



FCC TCB & ISCED CB



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46390-2049



AT-1945



SL2-IN-E-1119R



Korea KCC-RRL  
CA2049

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January 11, 2018

**Elprotronic Inc**  
35 Austin Rumble Court  
King City, Ontario  
Canada, L7B 0B2

**Attn.:** Mr. Gregory Czajkowski

**Subject:** Verification Testing under FCC PART 15, SUBPART B, Class A - Unintentional Radiators.

**Product Name:** XStreamPro-Iso  
**Model:** X2S

Dear Mr. Czajkowski,

The product sample, as provided by you, has been tested and found to comply with **FCC PART 15, SUBPART B, Class A - Unintentional Radiators.**

Enclosed you will find a copy of the engineering report. If you have any queries, please do not hesitate to contact us.

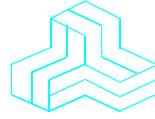
Yours truly,

A handwritten signature in blue ink, appearing to read "Tri Minh Luu".

Tri Minh Luu B.A.Sc.  
V.P., Engineering

Encl

# VERIFICATION CERTIFICATE



**NOT TRANSFERABLE**

This Verification Certificate is hereby issued to the named GRANTEE and is VALID ONLY for the equipment identified hereon for use under the rules and regulations listed below:

**GRANTEE:**

**Elprotronic Inc**  
Address: 35 Austin Rumble Court  
King City, Ontario  
Canada, L7B 0B2

Contact Person: Mr. Gregory Czajkowski  
Phone #: 905-539-0424  
Fax #: 905-539-0474  
Email Address: gregory@elprotronic.com

**Equipment Type:**

**Product Name:**

**Model:**

Unintentional Radiators for Use in Non-Residential Areas  
**XStreamPro-Iso**  
**X2S**

**The above product was tested by UltraTech Engineering Labs Inc. and found to comply with:**  
**Date of Authorization:**

FCC Part 15, Subpart B - Class A Unintentional Radiators for Use in Commercial and Industrial Areas.

January 11, 2018

- **Note(s):** See attached report, UltraTech's File No.: 18ELP015\_FCCA, dated January 11, 2018 for details and conditions of Verification Compliance.

Approved by: Tri M. Luu B.A.Sc.  
V.P. – Engineering

## UltraTech

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KCC-RRA  
CA2049

# ENGINEERING TEST REPORT



## XStreamPro-Iso Model: X2S

*Applicant:* **Elprotronic Inc**  
35 Austin Rumble Court  
King City, Ontario  
Canada, L7B 0B2

**Tested in Accordance With**

**Federal Communications Commission (FCC)  
CFR 47, Part 15, Subpart B  
Class A Unintentional Radiators**

**UltraTech's File No.: 18ELP015\_FCCA**

This Test report is Issued under the Authority of  
Tri M. Luu BAsC.  
Vice President of Engineering  
UltraTech Group of Labs

Date: January 11, 2018

Report Prepared by: Phuong Ho

Tested by: Mr. Hien Luu & Mrs. Phuong Ngo, EMC/EMI Technicians

Date: January 11, 2018

Test Date: December 22, 2017

- *The results in this Test Report apply only to the sample(s) tested, and the sample tested is randomly selected.*
- *This report must not be used by the client to claim product endorsement by any agency of the US Government.*
- *This test report shall not be reproduced, except in full, without a written approval from UltraTech.*

## UltraTech

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## EXHIBIT 1. INTRODUCTION

### 1.1. SCOPE

<b>Reference:</b>	FCC Part 15, Subpart B, Sections 15.107 & 15.109
<b>Title</b>	Telecommunication - Code of Federal Regulations, CFR 47, Part 15
<b>Purpose of Test:</b>	To gain FCC Verification Authorization for a Class A Unintentional Radiator.
<b>Test Procedures</b>	Both conducted and radiated emissions measurements were conducted in accordance with American National Standards Institute ANSI C63.4 - American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz.
<b>Environmental Classification:</b>	Light-industry, Commercial & Industry

### 1.2. REVISION HISTORY

Document	Issue Date	Description
18ELP015_FCCA	Jan. 11, 2018	Original report

### 1.3. RELATED SUBMITTAL(S)/GRANT(S)

None

### 1.4. NORMATIVE REFERENCES

Publication	Year	Title
CISPR 22 EN 55022	2008-09, Edition 6.0 2010	Information Technology Equipment - Radio Disturbance Characteristics - Limits and Methods of Measurement
CISPR 16-1-1 +A1 +A2	2006 2006 2007	Specification for radio disturbance and immunity measuring apparatus and methods. Part 1-1: Measuring Apparatus
CISPR 16-1-2 +A1: 2004 +A2: 2006	2003	Specification for radio disturbance and immunity measuring apparatus and methods. Part 1-2: Conducted disturbances
FCC 47 CFR 15	2016	Code of Federal Regulations – Telecommunication
ANSI C63.4	2014	American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 KHz to 40 GHz

## EXHIBIT 2. PERFORMANCE ASSESSMENT

### 2.1. CLIENT INFORMATION

<b>APPLICANT:</b>	
<b>Name:</b>	Elprotronic Inc
<b>Address:</b>	35 Austin Rumble Crt. King City, ON, L7B0B2, Canada
<b>Contact Person:</b>	Dr. Gregory Czajkowski
<b>Email Address:</b>	gregory@elprotronic.com
<b>Telephone No.:</b>	905-539-0424
<b>Fax No.:</b>	905-539-0474

<b>MANUFACTURER:</b>	
<b>Name:</b>	Elprotronic Inc
<b>Address:</b>	35 Austin Rumble Crt. King City, ON, L7B0B2, Canada
<b>Contact Person:</b>	Dr. Gregory Czajkowski
<b>Email Address:</b>	gregory@elprotronic.com
<b>Telephone No.:</b>	905-539-0424
<b>Fax No.:</b>	905-539-0474

### 2.2. EQUIPMENT UNDER TEST (EUT) INFORMATION

The following information (with the exception of the Date of Receipt) has been supplied by the applicant.

