FCC / Certification Test Report

EverPro Technologies Company Ltd.

Hdmi2.0 Active Optical Cable

Model：F-H2M-NLYZZ

FCC ID: 2ACI5FH2P

REPORT# 17WB0719265F Rev. 0

July 19, 2017

Prepared for:

EverPro Technologies Company Ltd.
4# Guanshan Er Road, Wuhan 430073 P,R, China

Prepared by:

WASHINGTON TECHNOLOGY INTERNATIONAL LIMITED

This report applies only to the sample evaluated prior to the preparation date stated above.
This report must be copied in its entirety, including all technical documents.

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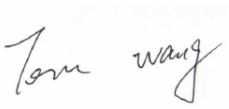

Tom Wang

Reviewed by:

Steven yang

Abstract

This report has been prepared on behalf of EverPro Technologies Company Ltd. to document compliance with the limits for a Class B digital device required under Part 15 (7/2017) of the FCC Rules and Regulations This Federal Communication Commission (FCC) Test Report documents the test configuration and test results for the EverPro Technologies Company Ltd. HDMI2.0 ACTIVE OPTICAL CABLE. Testing was performed on Audix Technology (Shenzhen) Co., Ltd. has been accepted by the FCC, the FCC Registration Number is 90454.

The EverPro Technologies Company Ltd. HDMI2.0 ACTIVE OPTICAL CABLE complies with the FCC Part 15 requirements for a Class B device.

Revision History	Reason	Date
Rev. 0	Initial Release	19 July 2017

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1 Introduction

1.1 Compliance Statement

After the modifications listed in Section 2.7 were installed:

The EverPro Technologies Company Ltd. Hdmi2.0 Active Optical Cable complied with the requirements for a Class B digital device under Part 15 (2014) of the FCC Rules and Regulations

1.2 Test Scope Summary

Tests for radiated and conducted emissions were performed. All measurements were performed according to the 2014 version of ANSI C63.4. The measurement equipment conforms to ANSI C63.4 Specifications for Electromagnetic Noise and Field Strength Instrumentation.

Test Specification	Specific Description	Date Completed	Result	Test location	Modifications (Y/N)
CFR 47 Part 15.107	Class B Conducted Emissions at the Mains Port	Jan.05,2017	Complied	Audix Technology (Shenzhen) Co., Ltd.	No
CFR 47 Part 15.109	Class B Radiated Emissions	Jul.09~11,2017	Complied	Audix Technology (Shenzhen) Co., Ltd.	No

1.3 Contract Information

Customer: EverPro Technologies Company Ltd.
4# Guanshan Er Road, Wuhan 430073 P,R, China

1.4 Test and Support Personnel

Mario Wu Audix Technology (Shenzhen) Co., Ltd.
No. 6, Kefeng Road, Science & Technology Park,
Nanshan District, Shenzhen, Guangdong, China

Abbreviations

A	**A**mpere
ac	**a**lternating **c**urrent
AM	Amplitude Modulation
Amps	**Amp**ere**s**
b/s	**b**its per **s**econd
BW	**B**and**W**idth
CE	**C**onducted **E**mission
cm	**c**enti**m**eter
CW	**C**ontinuous **W**ave
dB	**d**eci**B**el
dc	**d**irect **c**urrent
EMI	**E**lectro**m**agnetic **I**nterference
EUT	**E**quipment **U**nder **T**est
FM	**F**requency **M**odulation
G	**g**iga - prefix for 10^9 multiplier
Hz	**H**ertz
IF	**I**ntermediate **F**requency
k	**k**ilo - prefix for 10^3 multiplier
LISN	**L**ine **I**mpedance **S**tabilization **N**etwork
M	**M**ega - prefix for 10^6 multiplier
m	**m**eter
µ	**m**icro - prefix for 10^{-6} multiplier
NB	**N**arrow**b**and
QP	**Q**uasi-**P**eak
RE	**R**adiated **E**missions
RF	**R**adio **F**requency
rms	**r**oot-**m**ean-**s**quare
SN	**S**erial **N**umber
S/A	**S**pectrum **A**nalyzer
V	**V**olt

2 Equipment Under Test

2.1 EUT Identification

The results obtained relate only to the item(s) tested.

Table 1: Overview of Hdmi2.0 Active Optical Cable, Equipment Under Test

Model(s) Tested:	F-H2M-NLG50
EUT Specifications:	DC 5V powered by the PC
	Equipment Emissions Class: CLASS B
Test Date(s):	Jan.05~Jul.11,2017

2.2 EUT Description

Product Name: Hdmi2.0 Active Optical Cable

Model No.: F-H2M-NLYZZ

EUT Rated Voltage: DC 5V powered by the PC

MODEL DESCRIPTION AND DIFFERENCE

The model of F-H2M series HDMI Active Optical Cable, contain several models. F-H2M-NLB50 is the highest level version which is the full functions and maximum power consumption model among the F-H2M series

Model Name/Number(s): F-H2M-NLYZZ

We EverPro Technologies Company Ltd hereby declare that the layout of PCB in the F-H2M is the same, the only difference among the F-H2M series is length, cable color and frame ware.

We'll be responsible for any consequences caused by other differences in the F-H2M series.

The detail of model name to see below information:

F	H2	M	NL	Y	ZZ

- F: Abbreviation of brand name
- H2: HDMI2.0
- M: Metal Housing
- NL: without status indicator light
- Y: Color
  B-Black
  S-Sliver
  R-Red
  G-Golden
- ZZ: length
  1.5 meters to 100 meters

Joe Zhang
2017/8/4

2.3 Test Configuration

The EverPro Technologies Company Ltd. Hdmi2.0 Active Optical Cable, Equipment Under Test (EUT), was operated with DC 5V powered by the PC.

The Hdmi2.0 Active Optical Cable was configured as below:

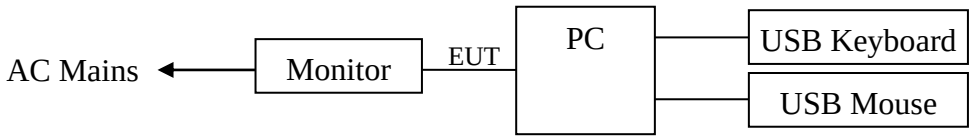


Figure 1: Test Configuration

2.4 Equipment Configuration

The EUT was set up as outlined in Figure 1. The EUT was comprised of the following equipment. (All Modules, PCBs, etc. listed were considered as part of the EUT, as tested.)

Table 2: Equipment Configuration

Slot #	Name / Description	Model Number	Part Number	Serial Number	Revision
1.	Hdmi2.0 Active Optical Cable	F-H2M-NLG50	/	/	/

2.5 Tested Supporting System Details

Table 3: Tested Supporting System Details

Slot #	Port Identification	Connector Type	Cable Length	Shielded (Y/N)	Termination Point
1	Power Cable	Unshielded; Detachable	1.5m	N	AE

2.6 Support Equipment

The following support equipment was used during testing:

	Description	ACS No.	Manufacturer	Model	Serial Number
1.	Personal Computer	Test PC X	DELL	Veriton T630	DTVMKCN00560900F639600
		Power Cord: Unshielded, Detachable, 1.8m Display Card: 5970994561(DVI + VGA + HDMI)			
2.	USB Mouse	ACS-EMC-M01R	DELL	M0C5UO	512022645
		USB Cable: Shielded, Undetectable, 1.5m			
3.	USB Keyboard	ACS-EMC-K01R	DELL	SK-8115	CN-0DJ313-71616-711-0J73
		USB Cable: Shielded, Undetachable, 2.0m			
4.	Monitor	---	Lenovo	L43M5-AZ	---
		Power Cord: Unshielded, Detachable, 1.8m			

2.7 EUT Modifications

None

2.8 Testing Algorithm

The Hdmi2.0 Active Optical Cable was operated continuously by normal operating conditions.

