EMC TEST REPORT

Product	:	seeed studio reCamera 2002 Series
Trade mark	:	Seeed Studio
Model/Type reference	:	reCamera 2002w 64GB, reCamera 2002w 8GB, reCamera Core 2002w 64GB, reCamera Core 2002w 8GB
Serial Number	:	N/A
Ratings	:	DC 5V/1A
Report Number	:	EED32Q819570
Date of Issue	:	Dec. 19, 2024
Regulations	:	See below

Test Standards	Results
EN 55032:2015+A11:2020	PASS
EN 55035:2017+A11:2020	PASS

Prepared for:

Seeed Technology Co., Ltd
9F, G3 Building, TCL International E City, Zhongshanyuan Road, Nanshan District, Shenzhen

Prepared by:

Centre Testing International Group Co., Ltd.
Hongwei Industrial Zone, Bao'an 70 District, Shenzhen, Guangdong, China
TEL: +86-755-3368 3668
FAX: +86-755-3368 3385

Compiled by: Hugo Chen Reviewed by: Alan - Chen

Approved by: Aaron Ma Date of Issue: Dec. 19, 2024

Aaron Ma Check No.: 9744271124

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(Note: N/A means not applicable)

1. GENERAL INFORMATION

Applicant:	Seeed Technology Co., Ltd 9F, G3 Building, TCL International E City, Zhongshanyuan Road, Nanshan District, Shenzhen
Manufacturer:	Seeed Technology Co., Ltd 9F, G3 Building, TCL International E City, Zhongshanyuan Road, Nanshan District, Shenzhen
Product:	seeed studio reCamera 2002 Series
Trade mark:	Seeed Studio
Model/Type reference:	reCamera 2002w 64GB, reCamera 2002w 8GB, reCamera Core 2002w 64GB, reCamera Core 2002w 8GB
Serial Number:	N/A
Report Number:	EED32Q819570
State of Sample(s):	Normal
Sample Received Date:	Nov. 27, 2024
Sample tested Date:	Nov. 27, 2024 to Dec. 16, 2024

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.

2. TEST SUMMARY

The Product has been tested according to the following specifications:

EMISSION		
Standard	**Test Item**	**Test**
EN 55032	Conducted disturbance	Yes[1]
EN 55032	Radiated disturbance	Yes

IMMUNITY (EN 55035)		
Standard	**Test Item**	**Test**
IEC 61000-4-2	Electrostatic discharge (ESD)	Yes
IEC 61000-4-3	Continuous RF electromagnetic radiated field disturbances	Yes
IEC 61000-4-4	Electrical fast transients (EFT)	Yes[2]
IEC 61000-4-5	Surges	Yes[2]
IEC 61000-4-6	Radio-frequency continuous conducted Immunity	Yes[2]
IEC 61000-4-8	Power-frequency magnetic fields Immunity	N/A[3]
IEC 61000-4-11	Voltage dips and interruptions	N/A[4]

Remark:
1. EUT powered by DC 5V,and the DC cable less than 3m, so only test the lan port at 100Mbps.
2. EUT powered by DC 5V,and the DC cable less than 3m, so only test the lan port.
3. The Product doesn't contain any device susceptible to magnetic fields.
4. EUT powered by DC 5V, the test is not applicable.

3. TEST UNCERTAINTY

Where relevant, the following test uncertainty levels have been estimated for tests performed on the Product as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Test item	Value (dB)
Conducted emissions	3.1
Radiated emissions (30MHz to 1GHz)	4.9
Radiated emissions (Above 1GHz)	4.7

4. PRODUCT INFORMATION AND TEST SETUP

4.1 PRODUCT INFORMATION

Ratings: DC 5V/1A

Model difference: Models differ by emmc size, the presence of lens boards, interface boards, and supporting structural parts. The test model is reCamera 2002w 64GB, and the test result are applicable to the others.

The highest frequency of the internal sources of the EUT is 5GHz:

☐ less than or equal 108 MHz, the measurement shall only be made up to 1 GHz.
☐ between 108 MHz and 500 MHz, the measurement shall only be made up to 2 GHz.
☐ between 500 MHz and 1 GHz, the measurement shall only be made up to 5 GHz.
☒ above 1 GHz, the measurement shall be made up to 5 times the highest frequency up to a maximum of 6GHz.

4.2 TEST SETUP CONFIGURATION

See test photographs attached in Appendix 1 for the actual connections between product and support equipment.

