SGS-CSTC Standards Technical Services
(Shanghai) Co., Ltd.

588 West Jindu Road,Songjiang District,Shanghai,China
Telephone: +86 (0) 21 6191 5666
Fax: +86 (0) 21 6191 5678
ee.shanghai@sgs.com

1 Cover Page

FCC MPE REPORT

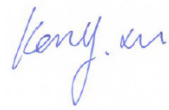
Application No.:	SHEM1508002990CR
Applicant:	TRENDNET INC
FCC ID:	XU8TVIP322WI
Equipment Under Test (EUT): **NOTE:** The following sample(s) submitted was/were identified on behalf of the client as	
Product Name:	IR Network Camera
Model No.(EUT):	TV-IP322WI
Standards:	FCC Rules 47 CFR §2.1091 KDB447498 D01 General RF Exposure Guidance v05r02
Date of Receipt:	July 06, 2015
Date of Test:	August 26, 2015 to August 28, 2015
Date of Issue:	September 10, 2015
Test Result:	**Pass***

* In the configuration tested, the EUT complied with the standards specified above.

Parlam Zhan
E&E Section Manager
SGS-CSTC (Shanghai) Co., Ltd.

2 Version

Revision Record				
Version	**Chapter**	**Date**	**Modifier**	**Remark**
00	/	September 06, 2015	/	Copy (Base on SHEM150700217303)

Authorized for issue by:				
Engineer		Eddy Zong **Print Name**		
Clerk		Susie Liu **Print Name**		
Reviewer		Keny Xu **Print Name**		

3 Contents

4 General Information

4.1 Client Information

Applicant:	TRENDNET INC
Address of Applicant:	20675 MANHATTAN PL TORRANCE, CA 90501 USA
Manufacturer:	TRENDNET INC
Address of Manufacturer:	20675 MANHATTAN PL TORRANCE, CA 90501 USA
Factory:	TRENDNET INC
Address of Factory:	20675 MANHATTAN PL TORRANCE, CA 90501 USA

4.2 General Description of E.U.T.

Product Description:	Fixed product with Enternet port and WiFi monitor function		
Rated Input:	DC 12V via adapter		
Adapter:	Rated Input:	AC 100-240V 50/60Hz 0.8A	
	Rated Output:	DC 12V 2.0A	
	Cable Length:	AC port:	2 Wires
		DC port:	140cm

4.3 Details of E.U.T.

Operation Frequency:	802.11 b/g/n(HT20): 2412MHz-2462MHz 802.11 n(HT40): 2422MHz-2452MHz
Modulation Type:	802.11 b: DSSS(CCK, DQPSK, DBPSK) 802.11 g/n(HT20/HT40): OFDM(64QAM, 16QAM, QPSK, BPSK)
Number of Channel:	802.11 b/g/n(HT20): 11 Channels 802.11 n(HT40): 7 Channels
Data Rate:	802.11 b: 1/2/5.5/11Mbps 802.11 g: 6/9/12/18/24/36/48/54Mbps 802.11 n(HT20): 13/26/39/52/78/104/117/135Mbps 802.11 n(HT40): 27/54/81/108/162/216/243/270Mbps
Antenna Type:	Integral
Antenna Gain:	2.4 dBi

4.4 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.

No.588 West Jindu Road, Songjiang District, Shanghai, China.201612.

Tel: +86 21 6191 5666

Fax: +86 21 6191 5678

4.5 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **CNAS (No. CNAS L0599)**

CNAS has accredited SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. to 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 in the field of testing. Date of expiry: 2017-07-14.

- **FCC – Registration No.: 402683**

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered and fully described in a report filed with the Federal Communications Commission (FCC). The acceptance letter from the FCC is maintained in our files. Registration No.: 402683, Expiry Date: 2017-09-16.

- **Industry Canada (IC) – IC Assigned Code: 8617A**

The 3m Semi-anechoic chamber of SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 8617A-1. Expiry Date: 2017-06-18.

- **VCCI (Member No.: 3061)**

The 3m Semi-anechoic chamber and Shielded Room of SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-3868, C-4336, T-2221, G-830 respectively. Date of Expiry: 2017-11-16.

5 Test Standards and Limits

According to§1.1310 Radiofrequency radiation exposure limits:

The limit for general population/uncontrolled exposures

Frequency	Power density(mW/cm^2)	Averaging time(minutes)
300MHz~1.5GHz	f/1500	30
1.5GHz~100GHz	1.0	30

6 Measurement and Calculation

6.1 Maximum transmit power

The Powe Data is based on the RF Test Report SHEM150700217302.

Test mode	Test Frequency (MHz)	Output Power (dBm)	Output Power (mW)
802.11b	**2412**	**18.77**	**75.34**
	2437	18.51	70.96
	2462	17.98	62.81
802.11g	2412	18.69	73.96
	2437	18.35	68.39
	2462	17.96	62.52
802.11 n(HT20)	2412	16.84	48.31
	2437	16.57	45.39
	2462	16.31	42.76
802.11 n(HT40)	2422	16.48	44.46
	2437	16.01	39.90
	2452	15.65	36.73

6.2 MPE Calculation

According to the formula S= $\frac{PG}{4R^2\pi}$, we can calculate S which is MPE.

Note:

1) P (Watts) =Power Input to antenna = $10^{\frac{dBm}{10}}$ / 1000

2) G (Antenna gain in numeric) = 10^ (Antenna gain in dBi /10)

3) R = distance to the center of radiation of antenna (in meter) = 20cm

4) MPE limit = 1mW/cm²

The Max Conducted Peak Output Power is 75.34mW in lowest channel;

The best case gain of the antenna is 2.4dBi. 2.4dB logarithmic terms convert to numeric result is nearly 1.738

$$S= \frac{PG}{4R^2\pi} = \frac{75.34 \times 1.738}{4 \times 400 \times 3.14} = 0.02606 \text{ mW/cm}^2$$

So the device is exclusion from SAR test.

7 EUT Constructional Details

Refer to the < TV-IP322WI_External Photos > & < TV-IP322WI_Internal Photos >.

--End of the Report--