RF Exposure Evaluation Report

Product	:	Intelligent Blackboard/LCD touch display/ Interactive Flat Panel/LCD Interactive Whiteboard/ Intelligent Interactive Panel/Interactive conference Panel/ LCD commercial display/LCD advertising display/ LCD splicing unit
Trade mark	:	OKV/OKView
Model/Type reference	:	Refer to section 4.2
Serial Number	:	N/A
Report Number	:	EED32P80580503
FCC ID	:	2BA7A-IWB5536
Date of Issue	:	Jun. 15, 2023
Test Standards	:	47 CFR Part 1.1307 47 CFR Part 1.1310 447498 D04 Interim General RF Exposure Guidance v01
Test result	:	PASS

Prepared for:

SHENZHEN OKVIEW TECHNOLOGY CO.,LIMITED
202, Building A, No.2Huangdiyin Industrial Zone, Kukeng Community, Guanlan Street, Longhua District, Shenzhen

Prepared by:

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Check No.: 8102240423

2 Version

Version No.	Date	Description
00	Jun. 15, 2023	Original

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4 General Information

4.1 Client Information

Applicant:	SHENZHEN OKVIEW TECHNOLOGY CO.,LIMITED
Address of Applicant:	202, Building A, No.2Huangdiyin Industrial Zone, Kukeng Community, Guanlan Street, Longhua District, Shenzhen
Manufacturer:	SHENZHEN OKVIEW TECHNOLOGY CO.,LIMITED
Address of Manufacturer:	202, Building A, No.2Huangdiyin Industrial Zone, Kukeng Community, Guanlan Street, Longhua District, Shenzhen
Factory:	SHENZHEN OKVIEW TECHNOLOGY CO.,LIMITED
Address of Factory:	202, Building A, No.2Huangdiyin Industrial Zone, Kukeng Community, Guanlan Street, Longhua District, Shenzhen

4.2 General Description of EUT

Product Name:	Intelligent Blackboard/LCD touch display/ Interactive Flat Panel/LCD Interactive Whiteboard/ Intelligent Interactive Panel/Interactive conference Panel/ LCD commercial display/LCD advertising display/ LCD splicing unit
Test Model No.:	IWB5536
Model/Type reference & Model difference:	IWB5531,IWB5533,IWB5535,IWB5536,IWB5537,IWB5538,IWB5539, IWB5551,IWB5552,IWB5553,IWB5555,IWB5556,IWB5557,IWB5558, IWB5559,V55C1,V55C2,V55C3,V55C5,V55C6,V55C7,V55C8,V55C9, K55V1,K55V2,K55V3,K55V5,K55V6,K55V7,K55V8,K55V9,IWB6531, IWB6533,IWB6535,IWB6536,IWB6537,IWB6538,IWB6539,IWB6551, IWB6552,IWB6553,IWB6555,IWB6556,IWB6557,IWB6558,IWB6559, V65C1,V65C2,V65C3,V65C5,V65C6,V65C7,V65C8,V65C9,K65V1, K65V2,K65V3,K65V5,K65V6,K65V7,K65V8,K65V9,IWB7531,IWB7533, IWB7535,IWB7536,IWB7537,IWB7538,IWB7539,IWB7551,IWB7552, IWB7553,IWB7555,IWB7556,IWB7557,IWB7558,IWB7559,V75C1, V75C2,V75C3,V75C5,V75C6,V75C7,V75C8,V75C9,K75V1,K75V2, K75V3,K75V5,K75V6,K75V7,K75V8,K75V9,IWB8631,IWB8633,IWB8635, IWB8636,IWB8637,IWB8638,IWB8639,IWB8651,IWB8652,IWB8653, IWB8655,IWB8656,IWB8657,IWB8658,IWB8659,V86C1,V86C2,V86C3, V86C5,V86C6,V86C7,V86C8,V86C9,K86V1,K86V2,K86V3,K86V5, K86V6,K86V7,K86V8,K86V9,VW46***(V), VW46***- H (V) ,VW46***(KY) , VW46***-H(KY) ,VW46***(K),VW46***-H(K) , VW49***(V),VW49***-H(V) ,VW49***(KY) ,VW49***-H(KY) ,VW49***(K),VW49***-H(K),DS49***, DS49***-T,SM4921,SM4922,SM49* *,VW55***(V), VW55***- H (V) ,VW55***(KY) , VW55***- H(KY) ,VW55***(K),VW55***-H(K),DS55***,DS55***-T,SM5521,SM5522,SM55* * ,VW65***(V), VW65***-H(V) ,VW65***(KY) ,VW65***-H(KY) ,VW65***(K),VW65***-H(K),DS65***,DS65***T,SM6521,SM6522,SM65**,SM7521,SM7522, SM75**,SM8621,SM8622,SM86* * （the "*" in the model number can be 0-9, A-Z or blank, vacant or - means, different models are only the appearance color, customer code, sales area is different, does not affect the safety and electromagnetic compatibility of the product）

	are identical on circuitry design, PCB layout, electrical components used, internal wiring and functions with the model,item No.:IWB5536 which we chose to be tested by CTI and only different on different models are only the appearance color, sales area is different, does not affect the safety and electromagnetic compatibility of the product.
Trade Mark:	OKV/OKView

4.3 Product Specification subjective to this standard

Product Type:	☒ Mobile ☐ Portable ☐ Fix Location
Frequency Range:	2.4G WiFi: 2412MHz~2462MHz; 5G WiFi: 5150-5250MHz
Test Power Grade:	Default
Test Software of EUT:	SecureCRTPortable.exe
Antenna Type:	External antenna
Antenna Gain:	2.4G WiFi: 3.17dBi, 5G WiFi: 2.46dBi
Power Supply:	AC 120V
Sample Received Date:	Apr. 25,2023
Sample tested Date:	May 19, 2023 to Jun 15, 2023
Remark: Company Name and Address shown on Report, the sample(s) and sample Information was/ were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified.	

