse within a Burst will have the same chirp width. Pulses in different Bursts may have different chirp widths. The chirp is centered on the pulse. For example, with radar frequency of 5310 MHz and a 20 MHz chirped signal, the chirp starts at 5300 MHz and ends at 5320 MHz.
- 6) If more than one pulse is present in a Burst, the time between the pulses will be between 1000 and 2000 microseconds, with the time being randomly chosen. If three pulses are present in a Burst, the time between the first and second pulses is chosen independently of the time between the second and third pulses.
- 7) The 12 second transmission period is divided into even intervals. The number of intervals is equal to Burst_Count. Each interval is of length (12,000,000 / Burst_Count) microseconds. Each interval contains one Burst. The start time for the Burst, relative to the beginning of the interval, is between 1 and [(12,000,000 / Burst_Count) (Total Burst Length) + (One Random PRI Interval)] microseconds, with the start time being randomly chosen. The step interval for the start time is 1 microsecond. The start time for each Burst is chosen independently.

A representative example of a Long Pulse radar test waveform:

- 1) The total test signal length is 12 seconds.
- 2) 8 Bursts are randomly generated for the Burst_Count.
- 3) Burst 1 has 2 randomly generated pulses.
- 4) The pulse width (for both pulses) is randomly selected to be 75 microseconds.
- 5) The PRI is randomly selected to be at 1213 microseconds.
- 6) Bursts 2 through 8 are generated using steps 3 5.
- 7) Each Burst is contained in even intervals of 1,500,000 microseconds. The starting location for Pulse 1, Burst 1 is randomly generated (1 to 1,500,000 minus the total Burst 1 length + 1 random PRI interval) at the 325,001 microsecond step. Bursts 2 through 8 randomly fall in successive 1,500,000 microsecond intervals (i.e. Burst 2 falls in the 1,500,001 3,000,000 microsecond range).

DEKRA

Graphical Representation of a Long Pulse radar Test Waveform





(3) Frequency Hopping Radar Test Signal

Radar	Pulse	PRI	Hopping	Pulses	Hopping	Minimum	Minimum
Waveform	Width	$(\mu \sec)$	Sequence	Per Hop	Rate	Percentage	Trials
	$(\mu \sec)$		Length		(kHz)	of Successful	
			(msec)			Detection	
6	1	333	300	9	0.333	70%	30

For the Frequency Hopping Radar Type, the same *Burst* parameters are used for each waveform. The hopping sequence is different for each waveform and a 100-length segment is selected₁ from the hopping sequence defined by the following algorithm:

The first frequency in a hopping sequence is selected randomly from the group of 475 integer frequencies from 5250 – 5724 MHz. Next, the frequency that was just chosen is removed from the group and a frequency is randomly selected from the remaining 474 frequencies in the group. This process continues until all 475 frequencies are chosen for the set. For selection of a random frequency, the frequencies remaining within the group are always treated as equally likely.

1.10. Radar Waveform Calibration

The following equipment setup was used to calibrate the conducted radar waveform. A spectrum analyzer was used to establish the test signal level for each radar type. During this process there were replace 50ohm terminal from master and client device and no transmissions by either the master or client device. The spectrum analyzer was switched to the zero span (time domain) at the frequency of the radar waveform generator. Peak detection was utilized. The spectrum analyzer resolution bandwidth (RBW) and video bandwidth (VBW) were set to 3MHz and 3 MHz.

The signal generator amplitude was set so that the power level measured at the spectrum analyzer was -64dBm due to the interference threshold level is not required.

Conducted Calibration Setup





1.11. Radar Waveform Calibration Result

	ysight Spec	ctrum Analyzer	- Swept SA		1			-		1		
Cer	nter Fi	RF req 5.32	50 Ω DC DOOOOOO) GHz	Z O: Fast (SEN	e Run	Avg Type Avg Hold	: Log-Pwr >1/1	03:00:44 PI TRAC TYF	MFeb 02, 2018 E 1 2 3 4 5 6 E M WWWWW	Frequency
10 d	B/div	Ref -30.	00 dBm	IFGa	ain:High	#Atten: 0	dB	Ext Gain:	7.80 dB	Mkr1 2 -64.0	9.68 ms 97 dBm	Auto Tune
-40.0												Center Freq 5.320000000 GHz
-50.0 -60.0					1							Start Freq 5.320000000 GHz
-70.0 -80.0	وروينا والروان		لى الم 100 مىل مىل مىل مىل م				ف ال ال	ul allataria. na ac hi	النفاشي عمور وهدو روانا		د از بند و هم در آن در از الد و هم رو	Stop Freq 5.320000000 GHz
-90.0 -100) (m) (m) (m) (m) (m) (m) (m) (m) (m) (m		1944 1 - 4 14 - 4 14	ρ τ Lev μ Στι τι ζ ζ = βτραγ - σ			9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9				CF Step 3.000000 MHz <u>Auto</u> Man
-110												Freq Offset 0 Hz
Cen	ter 5.3 BW 3	32000000 .0 MHz	0 GHz		#VBW	3.0 MHz		s	weep 1	9 90.0 ms (1	5pan 0 Hz 0001 pts)	Scale Type
MSG									STATU	IS		