4.3 TEST MODE DESCRIPTION

Test Mode	Test Status
①	Normal mode:EUT connected to AE then it powered and works normally.

4.4 SUPPORT EQUIPMENT

No.	Device Type	Brand	Series No.	Model	Data Cable	Power Cord
1.	Adapter	HUAWEI	P95216K9471235	HW-050200C02	----	----
2.	Netbook	HP	5CG5192QVB	HP 340G2	----	----
3.	Mobile phone	HUAWEI	H4D9XB13C2615181	HUAWEI Y325-T00	----	----
4.	Router	TP-LINK	---	TL-WAR302	----	----

Notes:

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

5. FACILITIES AND ACCREDITATIONS

5.1 TEST FACILITY

All test facilities used to collect the test data are located at Hongwei Industrial Zone, Bao'an 70 District, Shenzhen, Guangdong, China. The site and apparatus are constructed in conformance with the requirements of ANSI C63.4, CISPR 16-1-1 and other equivalent standards.

5.2 TEST EQUIPMENT LIST

Instrumentation: The following list contains equipment used at CTI for testing.
The calibrations of the measuring instruments, including any accessories that may affect such calibration, are checked frequently to assure their accuracy. Adjustments are made and correction factors applied in accordance with instructions contained in the manual for the measuring instrument.

Equipment used during the tests:

Shielding Room No. 3_Hongwei-Conducted emissions				
Equipment	**Manufacturer**	**Model**	**Series No.**	**Due Date**
Receiver	R&S	ESCI	100435	04/17/2025
LISN	R&S	ENV216	100098	09/18/2025
ISN	TESEQ	ISN T800	30297	12/04/2025
Software-EZ	Farad Technology	--	EMC-CON 3A1.1	--

3M Semi-anechoic Chamber (2)_Hongwei-Radiated emissions				
Equipment	**Manufacturer**	**Model**	**Series No.**	**Due Date**
3M Chamber & Accessory Equipment	TDK	SAC-3	--	01/12/2027
Receiver	R&S	ESR7	101697	09/18/2025
TRILOG Broadband Antenna	Schwarzbeck	VULB9163	9163-401	09/13/2025
Microwave Preamplifier	Tonscend	EMC051845SE	980380	12/04/2025
Horn Antenna	Schwarzbeck	BBHA 9120D	9120D-1869	04/15/2025
Software-EZ	Farad Technology	--	EMEC-3A1-Pre	--

Shielding Room No. 1_Hongwei-Electrostatic discharge (ESD)				
Equipment	**Manufacturer**	**Model**	**Series No.**	**Due Date**
ESD Simulator	TESEQ	NSG437	1182	06/02/2025

3M Semi-anechoic Chamber (1)_Hongwei-Continuous RF electromagnetic radiated field disturbances				
Equipment	**Manufacturer**	**Model**	**Series No.**	**Due Date**
3M Chamber & Accessory Equipment	ETS-LINDGREN	FACT-3	3510	05/19/2025

Signal Generator	R&S	SMB 100B	103084	05/12/2025
Horn Antenna	Schwarzbeck	STLP 9149	0776	06/05/2026
Stacked double Log.-Per. Antenna	Schwarzbeck	STLP9128	9128ES-110	03/21/2026
Directional coupler	BONN	BDC 1060-40/500	2128343-04	11/10/2025
RF switch	R&S	OSP220	102205	--
Power Amplifier	BONN	BLMA 1060-100	2113427	07/21/2025
Power Amplifier	R&S	BBA 150-BC500	104743	05/30/2025
Power Probe	R&S	NRP6A	103343	06/24/2025
Power Probe	R&S	NRP6A	103342	06/24/2025
Software-EMC-32	R&S	--	V10.60.20-Y267 _FU	--

Shielding Room No. 1_Hongwei-Electrical fast transients/burst (EFT/B)				
Equipment	**Manufacturer**	**Model**	**Series No.**	**Due Date**
Electric fast transient pulse group simulator	3ctest	EFT 600T	ES027000923002	04/27/2025
Capacitive coupling clamp	3ctest	CCC100	CCC22090019	01/02/2025

Shielding Room No. 1_Hongwei-Surges				
Equipment	**Manufacturer**	**Model**	**Series No.**	**Due Date**
Surge generator	3ctest	SG-5010H	EC5531306	01/28/2025