<b>Brand Name:</b>	ELPROTRONIC INC.
<b>Product Name:</b> <i>(Product Marketing Name -PMN)</i>	XStreamPro-Iso
<b>Model Name or Number:</b> <i>(Hardware Version Identification Number-HVIN)</i>	X2S
<b>Serial Number:</b>	20171111
<b>Oscillator Frequencies:</b>	12.0 MHz, 25.0 MHz
<b>CPU Frequencies:</b>	168 MHz, 50MHz
<b>Power input ratings:</b>	DC derived from host – USB (5V) or from PoE (48V)
<b>Equipment Environment / Type:</b>	Unintentional Radiators

### 2.3. LIST OF COMPONENTS / PART OF THE EUT

None

### 2.4. LIST OF EUT'S PORT

Port #	EUT's Port Description	Number of Identical Ports	Port Type (eg. RJ-45, USB etc.)	Connected Cabling Length / Type	Cable Type
1	Ethernet Port	1	RJ-45	Greater than 3m	Non-shielded
2	Ribbon cable	1	14-pins header	-	Non-shielded
3	USB Port	1	USB 2.0 Port B	-	Shielded

### 2.5. ANCILLARY EQUIPMENT

Ancillary Equipment # 1	
Equipment Make and Name:	PC - ACER
Model Name or Number:	ACER ASPIRE 4830T-6605
Serial Number:	SNID: 22706117116
Cable Type:	DC power
Connected to EUT's Port #: (See above table )	USB, Ethernet - USB connected to EUT port 3

Ancillary Equipment # 2	
Equipment Make and Name:	Ethernet Router
Model Name or Number:	DLINK DIR-605L
Serial Number:	R3ET4GA004574
Cable Type:	RJ45- CAT-6
Connected to EUT's Port #: (See above table )	

Ancillary Equipment # 3	
Equipment Make and Name:	ETH 8 Port Switch
Model Name or Number:	TP-Link TL-SF1008P
Serial Number:	2155338002586
Cable Type:	RJ45- CAT-6
Connected to EUT's Port #: (See above table )	Connected to EUT – port 1



## EXHIBIT 3. EUT OPERATING CONDITIONS AND CONFIGURATIONS DURING TESTS

### 3.1. CLIMATE TEST CONDITIONS

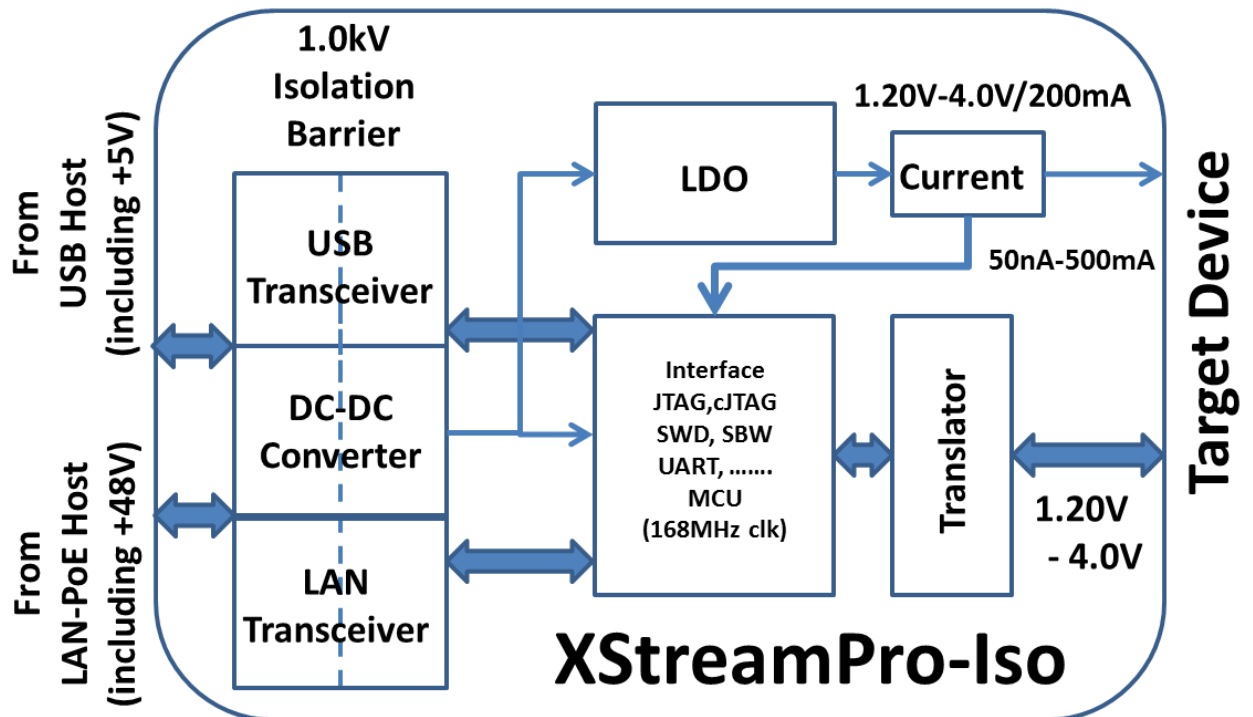
The climate conditions of the test environment are as follows:

Temperature:	23°C
Humidity:	23%
Pressure:	100.5 kPa
Power input source:	48 VDC

### 3.2. OPERATIONAL TEST CONDITIONS & ARRANGEMENT FOR TEST SIGNALS

The EUT can be connected to PC via USB OR via Ethernet. The EUT is powered from the USB port if the USB communication is used, or from PoE port (Ethernet) if LAN communication is used. When two communication are connected (USB and LAN) then the active communication is selected in PC. There no communication via two ports at the same time. When EUT is connected to PC, also should be connected any target device that is supported by the EUT. Only EUT is tested. All other equipment listed above should be isolated, shielded for avoiding EUT test degradation.