4.4 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd
Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, China
Telephone: +86 (0) 755 33683668 Fax:+86 (0) 755 33683385
No tests were sub-contracted.
FCC Designation No.: CN1164

4.5 Deviation from Standards

None.

4.6 Abnormalities from Standard Conditions

None.

4.7 Other Information Requested by the Customer

None.

4.8 Measurement Uncertainty (95% confidence levels, k=2)

No.	Item	Measurement Uncertainty
1	Separation distance	0.10mm

5 Equipment List

Equipment	Manufacturer	Mode No.	Serial Number	Cal. Date (mm-dd-yyyy)	Cal. Due date (mm-dd-yyyy)
Steel Ruler	Wynn's	300mm	EED32JL15005	11-04-2021	11-03-2024

6 SAR Evaluation

6.1 RF Exposure Compliance Requirement

6.1.1 Limits

The SAR-based exemption formula of § 1.1307(b)(3)(i)(B), repeated here as Formula (B.2), applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power or effective radiated power (ERP), whichever is greater, of less than or equal to the threshold Pth (mW).
This method shall only be used at separation distances from 0.5 cm to 40 cm and at frequencies from 0.3 GHz to 6 GHz (inclusive). Pth is given by Formula

$$P_{\text{th}}\,(\text{mW}) = \begin{cases} ERP_{20\text{ cm}}(d/20\text{ cm})^x & d \le 20\text{ cm} \\ ERP_{20\text{ cm}} & 20\text{ cm} < d \le 40\text{ cm} \end{cases}$$

where

$$x = -\log_{10}\left(\frac{60}{ERP_{20\text{ cm}}\sqrt{f}}\right)$$

and f is in GHz, d is the separation distance (cm), and ERP20cm is per Formula (B.1).

$$P_{\text{th}}\,(\text{mW}) = ERP_{20\text{ cm}}\,(\text{mW}) = \begin{cases} 2040f & 0.3\text{ GHz} \le f < 1.5\text{ GHz} \\ 3060 & 1.5\text{ GHz} \le f \le 6\text{ GHz} \end{cases} \qquad \text{(B.1)}$$

The 1 mW Blanket Exemption of § 1.1307(b)(3)(i)(A) applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power of no more than 1 mW, regardless of separation distance.

6.1.2 Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

6.1.3 EUT RF Exposure Evaluation

1)For Stand alone:

For 2.4G WiFi:

Frequency (MHz)	Separation distance (cm)	Max. Conducted Output power (dBm)	Antenna Gain (dBi)	ERP (dBm)	ERP (mW)	Limit (mW)	MPE Ratio1	Result
2462	20	18.62	3.17	19.64	92.045	< 3060	0.030	PASS

For 5G Wi-Fi

Frequency (MHz)	Separation distance (cm)	Max. Conducted Output power (dBm)	Antenna Gain (dBi)	ERP (dBm)	ERP (mW)	Limit (mW)	MPE Ratio2	Result
5240	20	13.16	2.46	13.47	22.233	< 3060	0.007	PASS

Note：

①EIRP=conducted power+antenna gain；

②ERP=EIRP-2.15

③The test data refer to the report of EED32P80580501 and EED32P80580502.Only the worst case data was recorded in the report.

2)This product integrates a certified module (FCC ID: 2AR82-SKIWB663U11),see below for a reassessment:

For 2.4G WiFi:

Mode	Separation distance (cm)	Max. Conducted Output power (dBm)	Antenna Gain (dBi)	ERP (dBm)	ERP (mW)	Limit (mW)	MPE Ratio3	Result
WIFI 2.4G	20	18	3.17	19.02	79.799	< 3060	0.026	PASS

For 5G Wi-Fi

Mode	Separation distance (cm)	Max. Conducted Output power (dBm)	Antenna Gain (dBi)	ERP (dBm)	ERP (mW)	Limit (mW)	MPE Ratio4	Result
WIFI 5G	20	18	2.46	18.31	67.764	< 3060	0.022	PASS

Note：

①EIRP=conducted power+antenna gain；

②ERP=EIRP-2.15

③The test data come from report of 4790010771.1-3,4790010771.1-4 and 4790010771.1-5. (FCC ID: 2AR82-SKIWB663U11) Only the worst case data was recorded in the report.

④The certified module (FCC ID: 2AR82-SKIWB663U11) cannot support simultaneous emissions.

3)For Simultaneous Transmission:

As MPE rato (MPE Ratio1+MPE Ratio2+MPE Ratio3+MPE Ratio4)=0.030+0.007+0.026+0.022=0.085 < 1, it's deemed to fulfil the RF exposure requirement.

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*** End of Report ***