

# EMC Test Report

**Project Number:** 4227659

**Report Number:** 4227659EMC07

**Revision Level:** 0

**Client:** Technicolor Connected Home USA LLC

**Equipment Under Test:** Channel Master Android TV

**Model:** CM-7600

**FCC ID:** G95-CM-7600


**IC ID:** 431C-DWT765CHA

**Applicable Standards:** FCC Part 15 Subpart C, § 15.407  
RSS-247, Issue 2

**Report issued on:** 05 January 2018

**Test Result:** Compliant

Tested by:

  
\_\_\_\_\_  
Jeremy Pickens, Senior EMC Engineer

Reviewed by:

  
\_\_\_\_\_  
David Schramm, Operations Manager

*Remarks: This report details the results of the testing carried out on one sample, the results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.*

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## 1 Summary of Test Results

Basic Standards	Test Result
FCC Part 15.407 / RSS-247 Channel Move Time	Compliant
FCC Part 15.407 / RSS-247 Channel Closing Transmission Time	Compliant

### 1.1 *Modifications Required to Compliance*

None

## 2 General Information

### 2.1 Client Information

Name: Technicolor Connected Home USA LLC  
Address: 5030 Sugarloaf Parkway Building 6  
City, State, Zip, Country: Lawrenceville, GA 30044, USA

### 2.2 Test Laboratory

Name: SGS North America, Inc.  
Address: 620 Old Peachtree Road NW, Suite 100  
City, State, Zip, Country: Suwanee, GA 30024, USA

### 2.3 General Information of EUT

Type of Product: Channel Master Android TV  
Model Number: CM-7600  
Serial Number: 211930007386700018

Frequency Range: 5150 to 5250 MHz, 5250-5350 MHz, 5470-5725 MHz, 5725-5850 MHz  
Number of channels: UNII Band 1 (Channels 36, 40, 44, 48)  
UNII Band 2-A (Channels 52, 56, 60, 64)  
UNII Band 2-B (Channels 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140)  
UNII Band 3 (Channels 149, 153, 157, 161, 165)

Modulation type: 802.11a, 802.11n (HT20/HT40), 802.11ac (VHT20/ VHT40/ VHT80)  
Antenna: 2x Internal PCB Trace  
#1 5.6 dBi Max Gain  
#2 5.4 dBi Max Gain

Rated Voltage: 12Vdc (Supplied via 100-120Vac, 60Hz AC Adapter)  
Test Voltage: 12Vdc, (120Vac, 60Hz)

Sample Received Date: 30 October 2017  
Dates of testing: 27 December 2017

## 2.4 **Device Description**

### **Operating mode**

The device has no radar detection capabilities and no ad-hoc capabilities in the 5GHz DFS bands.

### **Master device identification**

The DFS compliant master device used for testing was a Cisco Dual Band Access Point Model AIR-SAP2602E-A-K9; SN FGL1648Z5HP; FCC ID: LDK102080; IC: 2461B-102080.

### **Channel loading messages or sequences**

Channel loading was achieved using iPerf software. The UUT was preloaded with the software. A laptop was used (connected over the air to the access point) in conjunction to generate the traffic.

### **Transmit Power Control**

Since the device does not exceed 27dBm EIRP, TPC is not required.

### **User access to detected radar waveforms**

The device does not utilize radar detection, this requirement is not applicable

### **Time required for master or client device to complete its power on cycle**

The master device took 1 minute 11 seconds to complete its power on cycle.  
The client device does not have radar detection. Its power on time is not applicable.