### 3.3. BLOCK DIAGRAM OF TEST SETUP

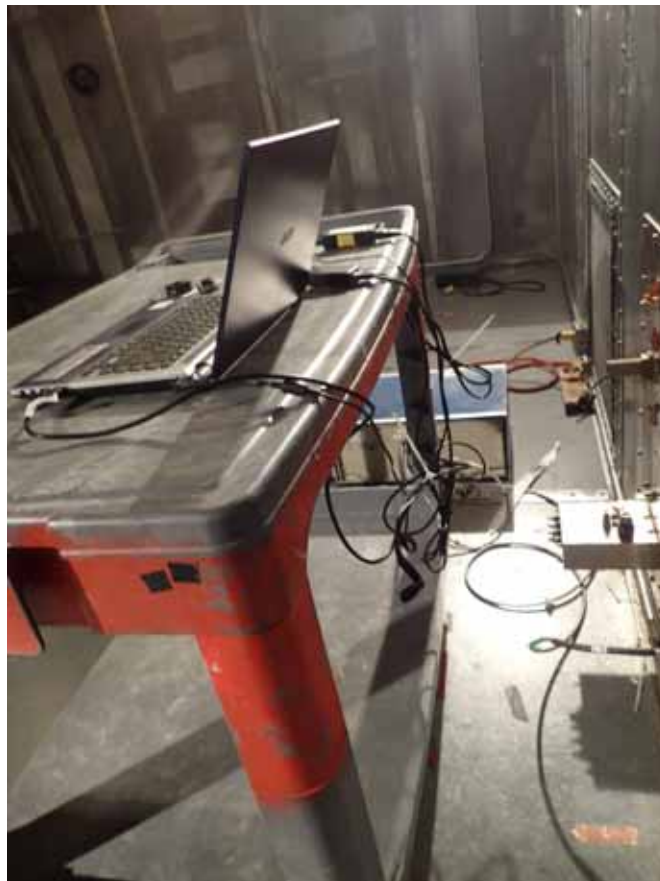


### 3.4. PHOTOGRAPHS OF TEST SETUP FOR CONDUCTED EMISSION MEASUREMENTS

Configuration 1: RJ45

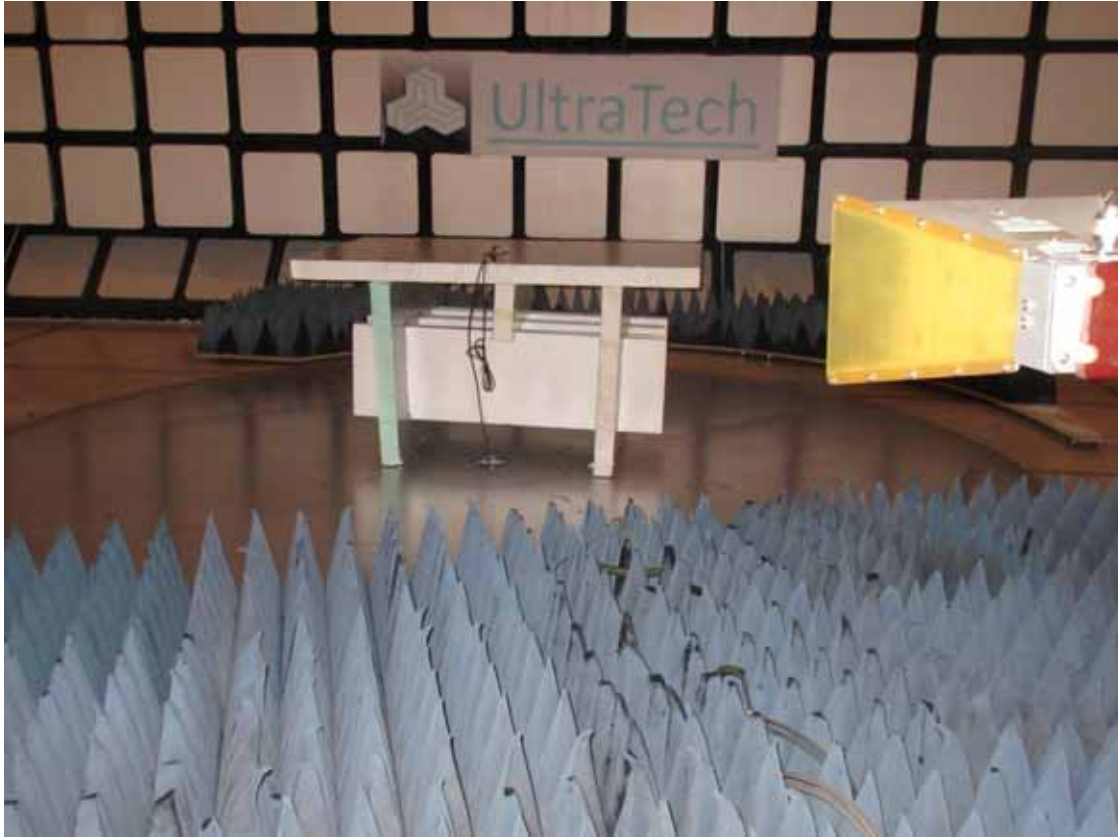


### Configuration 2: USB



### 3.5. PHOTOGRAPHS OF TEST SETUP FOR RADIATED EMISSION MEASUREMENTS





## EXHIBIT 4. SUMMARY OF TEST RESULTS

### 4.1. LOCATION OF TESTS

All of the measurements described in this report were performed at Ultratech Group of Labs located in the city of Oakville, Province of Ontario, Canada.