Shielding Room No. 2_Hongwei-Continuous induced RF disturbances				
Equipment	**Manufacturer**	**Model**	**Series No.**	**Due Date**
Conducted immunity test system	TESEQ	NSG 4070C-80	59089	06/25/2025
CDN	TESEQ	CDN M516AS	59088	09/01/2025
Attenuator	BIRD	75-A-MFN-06	0543	06/24/2025
EM-Clamp	EM TEST	EM101	35770	03/07/2025
Current injection probe	FISCHER	F-120-6A	120510	09/18/2025
Software-NSG 4070 Control Pgram	TESEQ	--	1.4.0	--

5.3 LABORATORY ACCREDITATIONS AND LISTINGS

The measuring equipment utilized to perform the tests documented in this report has been calibrated once a year or in accordance with the manufacturer's recommendations and is traceable under the ISO/IEC 17025 to international or national standards. Equipment has been calibrated by accredited calibration laboratories.

6. CONDUCTED EMISSIONS

6.1 LIMITS

Requirements for asymmetric mode conducted emissions from Class B equipment

Frequency range (MHz)	Voltage Limits dB(μV)		Current Limits dB(μA)	
	Quasi-peak	Average	Quasi-peak	Average
0,15 to 0,50	84-74	74-64	40-30	30-20
0,50 to 30	74	64	30	20

NOTE: 1. The lower limit shall apply at the transition frequencies.
2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 to 0.50 MHz.

6.2 BLOCK DIAGRAM OF TEST SETUP

For Wired Network port:

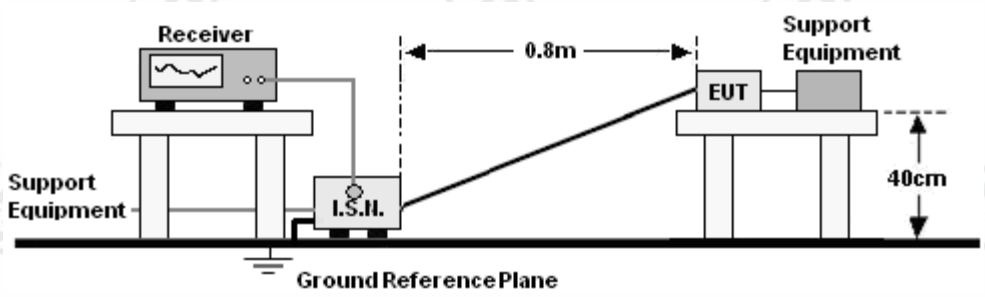


Table Top

6.3 TEST PROCEDURE

For Wired Network port:(Table Top**):**

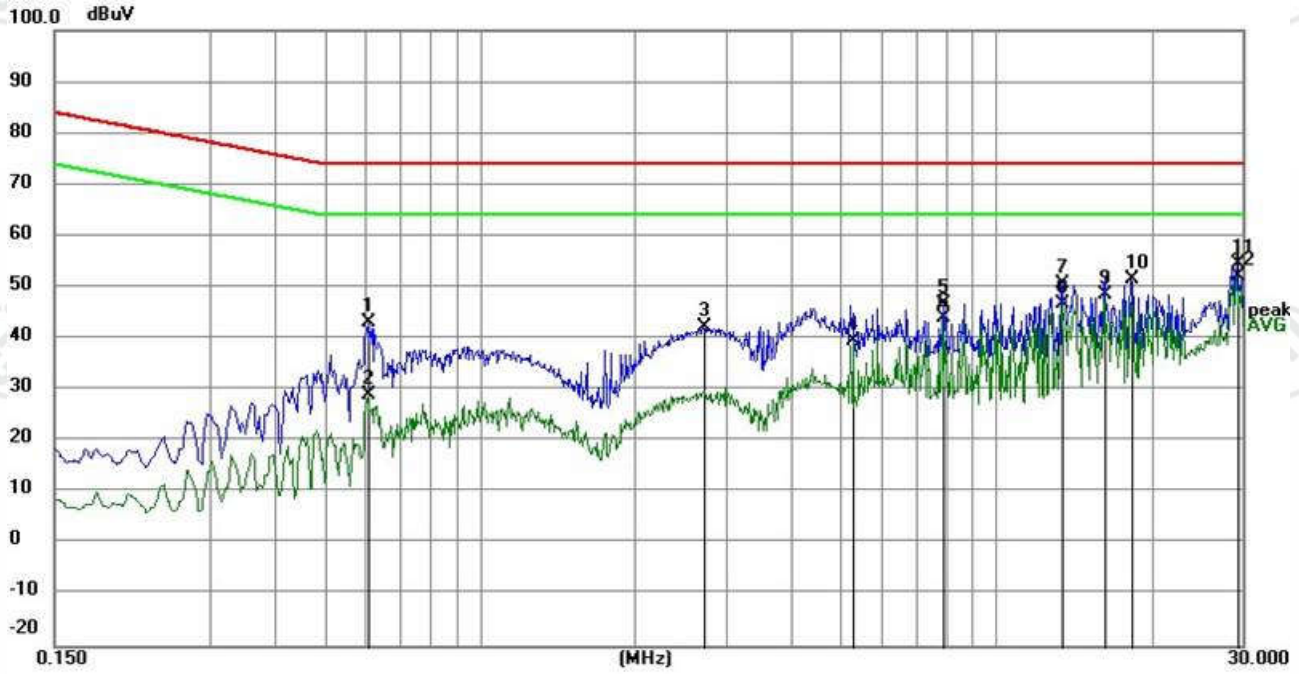
a. The Product was placed on a non-conductive table 0.4 m above the horizontal ground reference plane, and 0.4 m from the vertical ground reference plane, and connected to the telecommunication port through Impedance Stability Network (I.S.N).