2.9 Test Location

NAME: Audix Technology (Shenzhen) Co., Ltd. by CNAS. The CNAS Registration No.: L4117.

the FCC Registration Number is 90454

Address: No. 6, Kefeng Road, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China

China National Accreditation Service for Conformity Assessment

LABORATORY ACCREDITATION CERTIFICATE

(Registration No. CNAS L4117)

Audix Technology(Shenzhen) Co., Ltd.

No.6, Kefeng Road, Science & Technology Park,

Nanshan District, Shenzhen, Guangdong, China

is accredited in accordance with ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories(CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence to undertake testing service as described in the schedule attached to this certificate.

The scope of accreditation is detailed in the attached schedule bearing the same registration number as above. The schedule form an integral part of this certificate.

Date of Issue：2016-01-11

Date of Expiry：2019-02-03

Date of Initial Accreditation：2009-07-16

Signed on behalf of China National Accreditation Service for Conformity Assessment

China National Accreditation Service for Conformity Assessment(CNAS) is authorized by Certification and Accreditation Administration of the People's Republic of China (CNCA) to operate the national accreditation schemes for conformity assessment. CNAS is a signatory of the International Laboratory Accreditation Cooperation Mutual Recognition Arrangement (ILAC MRA) and the Asia Pacific Laboratory Accreditation Cooperation Mutual Recognition Arrangement (APLAC MRA).
The validity of the certificate can be checked on CNAS website at http://www.cnas.org.cn/english/findanaccreditedbody/index.shtml

2.10 Measurements

2.11 Measurement Method

All measurements herein were performed according to the 2014 version of ANSI C63.4. The measurement equipment conforms to ANSI C63.4 Specifications for Electromagnetic Noise and Field Strength Instrumentation. Calibration checks are made periodically to verify proper performance of the measuring instrumentation.

2.12 Measurement Uncertainty

All results reported herein relate only to the equipment tested. The basis for uncertainty calculation uses ANSI/NCSL Z540-2-1997 with a type B evaluation of the standard uncertainty. Elements contributing to the standard uncertainty are combined using the method described in Equation 1 to arrive at the total standard uncertainty. The standard uncertainty is multiplied by the coverage factor to determine the expanded uncertainty which is generally accepted for use in commercial, industrial, and regulatory applications and when health and safety are concerned (see Equation 2). A coverage factor was selected to yield a 95% confidence in the uncertainty estimation.

Equation 1: Standard Uncertainty

$$u_c = \pm\sqrt{\frac{a^2}{div_a{}^2} + \frac{b^2}{div_b{}^2} + \frac{c^2}{div_c{}^2} + ...}$$

where u_c = standard uncertainty

a, b, c,.. = individual uncertainty elements

$div_{a,\ b,\ c}$ = the individual uncertainty element divisor based on the probability distribution

divisor = 1.732 for rectangular distribution

divisor = 2 for normal distribution

divisor = 1.414 for trapezoid distribution

Equation 2: Expanded Uncertainty

$$U = ku_c$$

where U = expanded uncertainty

k = coverage factor

$k \leq 2$ for 95% coverage (ANSI/NCSL Z540-2 Annex G)

u_c = standard uncertainty

The measurement uncertainty complies with the maximum allowed uncertainty from CISPR 16-4-2. Measurement uncertainty is not used to adjust the measurements to determine compliance. The expanded uncertainty values for the various scopes in the WLL accreditation are provided in Table 4 below.

Table 4: Expanded Uncertainty List

Scope	Standard(s)	Expanded Uncertainty
Conducted Emissions	FCC Part 15	3.6 dB
Radiated Emissions (30MHz-1GHz)	FCC Part 15	2.8 dB
		2.8 dB
		3.0 dB
		3.0 dB
Radiated Emissions (1GHz-25GHz)	FCC Part 15	5.8 dB
		5.8 dB

3 Test Results

3.1 Conducted Emissions

3.1.1 Requirements

Test Arrangement: Table Top

Compliance Standard: FCC Part 15, Class B

Compliance Limits		
Frequency	**Quasi-Peak Level dB(μV)**	**Average Level dB(μV)**
150kHz~500kHz 500kHz~5MHz 5MHz~30MHz	66 ~ 56 56 60	56 ~ 46 46 50

3.1.2 Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	1# Shielding Room	AUDIX	N/A	N/A	Apr.17,16	1 Year
2.	Test Receiver	Rohde & Schwarz	ESCI	100842	Apr.24,16	1 Year
3.	L.I.S.N.#1	Rohde & Schwarz	ESH2-Z5	100429	Oct.15,16	1 Year
4.	L.I.S.N.#2	Kyoritsu	K NW-403D	8-1750-2	Apr.24,16	1 Year
5.	Terminator	Hubersuhner	50Ω	No.1	May.05,16	1 Year
6.	Terminator	Hubersuhner	50Ω	No.2	May.05,16	1 Year
7.	RF Cable	MIYAZAKI	3D-2W	No.1	Apr.24,16	1Year
8.	Coaxial Switch	Anritsu	MP59B	6200766906	Apr.23,16	1 Year
9.	Test Software	AUDIX	e3	6.100913a	N/A	N/A
Note: N/A means Not applicable.						

3.1.3 Test Procedure

The EUT was placed on a non-metallic table, 80cm above the ground plane. The EUT Power connected to the power mains through a line impedance stabilization network (L.I.S.N. #1). This provided a 50-ohm coupling impedance for the EUT (Please refer to the block diagram of the test setup and photographs). The other peripheral devices power cord connected to the power mains through a line impedance stabilization network (L.I.S.N.#2).Both sides of power line were checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipments and all of the interface cables were changed according to ANSI C63.4: 2014 on conducted Emission test.

The bandwidth of the R&S Test Receiver ESCI was set at 9kHz.

The frequency range from 150kHz to 30MHz is checked.

3.1.4 Radiated Data Reduction and Reporting

To convert the raw spectrum analyzer radiated data into a form that can be compared with the FCC limits, it is necessary to account for various calibration factors that are supplied with the antennas and other measurement accessories. These factors are included into the antenna factor (AF) column of the table and in the cable factor (CF) column of the table. The AF (in dB/m) and the CF (in dB) is algebraically added to the raw Spectrum Analyzer Voltage in dBµV to obtain the Radiated Electric Field in dBµV/m. This logarithm amplitude is converted to a linear amplitude, then compared to the FCC limit. Example:

Spectrum Analyzer Voltage: VdBµV

Antenna Correction Factor: dB/m

Electric Field: EdBµV/m = V dBµV + AFdB/m + CFdB - *GdB*

To convert to linear units of measure: EdBV/m/20 Inv log

3.1.5 Test Data

The EUT Hdmi2.0 Active Optical Cable complied with the Class B Radiated Emissions requirements.

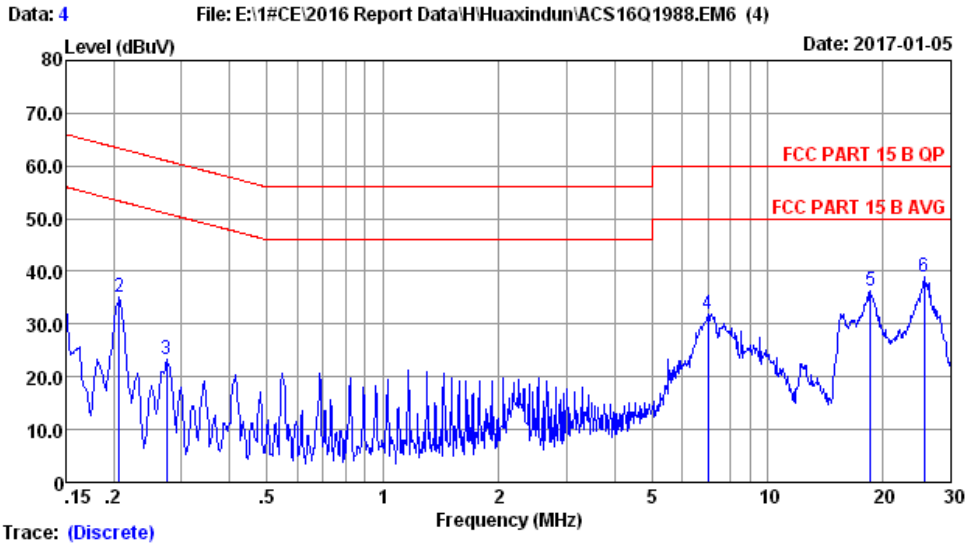
Table 5 provides the test results for radiated conducted emissions.