- Power line Conducted Emissions were performed in UltraTech's shielded room, 16'(L) by 12'(W) by 12'(H).
- Radiated Emissions were performed at the Ultratech's 3-10 TDK Semi-Anechoic Chamber situated in the Town of Oakville, province of Ontario. This test site been calibrated in accordance with ANSI C63.4, and found to be in compliance with the requirements of Sec. 2.948 of the FCC Rules. The descriptions and site measurement data of the Oakville 3-10 TDK Semi-Anechoic Chamber has been filed with ANAB File No.: AT-1945.

### 4.2. APPLICABILITY & SUMMARY OF EMC EMISSION TEST RESULTS

FCC PART 15, SUBPART B	TEST REQUIREMENTS	MARGIN BELOW (-) / ABOVE (+) THE LIMITS	COMPLIANCE (YES/NO)
15.107(b), Class A	Power Line Conducted Emissions Measurements	- 23.7 dB @ 16.227 MHz	Yes
15.109(b), Class A	Radiated Emissions from Computing Devices (Digital Devices)	- 3.3 dB @ 54.87 MHz	Yes

### 4.3. DEVIATION OF THE STANDARD TEST PROCEDURES

None

### 4.4. MODIFICATIONS REQUIRED FOR COMPLIANCE

None

## EXHIBIT 5. MEASUREMENT DATA

### 5.1. POWERLINE CONDUCTED EMISSIONS @ FCC PART 15, SUBPART B, PARA.15.107(B)

#### 5.1.1. Limits

The equipment shall meet the limits of the following table:

Test Frequency Range (MHz)	CLASS A LIMITS		Measuring Bandwidth
	Quasi-Peak (dBµV)	Average* (dBµV)	
0.15 to 0.5	79	66	RBW = 9 kHz VBW ≥ 9 kHz for QP VBW = 10 Hz for Average
0.5 to 30	73	60	RBW = 9 kHz VBW ≥ 9 kHz for QP VBW = 10 Hz for Average

#### 5.1.2. Method of Measurements

Refer to Ultratech Test Procedures ULTR-P001-2004 & ANSI C63.4 for method of measurements.

#### Calculation of Conducted Emission Voltage (dBµV):

This is calculated by adding the L.I.S.N factor, Cable loss factor, and Attenuator factor to the measured reading. The basic equation with a sample calculation is as follows:

$$\text{Voltage (dB}\mu\text{V)} = \text{RA} + \text{AF} + \text{CF} + \text{LF}$$

Where

RA	=	Receiver/Analyzer Reading in dBµV
AF	=	Attenuation Factor in dB
CF	=	Cable loss Factor in dB
LF	=	L.I.S.N Factor in dB

#### 5.1.3. Test Instruments

Refer to Exhibit 6 for Test Instruments & Measurement Uncertainty

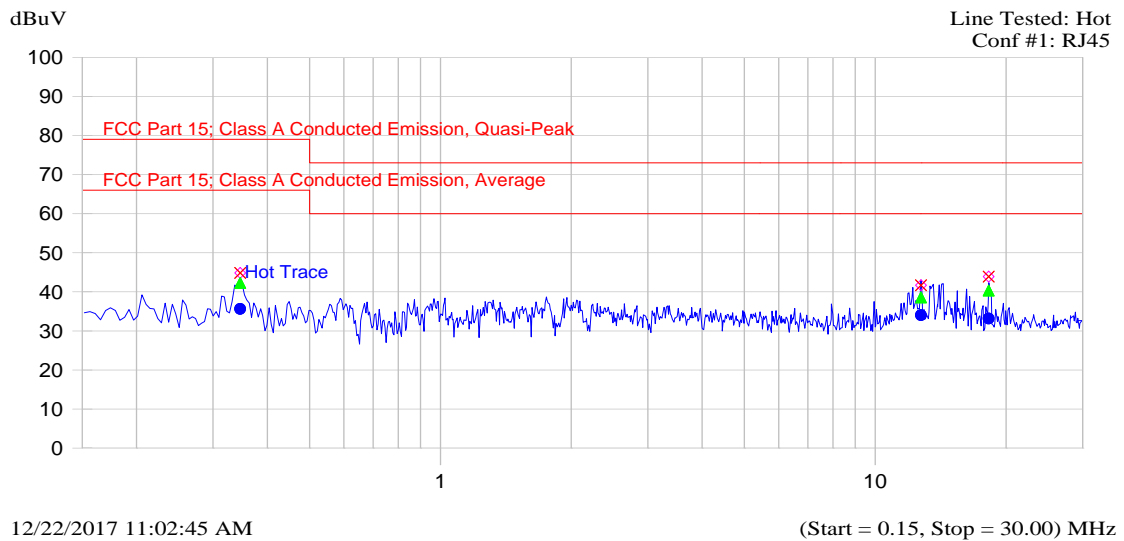


### 5.1.4. Test Results

The emissions were scanned from 150 kHz to 30 MHz at mains Terminal via a LISN, and all emissions less than 20 dB below the limits were recorded.

Description: Line Tested: RJ45  
 Setup Name: FCC 15 Class A  
 Customer Name: Elprotronic Inc.  
 Project Number: ELP-014Q  
 Operator Name: Phuong Luu  
 EUT Name: XStreamPro-Iso  
 Date Created: 12/22/2017 10:49:41 AM  
 Date Modified: 12/22/2017 10:49:41 AM