### **System Architecture**

The EUT utilizes IP based system architecture

### **Uniform Channel Spreading**

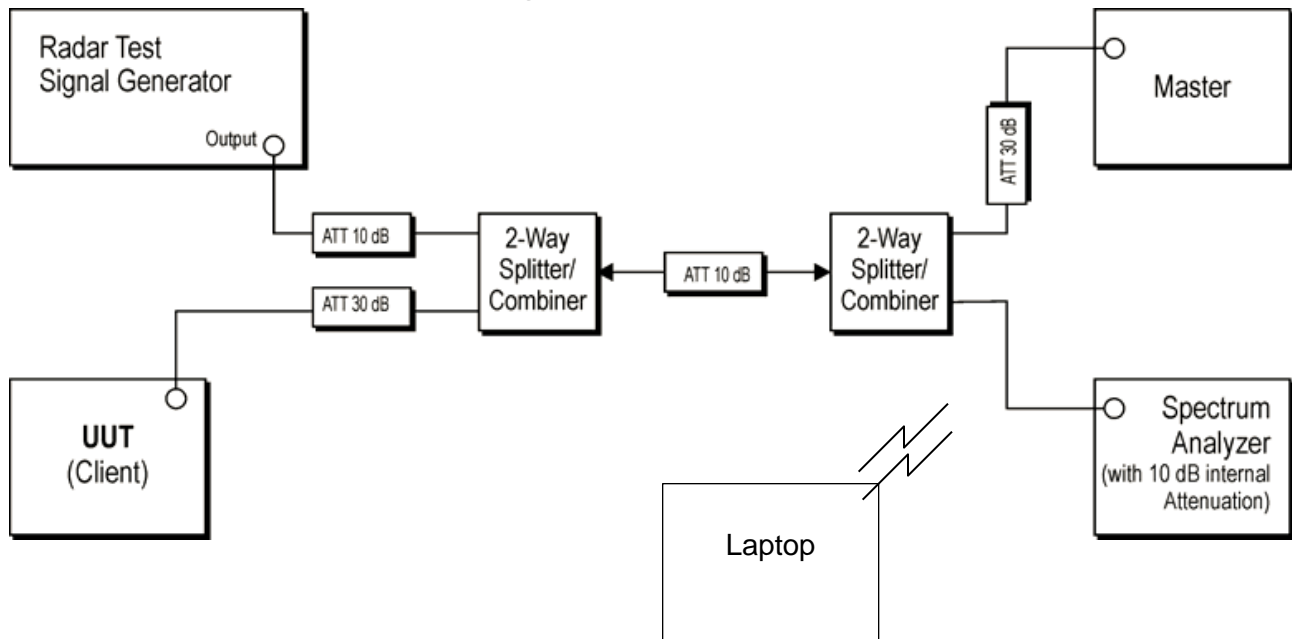
Not applicable for non radar detecting devices

### **List all antennas and their corresponding gains**

2x Internal PCB Trace  
#1 5.6 dBi Max Gain  
#2 5.4 dBi Max Gai

The calibrated conducted DFS detection threshold level was set at -63 dBm at the antenna port of the Master device. This satisfies the DFS detection threshold requirement +1 dB.

## 2.5 EUT Connection Block Diagram



## 2.6 System Configurations

Device reference	Manufacturer	Description	Model Number	Serial Number
Master	Cisco	Dual Band Access Point	AIR-SAP2602E-A-K9	FGL1648Z5HP
UUT	Technicolor	Channel Master Android TV	CM-7600	211930007386700018
Radar Test Signal Generator	Rohde & Schwarz	Vector Signal Generator	SMBV100A	261506
Laptop	Lenovo	ThinkPad Laptop	T400	R8-X9XFV

### 3 DFS Requirements

#### 3.1 Test Result

Test Description	Basic Standards	Test Result
Channel Shutdown/Closing Transmission/Non-occupancy	FCC Part 15.407 (h)(2) RSS 247, S6.3	Compliant

#### 3.2 Test Method

DFS Testing was performed using the conducted test methods defined in KDB 905462 D02 UNII DFS Compliance Procedures New Rules v02. The device was a client only device without radar detection capability. The Rohde & Schwarz TS8997 test system in conjunction with WMS32 software was used for automation of the testing.

