



RADIO TEST REPORT

Report No: STS1806237H01

Issued for

ZHEJIANG UNIVIEW TECHNOLOGIES CO LTD

88 JIANGLING RD, BINJIANG DISTRICT HANGZHOU,
ZHEJIANG 310051, P.R. CHINA

Product Name:	Network Video Recorder
Brand Name:	N/A
Model Name:	NVR301-04LB-W
Series Model:	NVR301-04LB-W-NB
FCC ID:	2AL8S-0211C2WX
Test Standard:	FCC 47CFR§2.1091

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Test Report Certification

Applicant's name : **ZHEJIANG UNIVIEW TECHNOLOGIES CO LTD**
Address : 88 JIANGLING RD, BINJIANG DISTRICT HANGZHOU,
ZHEJIANG 310051, P.R. CHINA
Manufacture's Name..... : **1. Zhejiang Uniview Technologies Co., Ltd.**
2.Suzhou Qiaoxin Electronic Technology Co., Ltd.
3. TDG TECHNOLOGY CO LTD
4. ZHE JIANG RAYSOAR ELECTRONICS CO LTD
Address : 1. A Zone, Building 2, Wanlun Science Park, 88 Jiangling Road,
Hangzhou, P.R. China
2. No. 77, Yitang Road, Economic Development Zone, Wujiang
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3. YATAI ROAD NO.1,SOUTH LAKE DISTRICT, JIAXING,
ZHEJIANG, PROVINCE, 314050, P.R. CHINA.
4. No. 367 Weizhong Road, Weitang Street, Jiashan County,
Jiaxing, Zhejiang

Product description

Product Name..... : Network Video Recorder

Brand Name : N/A

Model Name : NVR301-04LB-W

Series Model..... : NVR301-04LB-W-NB

Standards..... : FCC 47CFR§2.1091

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Date of Test..... :

Date (s) of performance of tests..... : 19 Oct. 2018

Date of Issue..... : 19 Oct. 2018

Test Result..... : **Pass**



Testing Engineer : Chris chen
(Chris chen)

Technical Manager : Sean she
(Sean she)



Authorized Signatory : Vita Li
(Vita Li)





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Revision History

Rev.	Issue Date	Report No.	Effect Page	Contents
00	19 Oct. 2018	STS1806237H01	ALL	Initial Issue





1. GENERAL INFORMATION

1.1 GENERAL DESCRIPTION OF THE EUT

Product Name	Network Video Recorder	
Brand Name	N/A	
Model Name	NVR301-04LB-W	
Series Model	NVR301-04LB-W-NB	
Model Difference	All models are identical except the model number.	
Product Description	The EUT is Network Video Recorder which supports Wi-Fi 802.11 b/g/n wireless technology.	
	Operation Frequency:	2412 - 2462 MHz for 802.11b/g/n(HT20)
	Modulation Type:	DSSS(DBPSK/DQPSK/CCK) OFDM(BPSK/QPSK/16QAM/64QAM)
	Bit Rate of Transmitter:	1/2/5.5/11 Mbps for 802.11b 6/9/12/18/24/36/48/54 Mbps for 802.11g MCS0 ~ MCS7 for 802.11n
	Number Of Channel:	11 channels for 802.11b/g/n(HT20)
	Antenna Designation:	Please see Note 4
	Antenna Gain (dBi):	4dBi
	Duty Cycle:	>98%
Adapter	Adapter 1 Model: 2ABL024F (CWT) Input: AC 100-240V~50/60Hz, 0.8A Output: DC 12.0V@2000mA Adapter 2 Model: KPC-024FA-VI-US (CWT) Input: AC 100-240V~50/60Hz, 0.8A Output: DC 12.0V@2000mA	
Hardware Version	N/A	
Software Version	N/A	

Note: 1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

1.2 TEST FACTORY

Shenzhen STS Test Services Co., Ltd.

Add. : 1/F., Building B, Zhuoke Science Park, No.190, Chongqing Road,
Fuyong Street, Bao'an District, Shenzhen, Guangdong, China

CNAS Registration No.: L7649; FCC Registration No.: 625569

IC Registration No.: 12108A; A2LA Certificate No.: 4338.01;



2. FCC 47CFR§2.1091 REQUIREMENT

2.1 TEST STANDARDS

The limit for Maximum Permissible Exposure (MPE) specified in FCC 1.1310 is followed. The gain of the antennas used in the product is extracted from the Antenna data sheets provided and also the maximum total power input to the antenna is measured. Through the Friis transmission formula and the maximum gain of the antenna, we can calculate the distance, away from the product, where the limit of MPE is reached.

Although the Friis Transmission formula is far field assumption, the calculated result of that is an over-prediction for near field power density. It is taken as worst case to specify the safety range.

2.2 LIMIT

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environmental impact of the human exposure to radio-frequency (RF) radiation as specified in 1.1307

(b)

Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)
Limits for Occupational / controlled Exposures			
300 - 1500	--	--	F/300
1500 – 100000	--	--	5.0
Limits for General population / Uncontrolled Exposure			
300 - 1500	--	--	F/1500
1500 – 100000	--	--	1.0

F= Frequency in MHz

Friss Formula

Friss Transmission Formula: $Pd = (Pout * G) / (4*pi*r^2)$

Where

Pd = power density in mW/cm² aaa

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

R = Distance between observation point and the center of radiator in cm

If we know the maximum gain of the antenna and the total output power to the antenna, through calculation, we will know MPE value at distance 20cm.

2.3 EUT OPERATION CONDITION

EUT was enabled to transmit and receive at lowest, middle and highest channels.

2.4 CLASSIFICATION

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. Warning statement to the user for keeping at least 20cm or more separation distance from the antenna should be included in the User manual. So, this device is classified as Mobile device.



2.4TEST RESULT

Turn up

Mode	Detector	Turn up
802.11b-Low	PEAK	13±1dBm
802.11b-Mid	PEAK	13±1dBm
802.11b-High	PEAK	11±1dBm
802.11g-Low	PEAK	13±1dBm
802.11g-Mid	PEAK	12±1dBm
802.11g-High	PEAK	11±1dBm
802.11n(HT20)-Low	PEAK	13±1dBm
802.11n(HT20)-Mid	PEAK	12±1dBm
802.11n(HT20)-High	PEAK	11±1dBm

ANT Gain (G)

2402-2483.5MHz:4dBi(gain of antenna in linear scale=2.51)

Protocol	Output Power to Antenna (mW)	Power Density (mW/cm ²)	Limit (mW/cm ²)	Result
802.11b-Low	25.12	0.013	1	Pass
802.11b-Mid	25.12	0.013	1	Pass
802.11b-High	15.85	0.008	1	Pass
802.11g-Low	25.12	0.013	1	Pass
802.11g-Mid	19.95	0.010	1	Pass
802.11g-High	15.85	0.008	1	Pass
802.11n(HT20)-Low	25.12	0.013	1	Pass
802.11n(HT20)-Mid	19.95	0.010	1	Pass
802.11n(HT20)-High	15.85	0.008	1	Pass

*****END OF THE REPORT*****