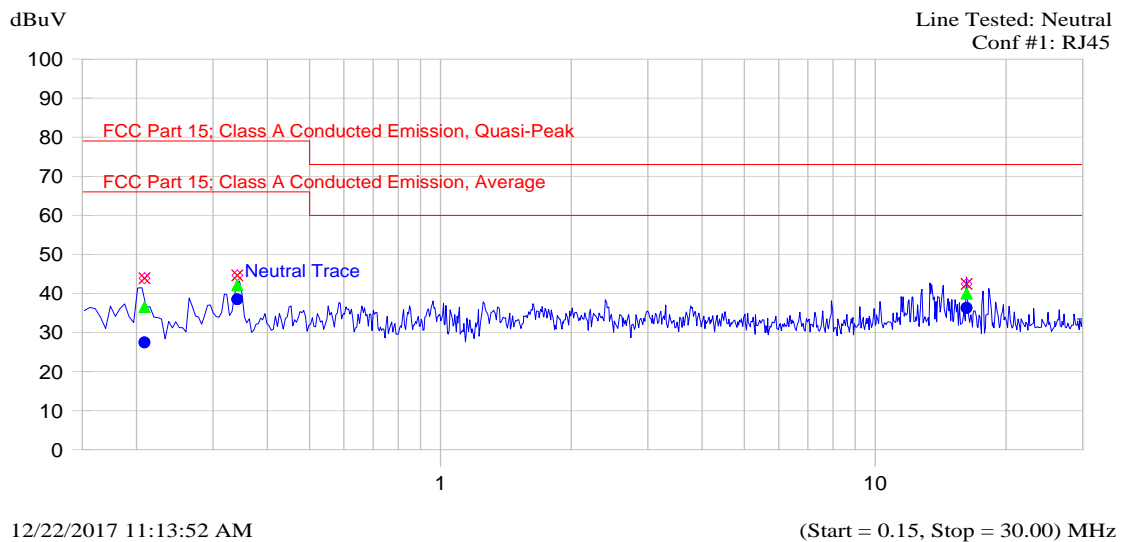
### Plot # 1



Frequency MHz	Peak dBuV	QP dBuV	QP-QP Limit dB	Avg dBuV	Avg-Avg Limit dB	Trace Name
0.346	44.8	42.3	-36.7	35.6	-30.4	Hot Trace
12.749	41.7	38.6	-34.4	34.0	-26.0	Hot Trace
18.243	43.9	40.3	-32.7	33.2	-26.8	Hot Trace

Description: Line Tested: RJ45  
 Setup Name: FCC 15 Class A  
 Customer Name: Elprotronic Inc.  
 Project Number: ELP-014Q  
 Operator Name: Phuong Luu  
 EUT Name: XStreamPro-Iso  
 Date Created: 12/22/2017 10:49:41 AM  
 Date Modified: 12/22/2017 11:09:52 AM

**Plot # 2**

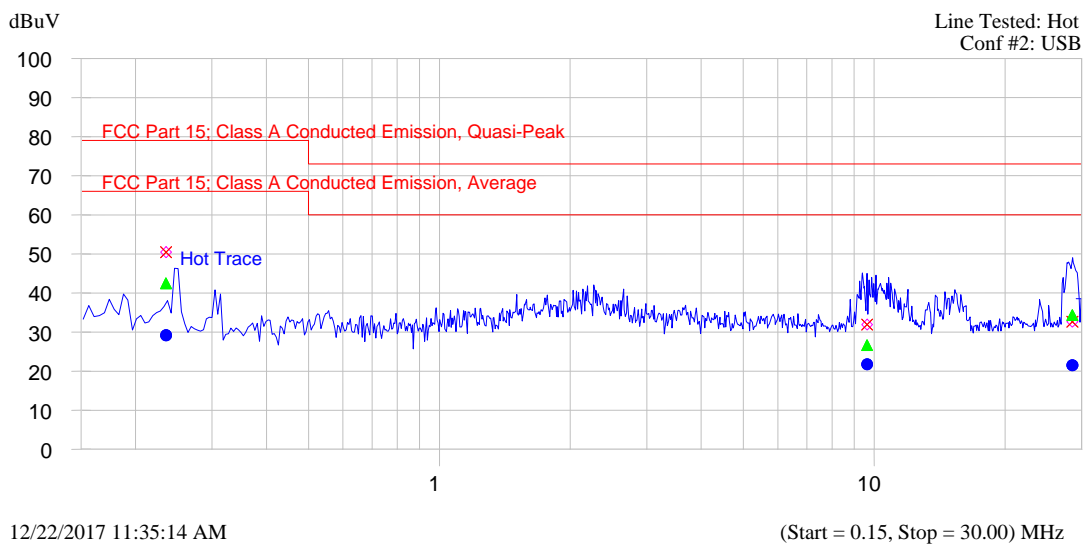


**Current List**

Frequency MHz	Peak dBuV	QP dBuV	QP-QP Limit dB	Avg dBuV	Avg-Avg Limit dB	Trace Name
0.209	43.9	36.5	-42.5	27.5	-38.5	Neutral Trace
0.341	44.6	42.1	-36.9	38.5	-27.5	Neutral Trace
16.227	42.4	40.0	-33.0	36.3	-23.7	Neutral Trace

Description: Line Tested: USB  
 Setup Name: FCC 15 Class A  
 Customer Name: Elprotronic Inc.  
 Project Number: ELP-014Q  
 Operator Name: Phuong Luu  
 EUT Name: XStreamPro-Iso  
 Date Created: 12/22/2017 10:49:41 AM  
 Date Modified: 12/22/2017 11:32:56 AM