#### 3.3 DFS requirements / Limits

Requirement	Limit
Channel Move Time	10 sec
Channel Closing Transmission Time	200 ms + an aggregate 60 ms over the following 10 seconds
Non-Occupancy Period	30 Minutes

#### 3.4 Test Site

EMC Laboratory, Suwanee, GA

Environmental Conditions

Temperature: 22.5 °C  
Relative Humidity: 12.6 %  
Atmospheric Pressure: 98.0 kPa

#### 3.5 Test Equipment

Test End Date: 27-Dec-2017

Tester: JOP

Equipment	Model	Manufacturer	Asset Number	Cal Due Date
SIGNAL GENERATOR	SMB 100A	ROHDE & SCHWARZ	B085760	29-Jun-2019
SIGNAL GENERATOR	SMBV100A	ROHDE & SCHWARZ	15002	2-Oct-2018
SIGNAL ANALYZER	FSV30	ROHDE & SCHWARZ	B085749	1-Nov-2019
ATTENUATOR, 10DB	10DB	ROHDE & SCHWARZ	B095591	28-Jul-2018
RF CABLE	141	HUBER & SUHNER	B095585	26-Jul-2018
OPEN SWITCH AND CONTROL PLATFORM	OSP 120	ROHDE & SCHWARZ	S/N: 101182	CNR

Note: The equipment calibration period is 1 year except for the FSV which is on a 2-year cycle. FSV Signal Analyzer and Signal Generator were used to validate the OSP prior to testing.