b. The RBW of the receiver was set at 9 kHz in 150 kHz ~ 30MHz with Peak and AVG detector in Max Hold mode. Run the receiver's pre-scan to record the maximum disturbance generated from Product in all power lines in the full band.

c. For each frequency whose maximum record was higher or close to limit, measure its QP and AVG values and record.

6.4 GRAPHS AND DATA

Product	:	seeed studio reCamera 2002 Series			
Model/Type reference	:	reCamera 2002w 64GB			
Power	:	AC 230V/50Hz	**Temperature**	:	23℃
Mode	:	①	**Humidity**	:	53%R.H.
Note	:	100Mbps	**Press**	:	101KPa



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector
1		0.6090	33.58	9.50	43.08	74.00	-30.92	QP
2		0.6090	19.45	9.50	28.95	64.00	-35.05	AVG
3		2.7195	32.68	9.46	42.14	74.00	-31.86	QP
4		5.2980	30.11	9.50	39.61	64.00	-24.39	AVG
5		7.9215	37.27	9.53	46.80	74.00	-27.20	QP
6		7.9215	34.47	9.53	44.00	64.00	-20.00	AVG
7		13.3575	41.06	9.53	50.59	74.00	-23.41	QP
8		13.4205	37.07	9.53	46.60	64.00	-17.40	AVG
9		16.2285	39.18	9.47	48.65	64.00	-15.35	AVG
10		18.2445	42.18	9.41	51.59	74.00	-22.41	QP
11		29.2335	45.46	9.03	54.49	74.00	-19.51	QP
12	*	29.2335	43.12	9.03	52.15	64.00	-11.85	AVG

Note:
1. Margin=Measurement-Limit.
2. Measurement=Reading Level+Correct Factor.

7. RADIATED EMISSIONS

7.1 LIMITS

30MHz ~ 1GHz(3m):

Requirements for radiated emissions for Class B equipment

Frequency (MHz)	Quasi-peak limits at 3m dB(μV/m)
30-230	40
230-1000	47

Above 1G(3m):

Requirements for radiated emissions for Class B equipment

Frequency (GHz)	limit above 1GHz at 3m dB(μV/m)	
	Average	peak
1-3	50	70
3-6	54	74

NOTE: The lower limit shall apply at the transition frequency.

7.2 BLOCK DIAGRAM OF TEST SETUP

30MHz ~ 1GHz(3m):

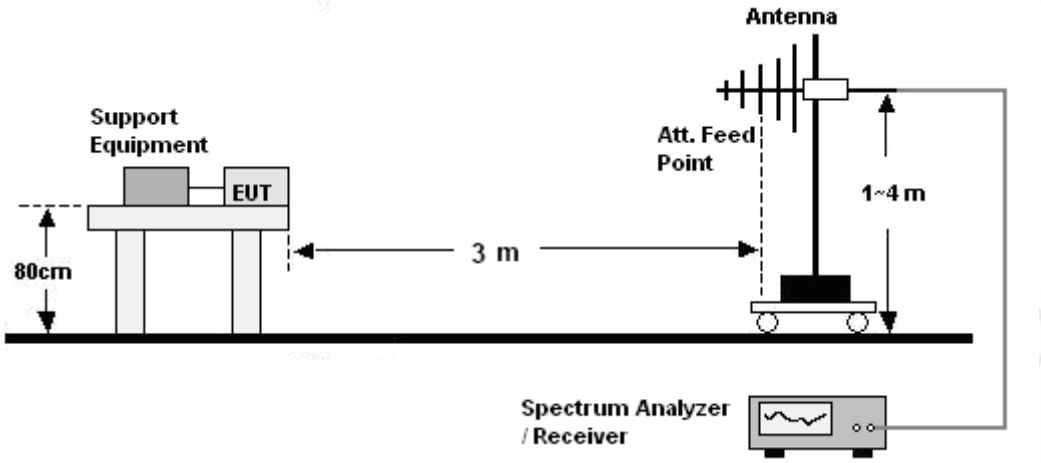


Table Top

Above 1GHz:

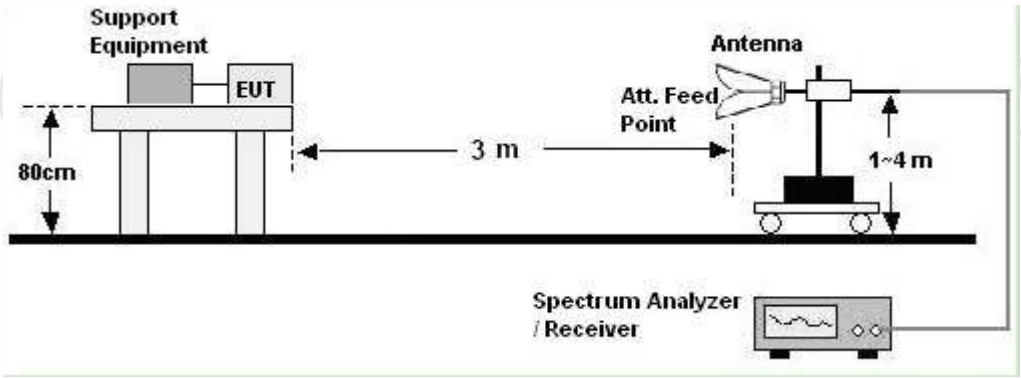


Table Top

7.3 TEST PROCEDURE

30MHz ~ 1GHz(Table Top**):**
a. The Product was placed on the non-conductive turntable 0.8 m above the ground at a chamber.

b. Set the spectrum analyzer/receiver in Peak detector, Max Hold mode, and 120 kHz RBW. Record the maximum field strength of all the pre-scan process in the full band when the antenna is varied between 1~4 m in both horizontal and vertical, and the turntable is rotated from 0 to 360 degrees.

c. For each frequency whose maximum record was higher or close to limit, measure its QP value: vary the antenna's height and rotate the turntable from 0 to 360 degrees to find the height and degree where Product radiated the maximum emission, then set the test frequency analyzer/receiver to QP Detector and specified bandwidth with Maximum Hold Mode, and record the maximum value.

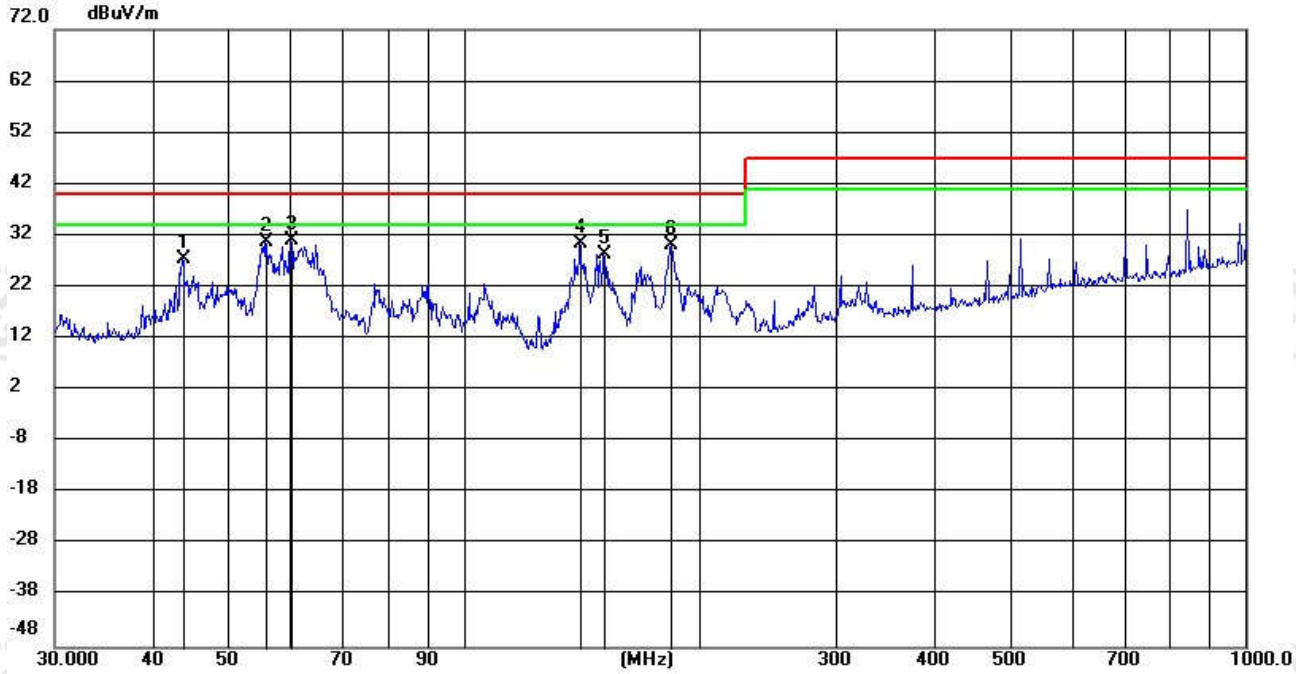
Above 1GHz(Table Top**):**
a. The Product was placed on the non-conductive turntable 0.8 m above the ground at a chamber.