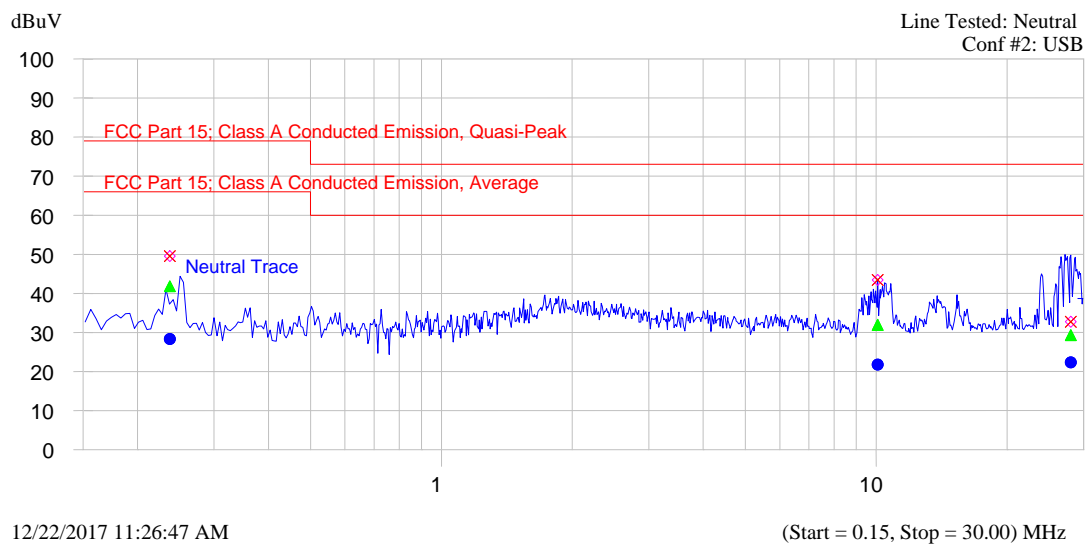
Plot # 3



Frequency MHz	Peak dBuV	QP dBuV	QP-QP Limit dB	Avg dBuV	Avg-Avg Limit dB	Trace Name
0.235	50.4	42.4	-36.6	29.2	-36.8	Hot Trace
9.635	31.9	26.6	-46.4	21.7	-38.3	Hot Trace
28.592	32.6	34.3	-38.7	21.5	-38.5	Hot Trace

Description: Line Tested: USB  
 Setup Name: FCC 15 Class A  
 Customer Name: Elprotronic Inc.  
 Project Number: ELP-014Q  
 Operator Name: Phuong Luu  
 EUT Name: XStreamPro-Iso  
 Date Created: 12/22/2017 10:49:41 AM  
 Date Modified: 12/22/2017 11:09:52 AM

Plot # 4



Frequency MHz	Peak dBuV	QP dBuV	QP-QP Limit dB	Avg dBuV	Avg-Avg Limit dB	Trace Name
0.238	49.5	41.8	-37.2	28.3	-37.7	Neutral Trace
10.081	43.4	31.9	-41.1	21.7	-38.3	Neutral Trace
28.023	32.7	29.3	-43.7	22.3	-37.7	Neutral Trace

## 5.2. RADIATED EMISSIONS FROM CLASS A UNINTENTIONAL RADIATORS (DIGITAL DEVICES) @ FCC 15.109(B)

### 5.2.1. Limits

The equipment shall meet the limits of the following table:

Test Frequency Range (MHz)	Class A Limits (dB $\mu$ V/m)	EMI Detector Used	Measurement Distance (meters)
30 – 88	39.0	Quasi-Peak	10
88 – 216	43.5	Quasi-Peak	10
216 – 960	46.4	Quasi-Peak	10
960 -1000	49.5	Quasi-Peak	10
Above 1000	60.0 80.0	Average Peak	3

### 5.2.2. Method of Measurements

Refer to Ultratech Test Procedures ULTR-P001-2004 & ANSI C63.4 for method of measurements.

The spectrum shall be investigated from the lowest radio frequency signal generated or used in the device, without going below the lowest frequency for which a radiated emission limit is specified, up to the frequency shown in the following table:

Highest frequency generated or used in the device or on which the device operates or tunes (MHz)	Upper frequency of measurement range (MHz)
Below 1.705	30
1.705 – 108	1000
108 – 500	2000
500 -1000	5000
Above 1000	5 <sup>th</sup> harmonic of the highest frequency or 40 GHz, whichever is lower

### Calculation of Field Strength:

The field strength is calculated by adding the calibrated antenna factor and cable factor, and subtracting the Amplifier gain (if any) from the measured reading. The basic equation with a sample calculation is as follows:

$$FS = RA + AF + CF - AG$$

Where FS = Field Strength  
RA = Receiver/Analyzer Reading  
AF = Antenna Factor  
CF = Cable Attenuation Factor  
AG = Amplifier Gain

### 5.2.3. Test Instruments

Refer to Exhibit 6 for Test Instruments & Measurement Uncertainty

**5.2.4. Test Results**

The emissions were scanned from 30 MHz to 1000 MHz at 10 Meters distance and all emissions less than 20 dB below the limits were recorded.

FREQUENCY (MHz)	RF LEVEL (dBuV/m)	DETECTOR USED (PEAK/QP)	ANTENNA PLANE (H/V)	LIMIT (dBuV/m)	MARGIN (dB)	PASS/ FAIL
54.87	35.66	PEAK	V	39.0	-3.3	PASS
54.87	19.90	PEAK	H	39.0	-19.1	PASS
73.52	34.02	PEAK	V	39.0	-5.0	PASS
73.52	22.18	PEAK	H	39.0	-16.8	PASS
101.50	32.18	PEAK	V	43.5	-11.3	PASS
101.50	22.30	PEAK	H	43.5	-21.2	PASS
250.00	36.42	PEAK	V	46.4	-10.0	PASS
250.00	37.45	PEAK	H	46.4	-9.0	PASS
625.36	31.94	PEAK	V	46.4	-14.5	PASS
625.36	32.76	PEAK	H	46.4	-13.6	PASS

The emissions were scanned from 1 to 2 GHz at 3 Meters distance and all emissions less than 20 dB below the limits were recorded.