Photograph 1 and Photograph 2 show the radiated emission test configuration.

3.1.6 Areas of Concern

None.

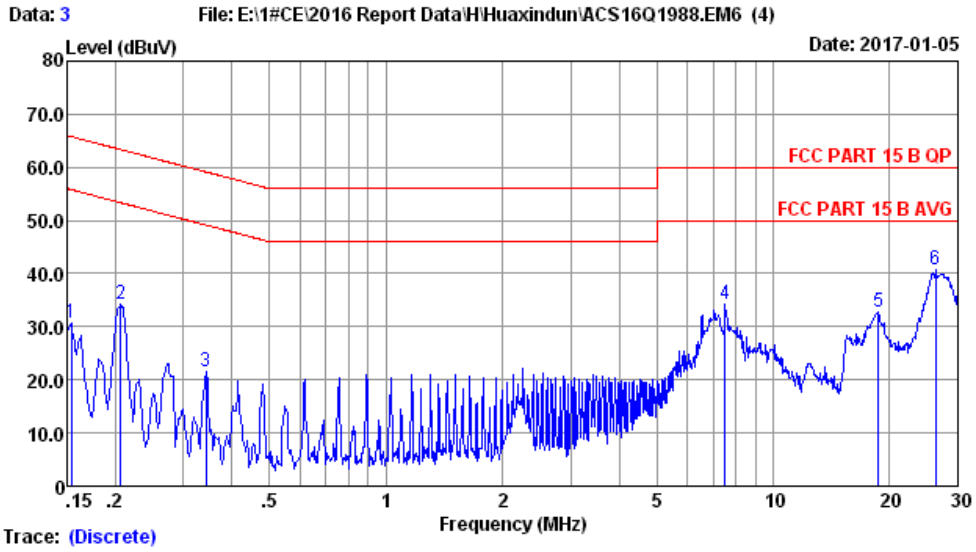
Table 5: Conducted Emissions Test Data



Site no :1# Conduction Data No :4
Dis./Lisn :2016 ESH2-Z5 NEUTRAL
Limit :FCC PART 15 B QP
Env./Ins. :21.6*C/52% Engineer :Evan
EUT :HDMI Cable M/N:EPH2C03
Power Rating :AC 120V/60Hz
Test Mode :Running "H" Pattern

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.150	0.13	0.02	32.95	33.10	66.00	32.90	QP
2	0.206	0.13	0.02	35.01	35.16	63.36	28.20	QP
3	0.274	0.13	0.02	23.04	23.19	60.98	37.79	QP
4	6.988	0.32	0.11	31.45	31.88	60.00	28.12	QP
5	18.524	0.75	0.19	35.37	36.31	60.00	23.69	QP
6	25.591	1.04	0.22	37.63	38.89	60.00	21.11	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.
2.If the average limit is met when using a quasi-peak detector.
the EUT shall be deemed to meet both limits and measurement
with average detector is unnecessary.



Site no :1# Conduction
Dis./Lisn :2016 ESH2-Z5 LINE
Limit :FCC PART 15 B QP
Env./Ins. :21.6*C/52%
EUT :HDMI Cable M/N:EPH2C03
Power Rating :AC 120V/60Hz
Test Mode :Running "H" Pattern

Data No :3
Engineer :Evan

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.154	0.13	0.02	30.51	30.66	65.78	35.12	QP
2	0.206	0.13	0.02	34.21	34.36	63.36	29.00	QP
3	0.343	0.13	0.02	21.42	21.57	59.13	37.56	QP
4	7.526	0.32	0.12	33.76	34.20	60.00	25.80	QP
5	18.721	0.74	0.19	31.96	32.89	60.00	27.11	QP
6	26.278	1.01	0.23	39.53	40.77	60.00	19.23	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.
2.If the average limit is met when using a quasi-peak detector.
the EUT shall be deemed to meet both limits and measurement
with average detector is unnecessary.

Photograph 1: Conducted Emissions Front

Photograph 2: Conducted Emissions Back

3.2 Radiated Emissions

3.2.1 Requirements

Test Arrangement: Table Top

Compliance Standard: FCC Part 15 (2014), Class B (3 meter)

FCC Compliance Limits	
Frequency	**Limits**
30-88 MHz	40dBuV
88-216 MHz	43.5dBuV
216-960 MHz	46dBuV
960-1000 MHz	54 dBuV
>1000MHz (3 meters) Peak	74dBuV
>1000MHz (3 meters)AV	54dBuV

3.2.2 Test Equipment

For frequency range 30MHz~1000MHz (In 3m Anechoic Chamber)

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	3#Chamber	AUDIX	N/A	N/A	Mar.28,17	1 Year
2.	Spectrum Analyzer	Agilent	E7405A	MY45116588	Oct.15,16	1 Year
3.	EMI Test Receiver	Rohde & Schwarz	ESR7	101547	Apr.22,17	1 Year
4.	Amplifier	HP	8447D	2648A04738	Apr.22,17	1 Year
5.	Bi-log Antenna	TESEQ	CBL6112D	35375	Aug.03,16	1 Year
6.	RF Cable	MIYAZAKI	CFD400NL-LW	No.3	Sep.26.16	1 Year
7.	Coaxial Switch	Anritsu	MP59B	6201397222	Apr.22,17	1 Year
8.	Attenuator	EMCI	EMCI-N-6-06	AT-N0639	Sep.26.16	1 Year
9.	Test Software	AUDIX	e3	6.2009-5-21a(n)	N/A	N/A
Note: N/A means Not applicable.						

For frequency range above 1GHz (In 3m Anechoic Chamber)

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	3#Chamber	AUDIX	N/A	N/A	May.17,17	1 Year
2.	Spectrum Analyzer	Agilent	E7405A	MY45116588	Oct.15,16	1 Year
3.	Horn Antenna	ETS	3115	9510-4580	Nov.16,16	1 Year
4.	Amplifier	Agilent	83017A	MY53270084	May.8,17	1 Year
5.	RF Cable	Hubersuhner	SUCOFLEX106	505239/6	Apr.22,17	1 Year
6.	MPEG2 Measurement Generator	ROHDE&SCHWARZ	DVG	100319	Oct.15,16	1 Year
7.	TV Transmitter	ROHDE&SCHWARZ	SFQ	100521	June.04,17	1 Year
8.	Pattern Generator	Philips	PM5418	LO625020	Apr.22,17	1 Year
9.	Test Software	AUDIX	e3	6.2009-5-21a(n)	N/A	N/A
Note: N/A means Not applicable.						

3.2.3 Test Procedure

The requirements of FCC Part 15 call for the EUT to be placed on an 80 cm high 1 X 1.5 meters non-conductive motorized turntable for radiated testing on a 10-meter open field test site. The emissions from the EUT were measured continuously at every azimuth by rotating the turntable. Bi-conical and log periodic broadband antennas were mounted on an antenna mast to determine the height of maximum emissions. The height of the antenna was varied between 1 and 4 meters. The output of the antenna was connected to the input of the spectrum analyzer and the emissions in the frequency range of 30 MHz to 1 GHz were measured. The peripherals were placed on the table in accordance with ANSI C63.4-2014. Cables were varied in position to produce maximum emissions. Both the horizontal and vertical field components were measured.