b. Set the spectrum analyzer/receiver in Peak detector, Max Hold mode, and 1MHz RBW. Record the maximum field strength of all the pre-scan process in the full band when the antenna is varied in both horizontal and vertical, and the turntable is rotated from 0 to 360 degrees.

c. For each frequency whose maximum record was higher or close to limit, measure its AV value: rotate the turntable from 0 to 360 degrees to find the degree where Product radiated the maximum emission, then set the test frequency analyzer/receiver to AV value and specified bandwidth with Maximum Hold Mode, and record the maximum value.

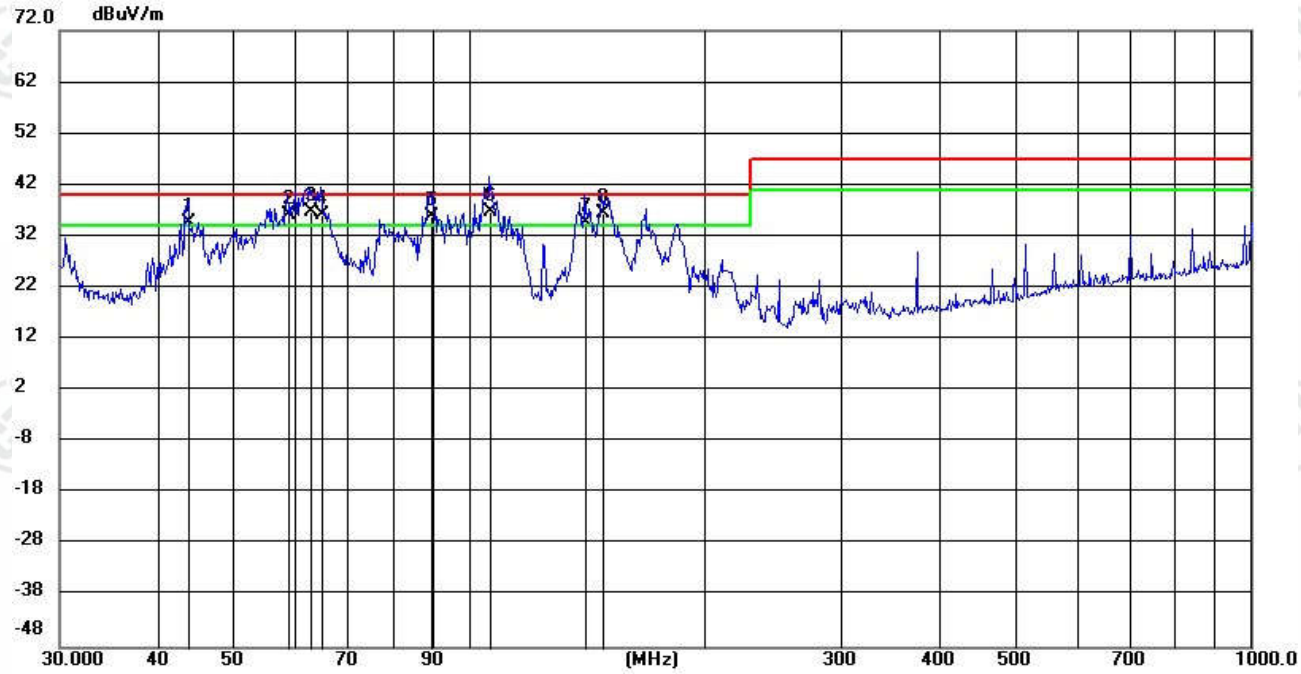
7.4 GRAPHS AND DATA

Product	:	seeed studio reCamera 2002 Series			
Model/Type reference	:	reCamera 2002w 64GB			
Power	:	AC 230V/50Hz	**Temperature**	:	24℃