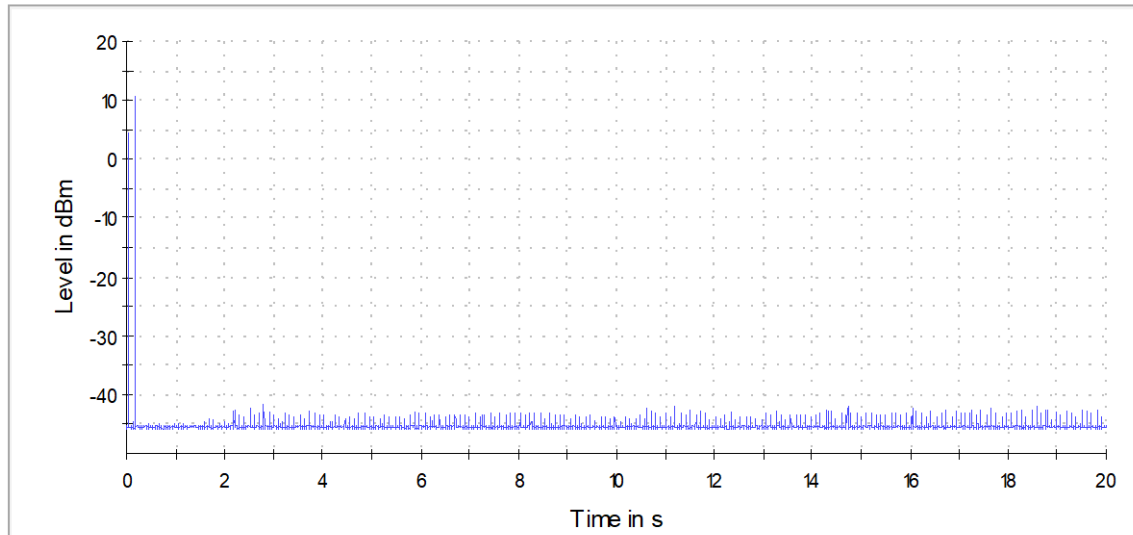
### 3.6 Test Data

#### DFS Channel Shutdown and Non-Occupancy period

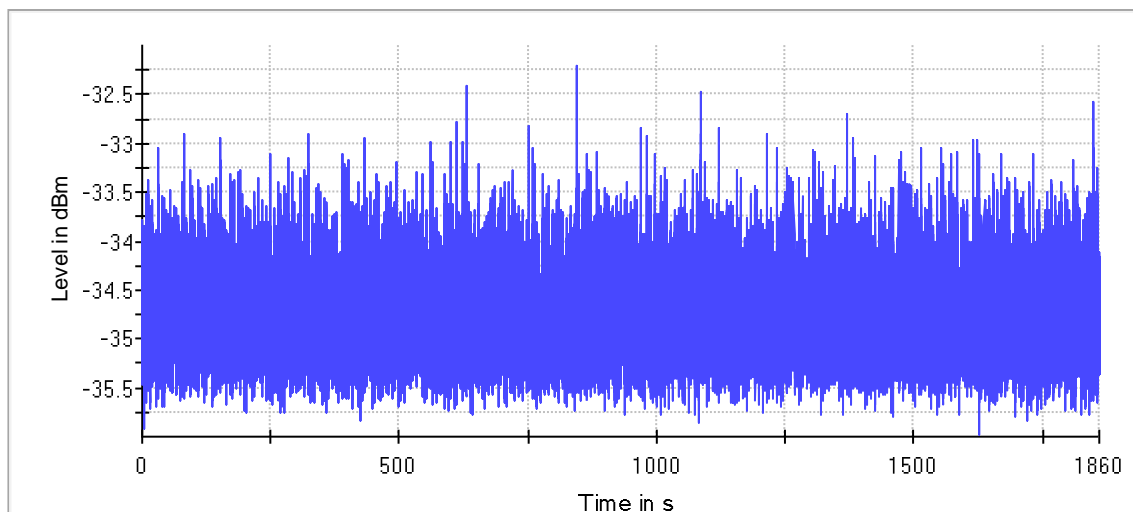
DUT Frequency (MHz)	CCTT (s)	Limit CCTT (s)	Non Occupancy Time (s)	Limit Non Occupancy Time (s)	Result	Comment
5500.000000	0.187	0.260	1860.062	1800.000	PASS	