The output from the antenna was connected, via a preamplifier, to the input of the spectrum analyzer. The detector function was set to quasi-peak or peak, as appropriate. Above 1GHz average measurement are recorded. The measurement bandwidth of the spectrum analyzer system was set to at least 120 kHz, with all post-detector filtering no less than 10 times the measurement bandwidth. Frequencies above 1GHz were performed using a measurement bandwidth of 1MHz with a video bandwidth setting of 10 Hz for the average measurement.

3.2.4 Radiated Data Reduction and Reporting

To convert the raw spectrum analyzer radiated data into a form that can be compared with the FCC limits, it is necessary to account for various calibration factors that are supplied with the antennas and other measurement accessories. These factors are included into the antenna factor (AF) column of the table and in the cable factor (CF) column of the table. The AF (in dB/m) and the CF (in dB) is algebraically added to the raw Spectrum Analyzer Voltage in dBµV to obtain the Radiated Electric Field in dBµV/m. This logarithm amplitude is converted to a linear amplitude, then compared to the FCC limit. Example:

Spectrum Analyzer Voltage: VdBµV

Antenna Correction Factor: dB/m

Electric Field: EdBµV/m = V dBµV + AFdB/m + CFdB - *GdB*

To convert to linear units of measure: EdBV/m/20 Inv log

3.2.5 Test Data

The EUT Hdmi2.0 Active Optical Cable complied with the Class B Radiated Emissions requirements.

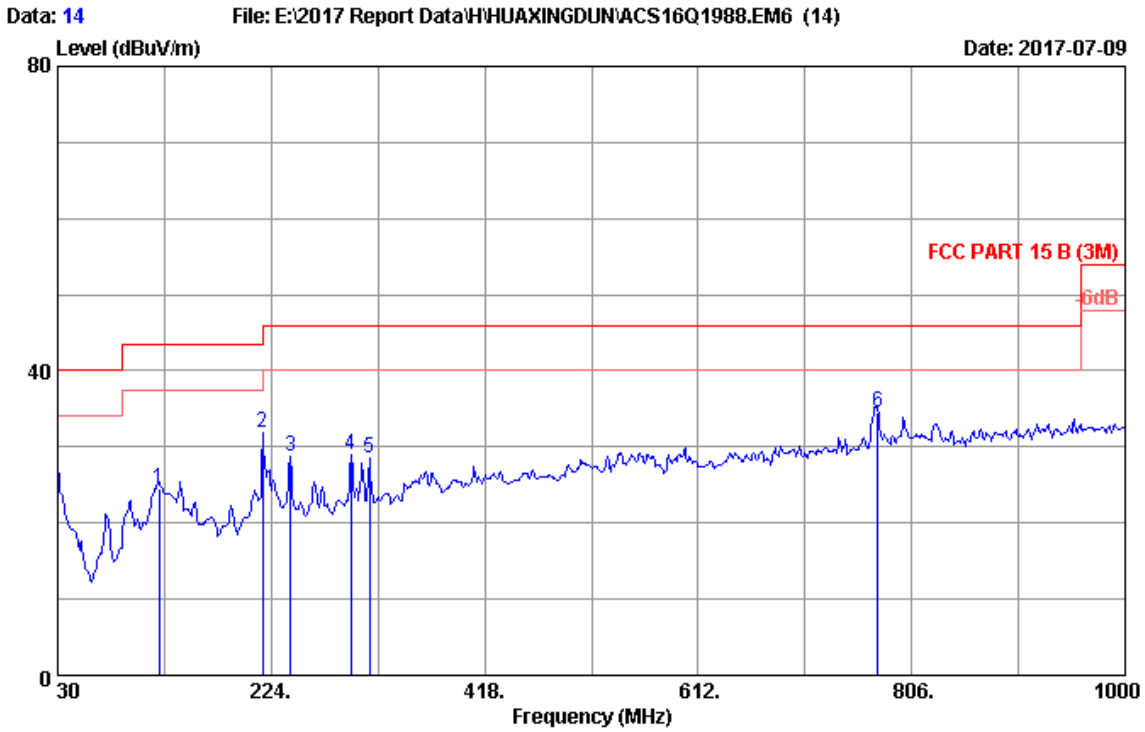
Table 6 provides the test results for radiated conducted emissions.

Photograph 3 -5 shows the radiated emission test configuration.

3.2.6 Areas of Concern

None.

Table 6: Radiated Emission Test Data

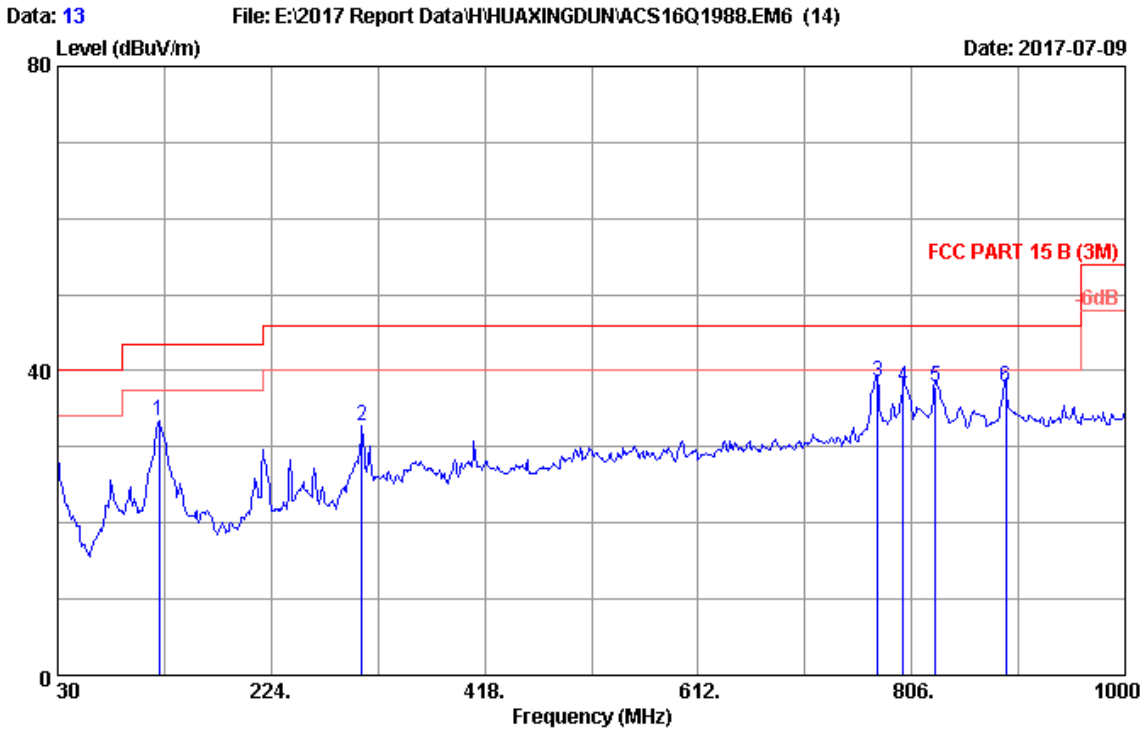


Site no. : 3m Chamber
Dis. / Ant. : 3m 2017 CBL6112D 35375
Limit : FCC PART 15 B (3M)
Env. / Ins. : 21.9*C/52%
EUT : HDMI Cable M/N:EPH2C03
Power rating : AC 120V/60Hz
Test Mode : Running "H" Pattern
:

Data no. : 14
Ant. pol. : HORIZONTAL
Engineer : Frank

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	122.150	13.51	7.01	3.94	24.46	43.50	19.04	QP
2	216.240	10.90	7.07	13.85	31.82	46.00	14.18	QP
3	241.460	12.76	7.31	8.79	28.86	46.00	17.14	QP
4	296.750	14.14	7.84	7.07	29.05	46.00	16.95	QP
5	313.240	14.55	7.93	5.96	28.44	46.00	17.56	QP
6	774.960	20.85	9.75	3.85	34.45	46.00	11.55	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