Radar Type 0 Calibration Plot (5510MHz)



1.12. Slave Data Traffic Plot Result

Keysight Spectrum Analyzer - Swept SA 02:35:56 PM Feb 02, 2018 TRACE 1 2 3 4 5 6 TYPE WWWWW DET P N N N N N RF SENSE:INT Center Freq 5.320000000 GHz Frequency Avg Type: Log-Pwr Trig: Free Run PNO: Fast ++ IFGain:Low #Atten: 10 dB Ext Gain: 7.80 dB Auto Tune ΔMkr3 15.60 ms -0.39 dB 10 dB/div Log√ Ref -10.00 dBm 3∆1 Center Freq -20.0 5.320000000 GHz 2/21 -30.0 -40.0 Start Freq 5.320000000 GHz 50.0 60.0 Stop Freq 5.320000000 GHz 70.0 -80.0 CF Step 3.000000 MHz 90.0 Auto Man -100 Freq Offset Center 5.320000000 GHz Span 0 Hz 0 Hz Res BW 3.0 MHz #VBW 3.0 MHz Sweep 100.0 ms (10001 pts) FUNCTION VALUE MKR MODE TRC SCL FUNCTION WIDTH -22.15 dBm -10.27 dB -0.39 dB Scale Type 44.40 ms 3.310 ms (Δ) 15.60 ms (Δ) 1 t 1 t (Δ) 1 t (Δ) 1 N 2 Δ1 <u>Lin</u> Δ1 Log 4 . MSG STATUS

Plot of Slave Traffic at 5320MHz

Plot of Slave Traffic at 5530MHz

Keysight Spectrum	Analyzer - Swept SA									×
LXI RI	50 Ω DC		SEN	SE:INT			02:49:41 P	M Feb 02, 2018	Frequency	~
Center Freq	5.530000000	GHz	Trig: Free	Dun	Avg Type	e: Log-Pwr	TRA	DE 1 2 3 4 5 6	Trequenc	y
		PNO: Fast ++- IFGain:Low	#Atten: 10	dB	Ext Gain:	7.80 dB	D	ET P NNNNN		
							Mkr2 4	5 70 mo	Auto T	lune
_						4		0.26 40		
10 dB/div Re	f -10.00 dBm							0.30 GB		
			. 241						Contor	
-20.0		and us t				i Jiela,			Center	ried
				3/	71		1 1		5.53000000	GH:
-30.0			M I	<u> </u>						
-40.0									Start	Frec
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-50.0										
60.0										
-00.0									Stopl	Frec
-70.0									5.53000000) GHz
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										Step
-90.0								- I	3.000000	MH:
									Auto	Mar
-100										
									Erea O	ffsei
Center 5.5300	000000 GHz						S	span 0 Hz		0.11-
Res BW 3.0 N	1Hz	#VBW	3.0 MHz		S	weep 10)0.0 ms (1	0001 pts)		0 112
			M	FUNZ			, EUNCTI			
	×	41 04 ms	-30.96 dB	FUNC	FUN FUN		FUNCT		Scale	Гуре
2 Δ1 1 t	(Δ)	2.930 ms (Δ)	7.87 (B						215
3 Δ1 1 t	<u>(</u> Δ)	15.70 ms (Δ)	0.36 0	B					Log	Lir
4	1				I		I	*		
MSG						STATU	e .		L	
100						STATU	~			

2. In-Service Monitoring for Channel Move Time and Channel Closing Transmission Time and Non-Occupancy Period

2.1. Test Procedure

These tests define how the following DFS parameters are verified during In-Service Monitoring;

Channel Closing Transmission Time, Channel Move Time, and Non-Occupancy Period.. The steps below define the procedure to determine the above mentioned parameters when a radar Burst with a level equal to the DFS Detection Threshold + 1dB (-63dBm) is generated on the Operating Channel of the U-NII device.

A U-NII device operating as a Master Device will associate with the UUT (Client) at 5300 MHz and 5500MHz.

Stream the MPEG test file from the Client (TX) Device to the Master (RX) Device on the selected Channel for the entire period of the test.

At time T0 the Radar Waveform generator sends a Burst of pulses for each of the radar types at

-63dBm.

Observe the transmissions of the UUT at the end of the radar Burst on the Operating Channel for duration greater than 10 seconds. Measure and record the transmissions from the UUT during the observation time (Channel Move Time). Compare the Channel Move Time and Channel Closing

Transmission Time results to the limits defined in the DFS Response requirement values table.

Measure the UUT for more than 30 minutes following the channel close/move time to verify that the UUT does not resume any transmissions on this Channel.

2.2. Test Requirement

Parameter	Value
Channel Move Time	10 Seconds
Channel Closing Transmission Time	200 milliseconds + an aggregate of 60 milliseconds over remaining 10 seconds period
Non-Occupancy Period	Minimum 30 minutes

2.3. Uncertainty

± 1ms.