Mode	:	①	**Humidity**	:	54%R.H.
Polarization	:	Horizontal	**Press**	:	101KPa



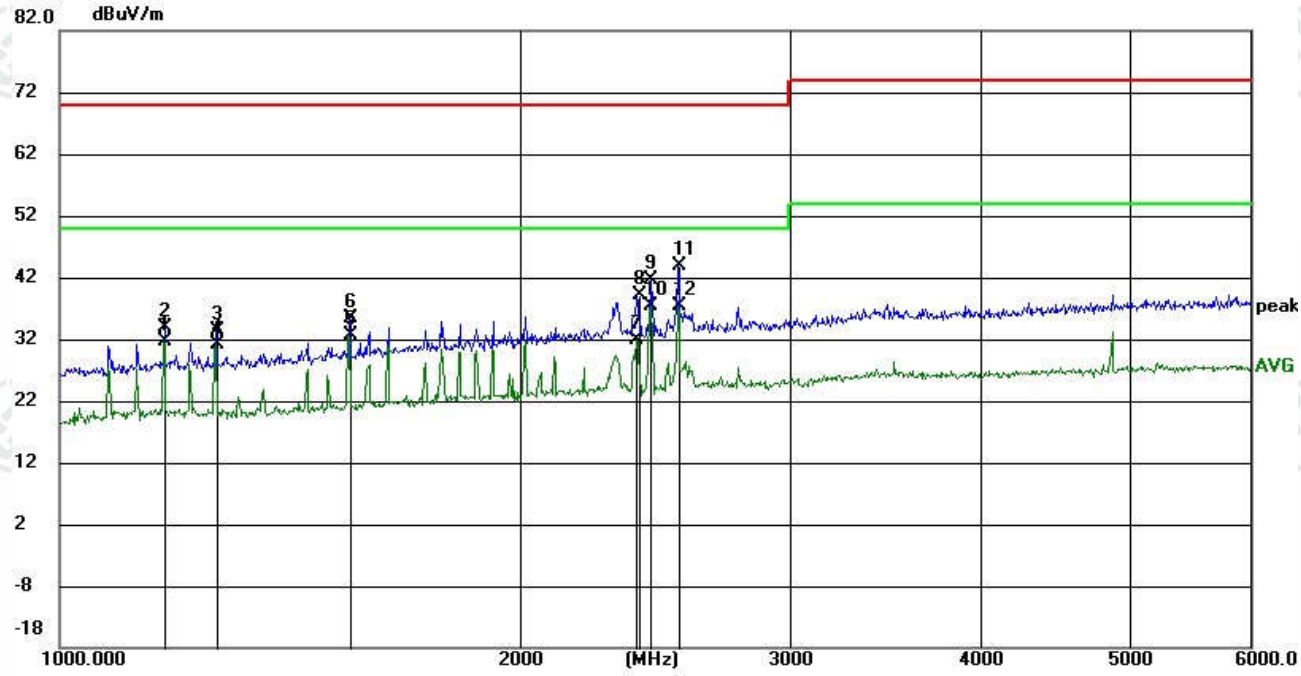
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		Antenna Height	Table Degree
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree
1		43.7811	13.71	13.60	27.31	40.00	-12.69	QP	100	290
2		55.9026	17.44	13.19	30.63	40.00	-9.37	QP	100	247
3	*	60.2167	18.06	12.90	30.96	40.00	-9.04	QP	100	247
4		141.1811	21.18	9.14	30.32	40.00	-9.68	QP	199	83
5		151.5706	19.15	9.30	28.45	40.00	-11.55	QP	199	73
6		184.4898	18.53	11.59	30.12	40.00	-9.88	QP	199	250

Product	:	seeed studio reCamera 2002 Series			
Model/Type reference	:	reCamera 2002w 64GB			
Power	:	AC 230V/50Hz	**Temperature**	:	24℃
Mode	:	①	**Humidity**	:	54%R.H.
Polarization	:	Vertical	**Press**	:	101KPa