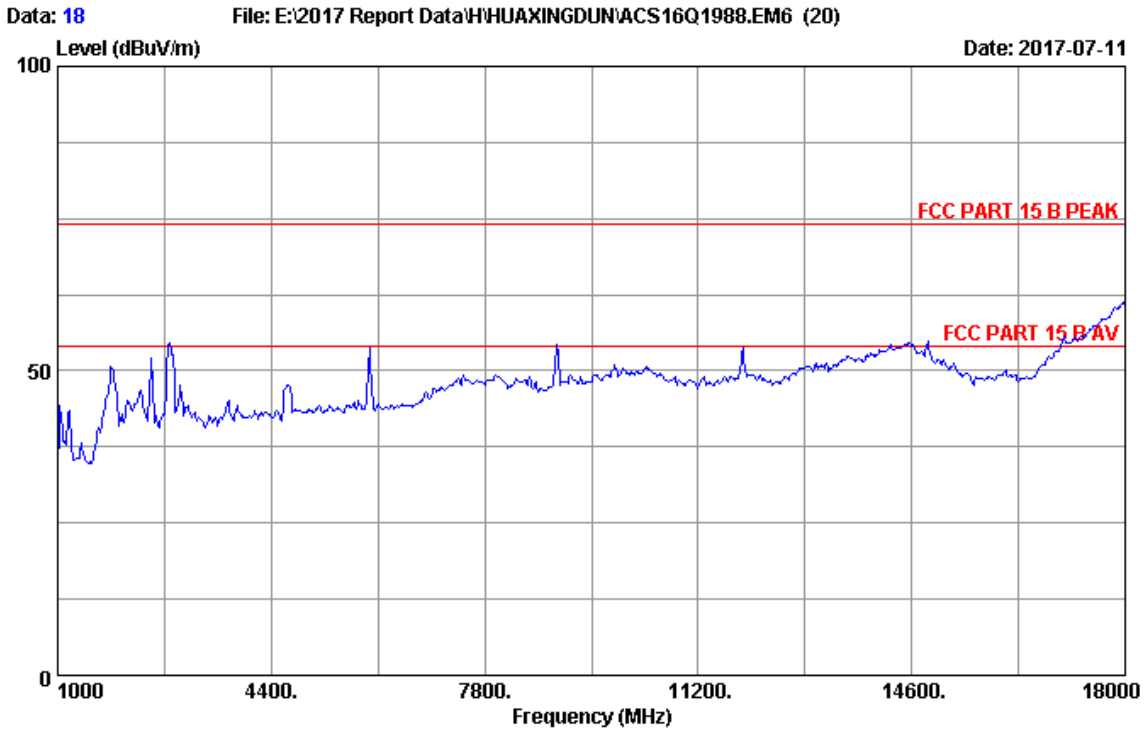


Site no. : 3m Chamber
Dis. / Ant. : 3m 2017 CBL6112D 35375
Limit : FCC PART 15 B (3M)
Env. / Ins. : 21.9*C/52%
EUT : HDMI Cable M/N:EPH2C03
Power rating : AC 120V/60Hz
Test Mode : Running "H" Pattern
:

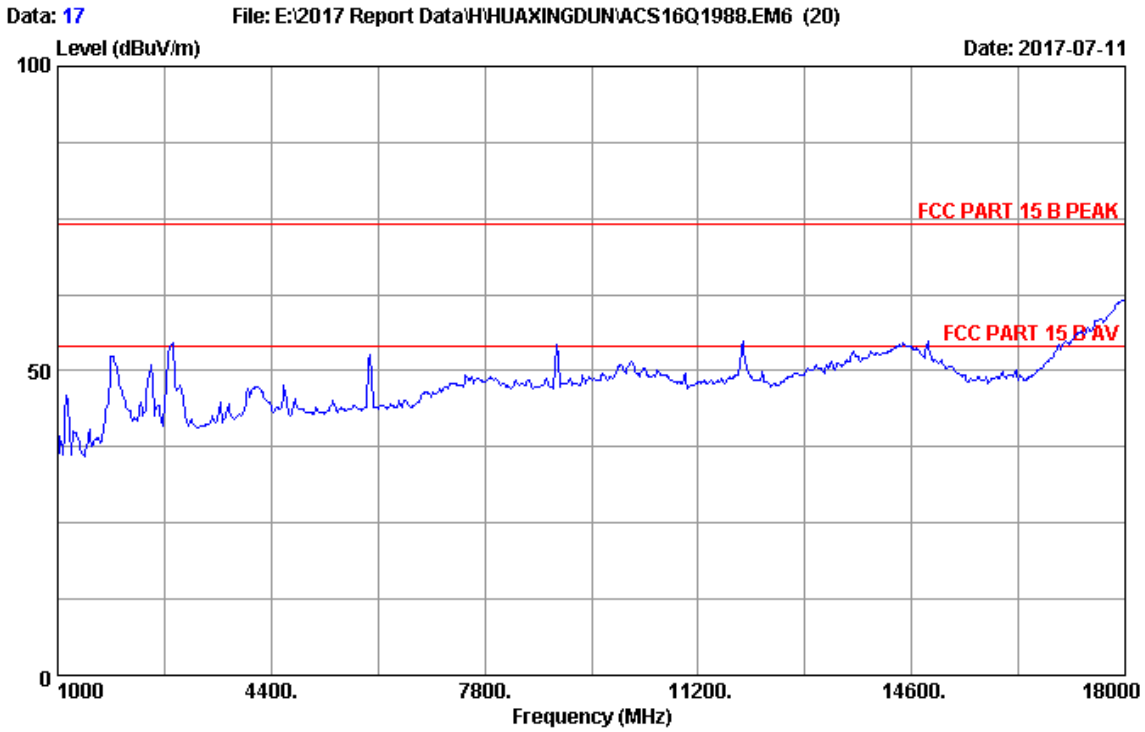
Data no. : 13
Ant. pol. : VERTICAL
Engineer : Frank

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	122.150	13.51	7.01	12.92	33.44	43.50	10.06	QP
2	306.450	14.38	7.90	10.57	32.85	46.00	13.15	QP
3	774.960	20.85	9.75	7.88	38.48	46.00	7.52	QP
4	798.240	21.08	9.86	7.00	37.94	46.00	8.06	QP
5	827.340	21.32	9.96	6.57	37.85	46.00	8.15	QP
6	891.360	21.83	10.18	5.95	37.96	46.00	8.04	QP