FREQUENCY (MHz)	RF LEVEL (dBuV/m)	DETECTOR USED (PEAK/AVG)	ANTENNA PLANE (H/V)	LIMIT (dBuV/m)	MARGIN (dB)	PASS/ FAIL
1124.00	46.04	PEAK	V	60.0	-14.0	PASS
1124.00	43.90	PEAK	H	60.0	-16.1	PASS
1570.00	42.70	PEAK	V	60.0	-17.3	PASS
1570.00	38.40	PEAK	H	60.0	-21.6	PASS
1658.00	45.85	PEAK	V	60.0	-14.2	PASS
1725.00	43.48	PEAK	V	60.0	-16.5	PASS
2000.00	42.66	PEAK	V	60.0	-17.3	PASS
2000.00	47.65	PEAK	H	60.0	-12.4	PASS

## EXHIBIT 6. TEST INSTRUMENTS & MEASUREMENT UNCERTAINTY (K=2, 95% CONFIDENCE LEVEL)

The measurement uncertainties stated were calculated in accordance with the requirements of CISPR 16-4-2 @ IEC:2003 and JCGM 100:2008 (GUM 1995) – Guide to the Expression of Uncertainty in Measurement.

### 6.1. LINE CONDUCTED EMISSION MEASUREMENT UNCERTAINTY (9 KHZ - 30 MHZ)

Test Instruments	Manufacturer	Model No.	Serial No.	Frequency Range	Calibration Due Date
Spectrum Analyzer	Hewlett Packard	HP 8593EM	3710A00223	9 kHz–22 GHz	Oct. 19, 2018
Attenuator	Pasternack	PE7010-20	07	DC to 2 GHz	Mar. 13, 2018
LISN Used	EMCO	3825/2R	1165	10 kHz-30MHz	Nov. 3, 2018

Test Software: HP designed E7415A EMI Test Measurement Software version A.01.40 is used for automated measurement.

Test Date: Dec. 22, 2017

	Line Conducted Emission Measurement Uncertainty (9 kHz – 30 MHz):	Measured	Limit
$u_c$	Combined standard uncertainty: $u_c(y) = \sqrt{\sum_{i=1}^m u_i^2(y)}$	$\pm 1.44$	$\pm 1.8$
<b>U</b>	Expanded uncertainty U: $U = 2u_c(y)$	$\pm 2.89$	$\pm 3.6$



## 6.2. RADIATED EMISSION MEASUREMENT UNCERTAINTY

Test Instruments	Manufacturer	Model No.	Serial No.	Frequency Range	Cal Due Date
EMI Receiver	Rohde & Schawrz	ESU40	100037	20 Hz to 40 GHz	May 09, 2018
Biconilog Antenna	EMCO	3142	9601-1005	26 – 2000 MHz	May 12, 2018
Pre-Amplifier	Com-Power	Pam-0118A	551052	500MHz – 18 GHz	July 17, 2018
Horn Antenna	EMCO	3115	9701-5061	1 – 18 GHz	April 24, 2018
Semi-Anechoic Chamber	TDK	IC: 2049A-3	--	--	March 27, 2020

Tested Date: Dec. 22, 2017

	Radiated Emission Measurement Uncertainty @ 10m, Horizontal (30-1000 MHz):	Measured (dB)	Limit (dB)
$u_c$	Combined standard uncertainty: $u_c(y) = \sqrt{\sum_{i=1}^m u_i^2(y)}$	$\pm 2.32$	$\pm 2.6$
<b>U</b>	Expanded uncertainty U: $U = 2u_c(y)$	$\pm 4.65$	$\pm 5.2$

	Radiated Emission Measurement Uncertainty @ 10m, Vertical (30-1000 MHz):	Measured (dB)	Limit (dB)
$u_c$	Combined standard uncertainty: $u_c(y) = \sqrt{\sum_{i=1}^m u_i^2(y)}$	$\pm 2.32$	$\pm 2.6$
<b>U</b>	Expanded uncertainty U: $U = 2u_c(y)$	$\pm 4.64$	$\pm 5.2$

	Radiated Emission Measurement Uncertainty @ 3 m, Horizontal & Vertical (1 – 18 GHz):	Measured (dB)	Limit (dB)
$u_c$	Combined standard uncertainty: $u_c(y) = \sqrt{\sum_{i=1}^m u_i^2(y)}$	$\pm 1.87$	Under consideration
<b>U</b>	Expanded uncertainty U: $U = 2u_c(y)$	$\pm 3.75$	Under consideration

## EXHIBIT 7. LABELLING & VERIFICATION REQUIREMENTS

### 7.1. SECTION 15.19 - LABELING REQUIREMENTS

For a Class A digital device or peripheral, the instructions furnished the user shall include the following or similar statement, placed in a prominent location on the device.

*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.*

- (1) The label shall NOT be a stick-on , paper label. The label on these products shall be permanently affixed to the product and shall be readily visible to the purchaser at the time of purchase, as described in FCC 2.925(d). “Permanently” affixed means that the label is etched, engraved, stamped, silk-screened, indelibly printed, or otherwise permanently marked on a permanently attached part of the equipment or on a nameplate of metal plastic, or other material fastened to the equipment by welding, riveting, or a permanent adhesive. The label must be designed to last the expected life-time of the equipment in the environment in which the equipment may be operated and must not be readily detachable.
- (2) Where a device is constructed in two or more sections connected by wires and marketed together, the statement specified in this Section is required to be affixed only to the main control unit.
- (3) When the device is so small or for such use that it is not practicable to place the statement specified in this Section on it, the information required by these paragraphs shall be placed in the instruction manual or pamphlet supplied to the user or, alternatively, shall be placed on the container in which the device is marketed. However, the FCC identifier or the unique identifier, as appropriate, must be displayed on the device.

### 7.2. SECTIONS 15.21 & 15.105 - INFORMATION TO USER

The users manual or instruction manual for an intentional or unintentional radiator shall caution the user that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

***NOTE:*** *This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provided reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.*

**Warning:** Changes or modifications not expressly approved by <manufacturer> could void the user’s authority to operate the equipment.