#### 5500 MHz

Channel Shutdown and first 10s of Non Occupancy Period



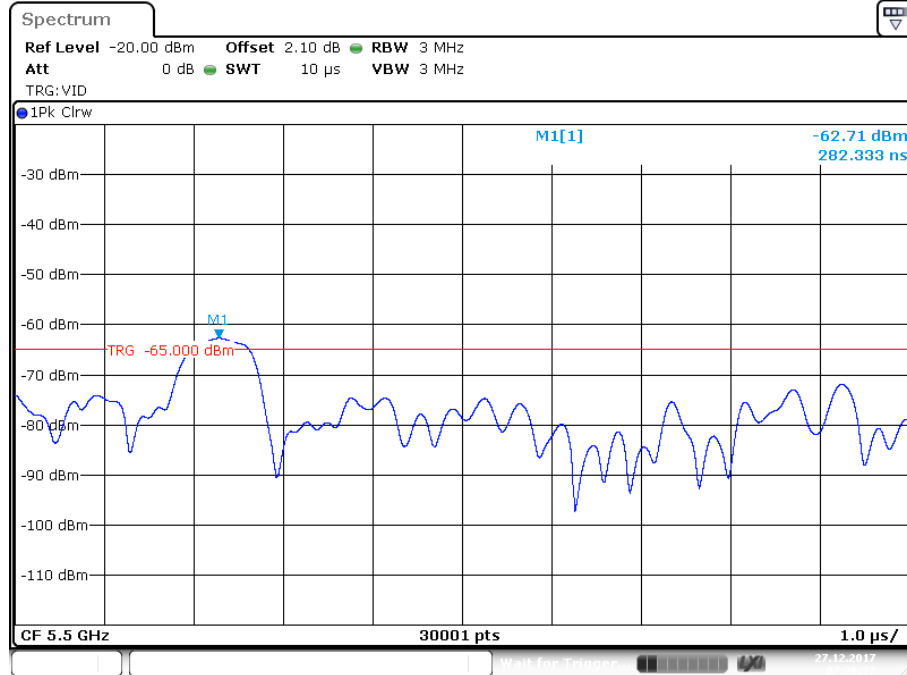
Non Occupancy Period



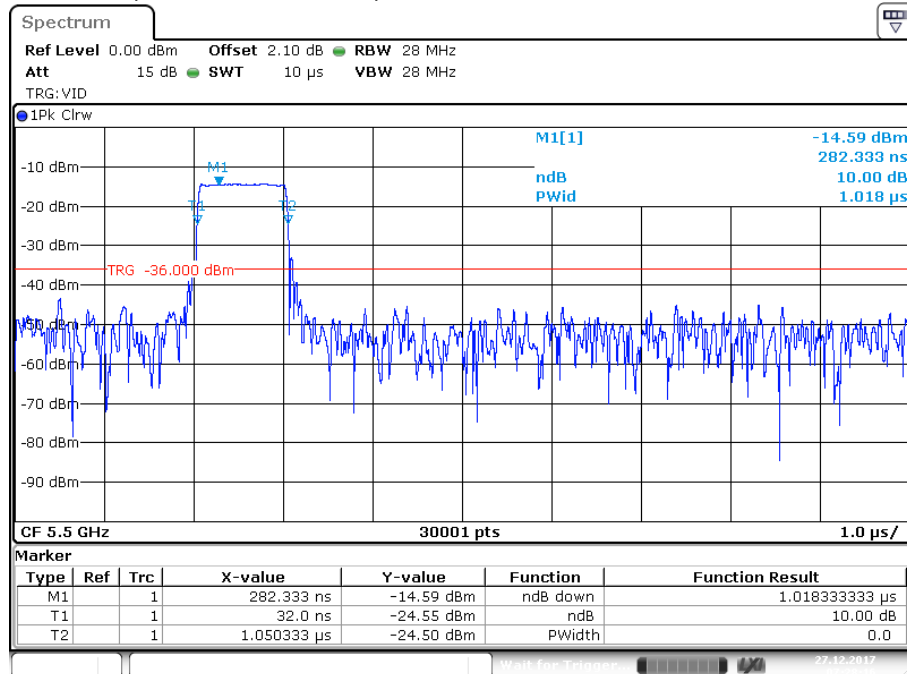


## 3.7 Radar Pulse Sample Plots

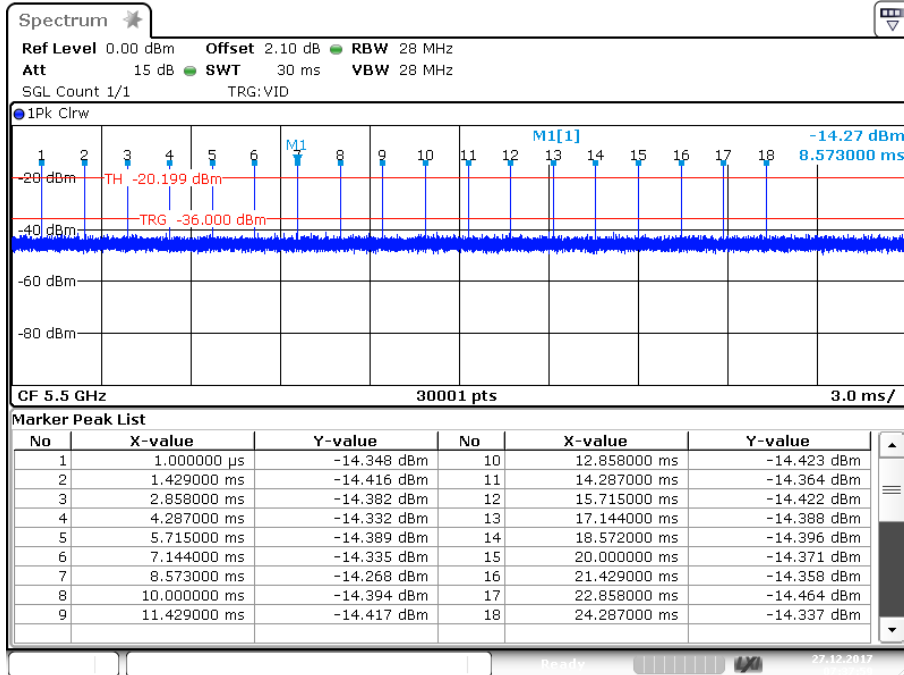
At the master device antenna port



Increase output level to differentiate pulse from noise floor



## Pulse Rate / Number of Pulses



Date: 27.DEC.2017 07:37:59

## 4 Revision History

Revision Level	Description of changes	Revision Date
0	Initial release	05 January 2018
	-	