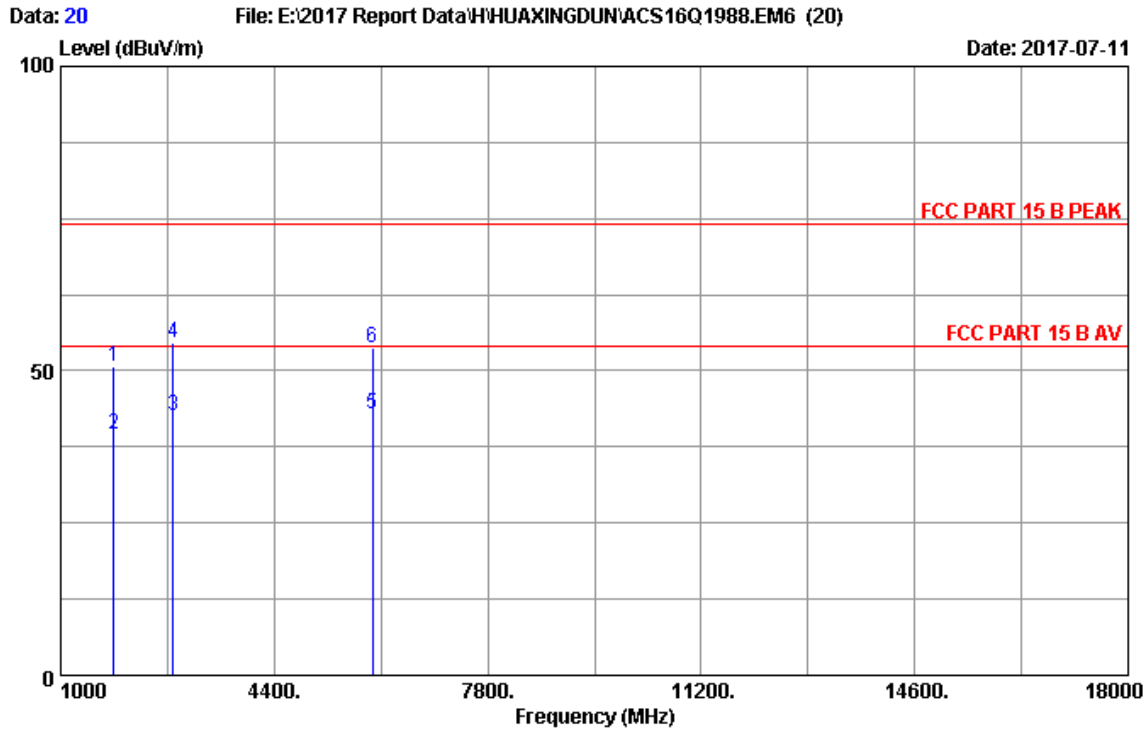
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no.	: 3m Chamber	Data no.	: 18
Dis. / Ant.	: 3m 2016 3115 4580	Ant. pol.	: HORIZONTAL
Limit	: FCC PART 15 B PEAK		
Env. / Ins.	: 22.4*C/49%	Engineer	: Garry
EUT	: HDMI Cable M/N:EPH2C03		
Power rating	: AC 120V/60Hz		
Test Mode	: Running "H" Pattern		




```
Site no.      : 3m Chamber                Data no.   : 17
Dis. / Ant.   : 3m   2016 3115 4580       Ant. pol.  : VERTICAL
Limit         : FCC PART 15 B PEAK
Env. / Ins.   : 22.4*C/49%                Engineer   : Garry
EUT           : HDMI Cable  M/N:EPH2C03
Power rating  : AC 120V/60Hz
Test Mode     : Running "H" Pattern
```

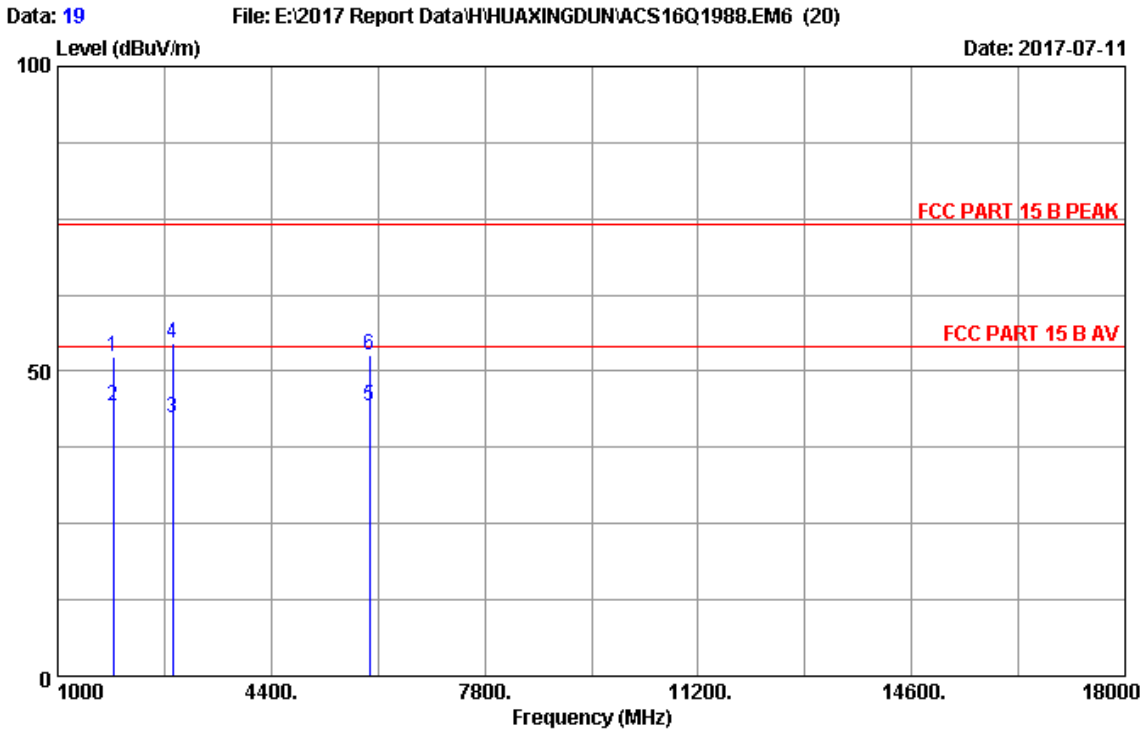



Site no. : 3m Chamber
Dis. / Ant. : 3m 2016 3115 4580
Limit : FCC PART 15 B PEAK
Env. / Ins. : 22.4*C/49%
EUT : HDMI Cable M/N:EPH2C03
Power rating : AC 120V/60Hz
Test Mode : Running "H" Pattern

Data no. : 20
Ant. pol. : HORIZONTAL
Engineer : Garry

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1850.95	27.44	2.34	35.12	56.14	50.80	74.00	23.20	Peak
2	1851.25	27.44	2.34	35.12	44.95	39.61	54.00	14.39	Average
3	2784.20	29.34	2.97	33.90	44.26	42.67	54.00	11.33	Average
4	2785.62	29.34	2.97	33.90	56.10	54.51	74.00	19.49	Peak
5	5963.22	34.38	4.55	33.47	37.37	42.83	54.00	11.17	Average
6	5964.26	34.38	4.55	33.47	48.40	53.86	74.00	20.14	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber
Dis. / Ant. : 3m 2016 3115 4580
Limit : FCC PART 15 B PEAK
Env. / Ins. : 22.4*C/49%
EUT : HDMI Cable M/N:EPH2C03
Power rating : AC 120V/60Hz
Test Mode : Running "H" Pattern

Data no. : 19
Ant. pol. : VERTICAL
Engineer : Garry

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1884.00	27.63	2.37	35.05	57.42	52.37	74.00	21.63	Peak
2	1885.34	27.63	2.37	35.05	49.37	44.32	54.00	9.68	Average
3	2834.02	29.47	2.99	33.84	43.65	42.27	54.00	11.73	Average
4	2836.69	29.48	2.99	33.84	55.88	54.51	74.00	19.49	Peak
5	5963.27	34.38	4.55	33.47	38.94	44.40	54.00	9.60	Average
6	5964.33	34.38	4.55	33.47	47.26	52.72	74.00	21.28	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
2. The emission levels that are 20dB below the official limit are not reported.

Photograph 3: Radiated Emission Test Configuration, (Below 1GHz) Front

Photograph 4: Radiated Emission Test Configuration, (Below 1GHz) Back

Photograph 5: Radiated Emission Test Configuration, (Above 1GHz) Front

4 Labeling Requirements

Each digital device which has been verified as complying with the Class B limits shall have permanently attached in a conspicuous location for the user to observe, a label with the following statement:

This device complies with Part 15 of the FCC Rules.

Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

4.1 Information to User

The following warning or similar statement shall be provided in a conspicuous location in the operator's manual so that the user of a Class B digital device is aware of its interference potential. Additional information about corrective measures may also be provided to the user at the manufacturer's option.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- **Reorient or relocate the receiving antenna**
- **Increase the separation between the equipment and receiver**
- **Connect the equipment into an outlet on a circuit different from that to which the receiver is connected**
- **Consult the dealer or an experienced radio/TV technician for help**

The instruction manual for a Class B digital device that is separately marketed shall also include sufficient information to insure that the complete system is capable of complying with the requirements for a Class B digital device. The manual should also caution the user that changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment. Finally, the manual should instruct the user to use any special accessories, i.e. shielded cables, necessary for compliance with the standards.

In cases where the manual is provided only in a form other than paper, such as on a computer disk or over the Internet, the information required above may be included in the manual in that alternative form, provided that the user can be reasonably expected to have the capability to access information in that form.

5 Attachment (EUT Photograph)

EUT Model: F-H2M-NLG50

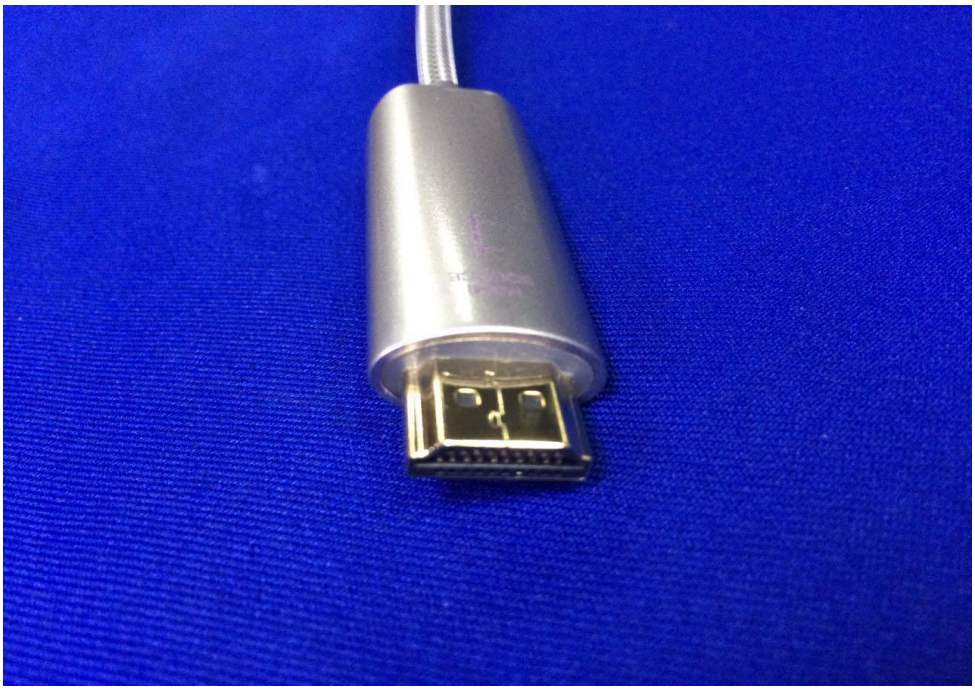
EUT Photo #1– Front View

EUT Photo #2– Back View

EUT Photo #3– Port View

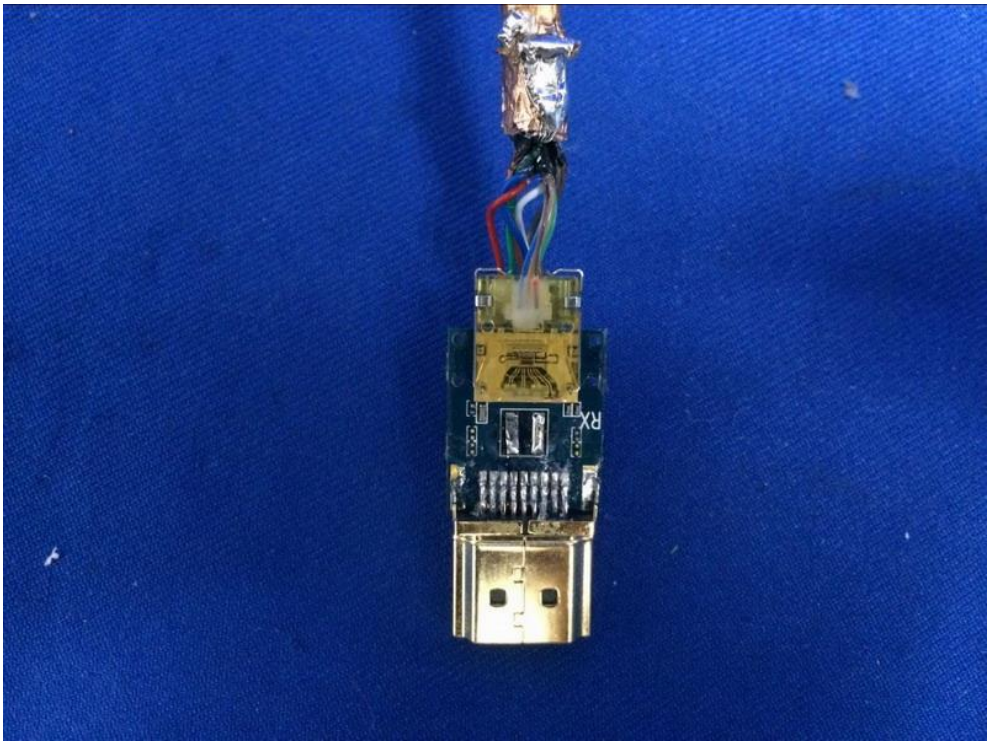
EUT Photo #4– Port View

EUT Photo #5– Port View

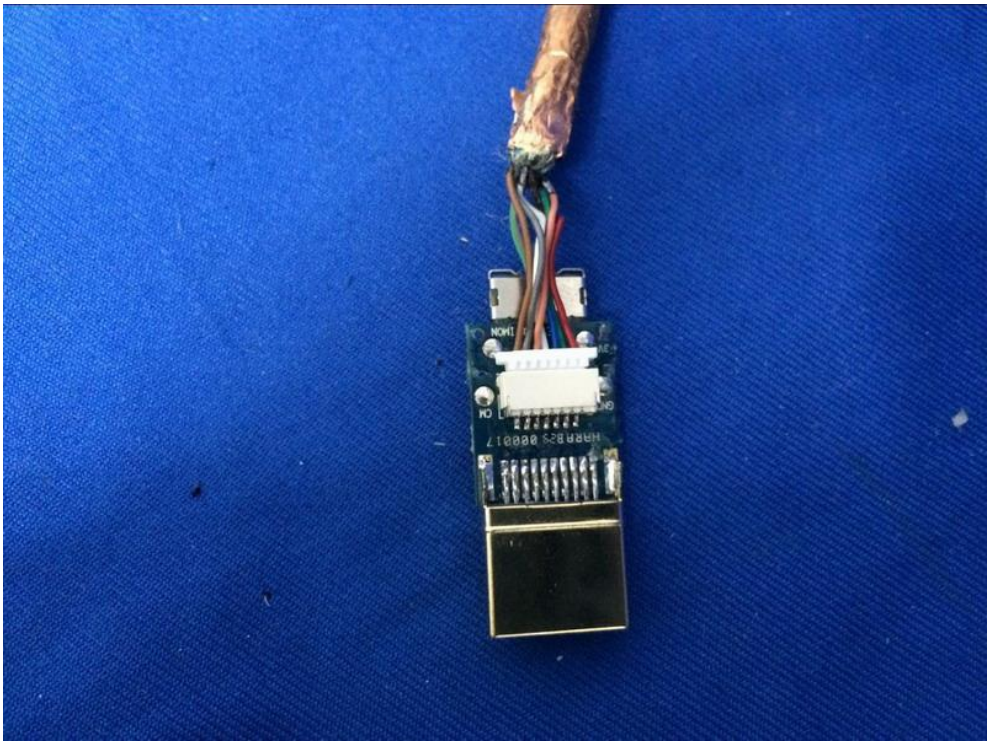


EUT Photo #6– Port View

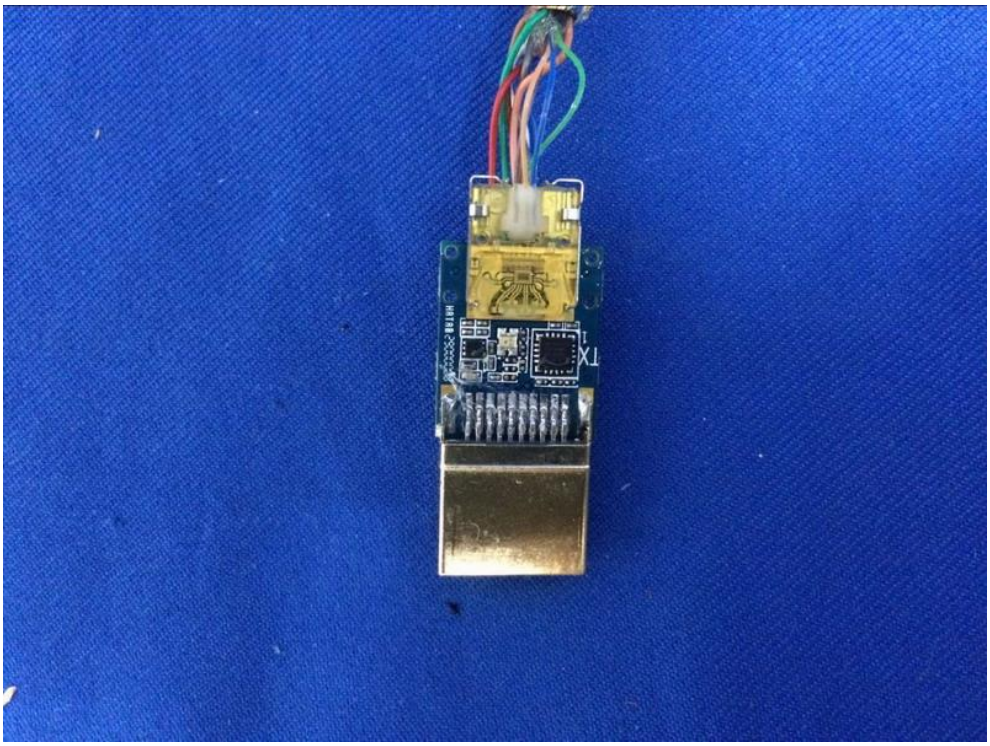
EUT Photo #7– Inside View



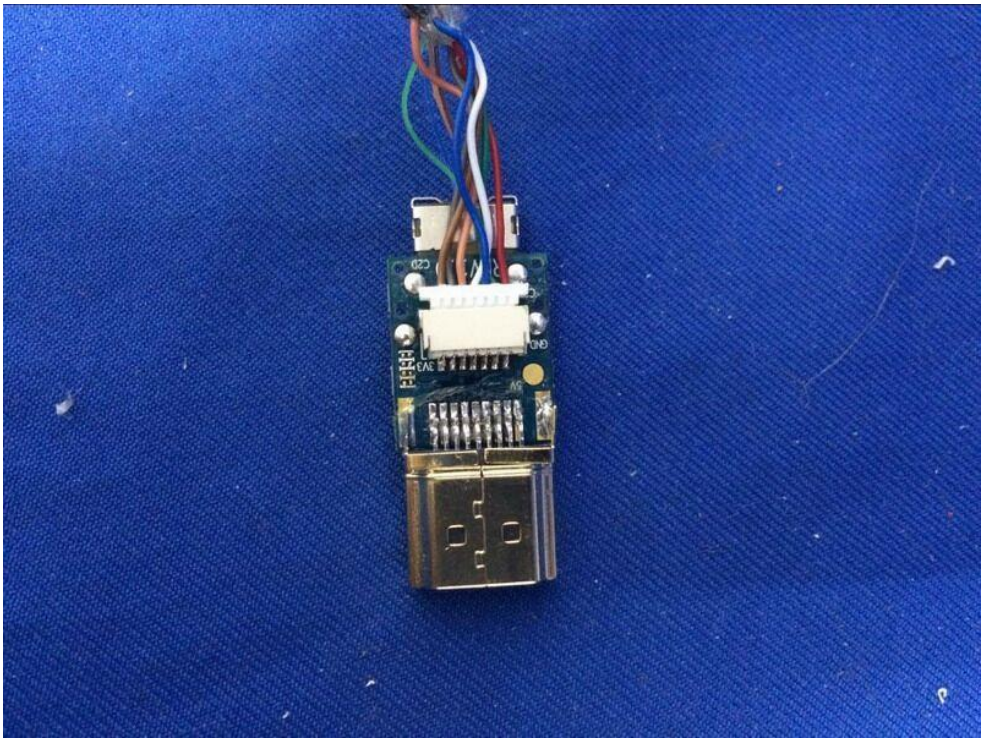
EUT Photo #8– Inside View



EUT Photo #9– Inside View

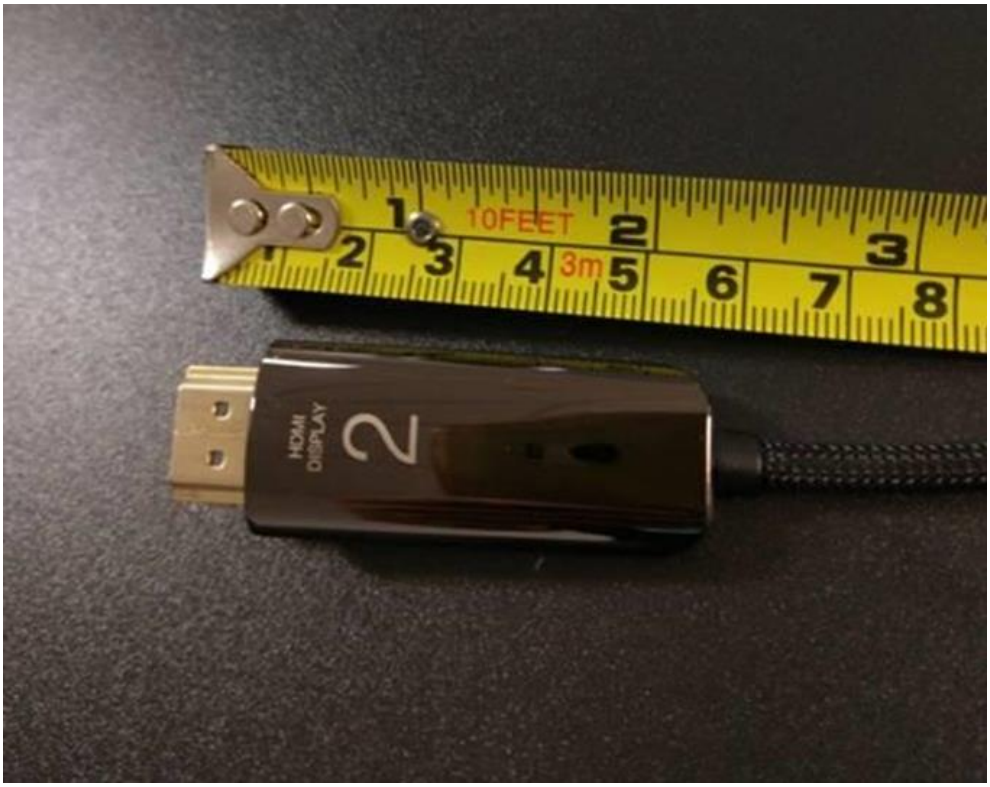


EUT Photo #10– Inside View



EUT Model: F-H2M-NLB50

EUT Photo #11– PART View



----------The End----------