2.4. Test Result of Channel Move Time and Channel Closing Transmission Time and Non-Occupancy Period

:	ConnectCore 6 Plus
:	Channel Move Time Test
:	Туре 0
:	Mode 1: Transmit
	: : :

Channel Move Time for Radar Test Type 0 at 5320MHz



Test Item	Test Result (Sec)	Limit (Sec)
Channel Move Time	0.8355	10
Channel Closing Transmission	0.0225	200 milliseconds + approx. 60 milliseconds
		over remaining 10 seconds period



Product	:	ConnectCore 6 Plus
Test Item	:	Channel Move Time Test
Radar Type	:	Туре 0
Test Mode		Mode 1 [.] Transmit

Channel Move Time for Radar Test Type 0 at 5500MHz



Test Item	Test Result (Sec)	Limit (Sec)
Channel Move Time	0.8100	10
Channel Closing Transmission	0.0270	200 milliseconds + approx. 60 milliseconds
		over remaining 10 seconds period



Product	:	ConnectCore 6 Plus
Test Item	:	Channel Move Time Test
Radar Type	:	Туре 0
Test Mode	:	Mode 1: Transmit

Channel Move Time for Radar Test Type 0 at 5290MHz



Test Item	Test Result (Sec)	Limit (Sec)
Channel Move Time	0.8475	10
Channel Closing Transmission	0.0315	200 milliseconds + approx. 60 milliseconds
		over remaining 10 seconds period



Product	:	ConnectCore 6 Plus
Test Item	:	Channel Move Time Test

- Radar Type : Type 0
- Test Mode : Mode 1: Transmit

Channel Move Time for Radar Test Type 0 at 5320MHz



Test Item	Test Result (Sec)	Limit (Sec)
Channel Move Time	0.8415	10
Channel Closing Transmission	0.0300	200 milliseconds + approx. 60 milliseconds
		over remaining 10 seconds period



Product	:	ConnectCore 6 Plus
Test Item	:	Non-Occupancy Period
Radar Type	:	Туре 0
Test Mode	:	Mode 1: Transmit

Non-Occupancy Period at 5500 MHz

👞 Ke	ysight Spe	ectrum Analyze	r - Swept SA								
L XI		RF	50 Ω DC		SEN	SE:INT			04:06:10 P	M Feb 02, 2018	Fraguaday
Cer	nter F	req 5.50	0000000	GHz		_	Avg Type	: Log-Pwi	r TRAC	E 1 2 3 4 5 6	Frequency
				PNO: Fast ↔ IFGain:Low	#Atten: 10	Run) dB	Ext Gain:	7.80 dB	DI		Auto Tune
10 d Log -20.0	B/div	Ref -10	.00 dBm								Center Freq 5.50000000 GHz
-30.0 -40.0											Start Freq 5.50000000 GHz
-50.0 -60.0											Stop Freq 5.50000000 GHz
-70.0 -80.0										at an state to be a state	CF Step 3.000000 MHz <u>Auto</u> Man
-90.0											Freq Offset 0 Hz
Cer	nter 5. BW 3	5000000 3.0 MHz	00 GHz	#VBW	3.0 MHz			Sweep	s 2.000 ks (1	Span 0 Hz 0001 pts)	Scale Type
MSG								STAT	US		

Test Item	Test Result (Minutes)	Limit (Minutes)
Non-Occupancy Period	>30	≧30

No EUT transmissions were observed on the test channel during 30 minutes observation time.



Product	:	ConnectCore 6 Plus
Test Item	:	Non-Occupancy Period
Radar Type	:	Туре 0
Test Mode	:	Mode 1: Transmit

Non-Occupancy Period at 5290 MHz

👞 Kej	ysight Spectrum Ar	nalyzer - Swept SA								
L XI	RF	50 Ω DC		SEN	SE:INT			04:41:43 PI	1Feb 02, 2018	Frequency
Center Freq 5.290000000 GHz			Tria: Eres Dun		Avg Type	Avg Type: Log-Pwr			Trequency	
	Dulin Dof	10.00 dBm	PNO: Fast ↔→ IFGain:Low	#Atten: 10) dB	Ext Gain:	7.80 dB	DE		Auto Tune
-20.0										Center Freq 5.290000000 GHz
-30.0 -40.0										Start Freq 5.290000000 GHz
-50.0 -60.0										Stop Freq 5.290000000 GHz
-70.0 -80.0		ne ffer de geld an det off ed to a to ferdile to		htter sa ter grade so de la here de la here	film for a statistic statistic			<u>, e livelette reduktionette</u>	unitése any se adjet a	CF Step 3.000000 MHz <u>Auto</u> Man
-90.0										Freq Offset 0 Hz
Cen	ter 5.29000 BW 3.0 Mi	00000 GHz 1z	#VBW	3.0 MHz			Sweep	s 2.000 ks (1	pan 0 Hz 0001 pts)	Scale Type
MSG							STAT	US		

Test Item	Test Result (Minutes)	Limit (Minutes)			
Non-Occupancy Period	>30	≧30			

No EUT transmissions were observed on the test channel during 30 minutes observation time.



DFS Test Setup Photo

Full DFS Test Setup Photo