### 7.3. SECTION 2.909 - RESPONSIBLE PARTY

The following parties are responsible for the compliance of radio frequency equipment with the applicable standards:

- (c) In the case of the equipment subject to authorization under the Declaration of Conformity procedure:
  - (1) The manufacturer or, if the equipment is assembled from individual component parts and the resulting system is subject to authorization under Declaration of Conformity, the assembler.
  - (2) If the equipment, by itself, is subject to Declaration of Conformity and the equipment is imported, the importer.

### 7.4. SECTION 2.945 - SAMPLING TEST OF EQUIPMENT COMPLIANCE

The Commission will, from time to time, request the responsible party to submit equipment subject to this chapter to determine the extent to which subsequent production of such equipment continues to comply with the data filed by the applicant (or on file with the responsible party for equipment subject to notification or a Declaration of Conformity). Shipping costs to the Commission's laboratory and return shall be borne by the responsible party.

### 7.5. SECTION 2.946 - PENALTY FOR FAILURE TO PROVIDE TEST SAMPLES AND DATA.

- (a) Any responsible party, as defined in Section 2.909 of this chapter, or nay party who markets equipment subject to the provisions of this chapter, shall provide test sample(s) or data upon request by the Commission. Failure to comply with such a request with the time frames shown below may be cause for forfeiture, pursuant to Section 1.80 of Part 1 of this chapter, or other administrative sanctions such as suspending action on any applications for equipment authorization submitted by such party while the matter is being resolved.
  - (1) When the equipment is subject to authorization under Declaration of Conformity, data shall be provided within 14 days of delivery of the request and test sample(s) shall be provided within 60 days of delivery of the request.
  - (2) For all other devices, test sample(s) or data shall be provided within 60 days of the request.
- In the case of the equipment involving harmful interference or safety of life or property, the Commission may specify that test samples subject to the provisions of this section be submitted within less than 60 days, but not less than 14 days. Failure to comply within the specified time period will be subject to the sanctions specified in paragraph (a) of this section.

### 7.6. LIMITATION ON VERIFICATION: FCC PART 2, SUBPART J, SECTION 2.952

- (a) Verification signifies that the manufacturer or importer has determined that the equipment has been shown to be capable of compliance with the applicable technical standards if no unauthorized change is made in the equipment and if the equipment is properly maintained and operated. Compliance with these standards shall not be construed to be a finding by the manufacturer or importer with respect to matters not encompassed by the Commission's rules.
- (b) Verification of the equipment by the manufacturer or importer is effective until a termination date is otherwise established by the Commission.

- (c) No person shall, in any advertising matter, brochure, etc., use or make reference to a verification in a deceptive or misleading manner or convey the impression that such verification reflects more than a determination by the manufacturer or importer that the device or product has been shown to be capable of compliance with the applicable technical standards of the Commission's Rules.

#### **7.7. RESPONSIBILITY OF MANUFACTURER OR IMPORTER: FCC PART 2, SUBPART J, SECTION 2.953**

- (a) In verifying compliance, the manufacturer or importer (in the case of imported equipment) warrants that each unit of the equipment marketed under the verification procedure will conform to the unit tested and found acceptable by the manufacturer or importer and that data on file with the manufacturer or importer continues to be representative of the equipment being produced under such verification within the variation that can be expected due to quantity production and testing on a statistical basis.
- (b) The importer of equipment subject to verification may upon receiving a written statement from the manufacturer that the equipment complies with the appropriate technical standards rely on the manufacturer or independent testing agency to verify compliance. The test records required by Section 2.955 however should be in English language and made available to the Commission upon a reasonable request.
- (c) In the case of transfer of control of equipment, as in the case of sale or merger of the grantee, the new manufacturer or importer shall bear the responsibility of continued compliance of the equipment.
- (d) Equipment verified by the manufacturer or importer shall be re-verified if the modification or change adversely affects the emanation characteristics of the modified equipment. The manufacturer or importer continues to bear the responsibility for continued compliance of subsequently produced equipment.

#### **7.8. IDENTIFICATION: FCC PART 2, SUBPART J, SECTION 2.954**

The identification of equipment subject to verification shall be consistent with current manufacturer or marketing practices: *Provided*, The manufacturer or importer maintains adequate identification records for each unit verified to facilitate positive identification of each equipment marketed.

#### **7.9. RETENTION OF RECORDS: FCC PART 2, SUBPART J, SECTION 2.955**

- (a) For each equipment subject to verification, the manufacturer (or importer) shall maintain the records listed below:
  - (1) A record of the original design drawings and specifications and all changes that have been made that may affect compliance with the requirements of Section 2.953.
  - (2) A record of the procedures used for production inspection and testing (if tests were performed) to insure the conformance required by Section 2.953. (Statistical production line emission testing is not required).
- (b) The records listed in paragraphs (a) of this section shall be retained for two years after the manufacture of said equipment item has been permanently discontinued, or until the conclusion of an investigation or a proceeding if the manufacturer or importer is officially notified that an investigation or any other administrative proceeding involving his equipment has been instituted.

**7.10. FCC INSPECTION & SUBMISSION OF EQUIPMENT FOR TESTING: FCC PART 2, SUBPART J, SEC. 2.956**

- (a) Each manufacturer or importer of equipment subject to verification shall upon receipt of reasonable request submit to the Commission the records required by Section 2.955.
- (b) The Commission may require the manufacturer or importer of equipment subject to verification to submit one or more of sample units for measurements at the Commission's Laboratory.
- (c) In the event the manufacturer believes that shipment of the sample to the Commission's Laboratory is impractical because of the size or weight of the equipment, or the power requirement or for any other reason, the applicant may submit a written explanation why such shipment is impractical and should not be required.

**7.11. SAMPLING TESTS OF EQUIPMENT COMPLIANCE: FCC PART 2, SUBPART J, SECTION 2.957**

The Commission will from time to time, request the manufacturer or importer to submit to the FCC Laboratory in Columbia, Maryland, various equipment(s) for which verification has been made, to determine the extent to which subsequently produced units continue to comply with the applicable standards.