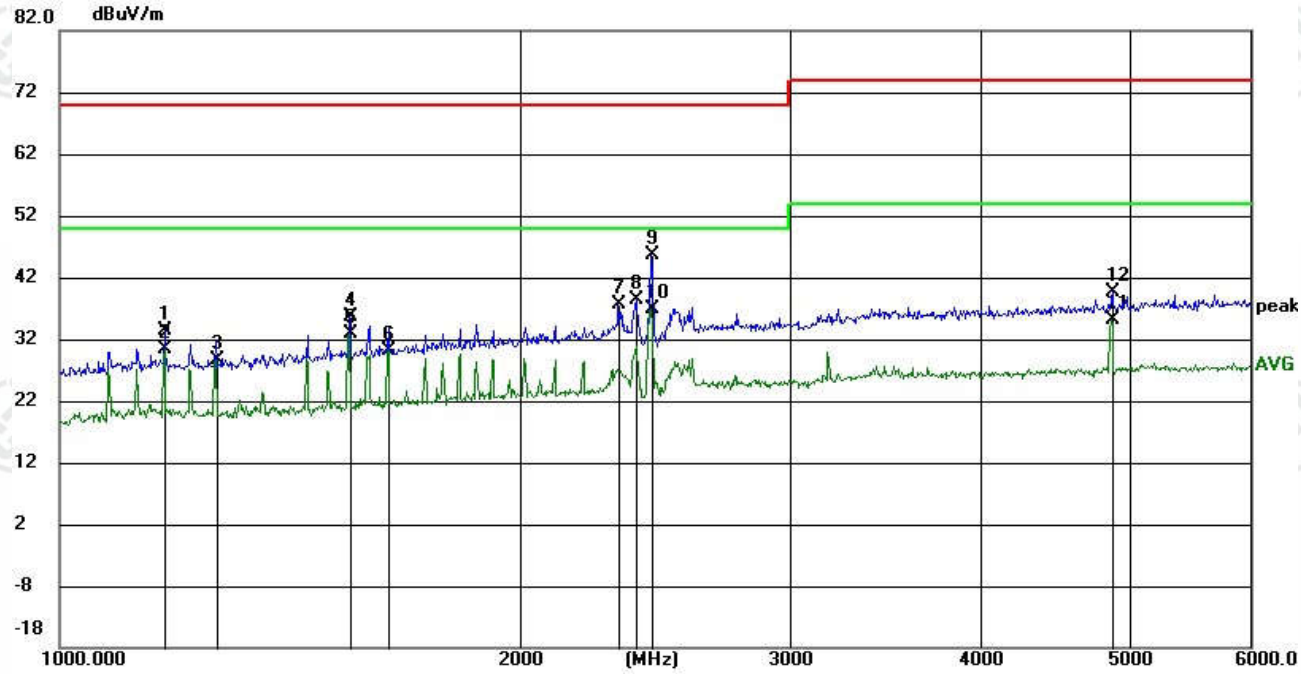
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		Antenna Height	Table Degree
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree
1	!	43.7965	21.00	13.60	34.60	40.00	-5.40	QP	100	328
2	!	58.7258	23.17	13.03	36.20	40.00	-3.80	QP	100	360
3	!	62.7606	24.54	12.26	36.80	40.00	-3.20	QP	100	7
4	!	64.7615	24.34	11.76	36.10	40.00	-3.90	QP	100	252
5	!	89.5586	24.34	11.56	35.90	40.00	-4.10	QP	100	306
6	*	106.7026	23.90	13.00	36.90	40.00	-3.10	QP	100	252
7	!	141.2059	25.46	9.14	34.60	40.00	-5.40	QP	100	295
8	!	148.1031	27.43	9.17	36.60	40.00	-3.40	QP	100	7

Product	:	seeed studio reCamera 2002 Series			
Model/Type reference	:	reCamera 2002w 64GB			
Power	:	AC 230V/50Hz	**Temperature**	:	24℃
Mode	:	①	**Humidity**	:	54%R.H.
Polarization	:	Horizontal	**Press**	:	101KPa



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		Antenna Height	Table Degree
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree
1		1171.730	49.24	-17.49	31.75	50.00	-18.25	AVG	100	130
2		1172.150	51.38	-17.49	33.89	70.00	-36.11	peak	100	215
3		1265.575	50.24	-16.79	33.45	70.00	-36.55	peak	100	79
4		1265.575	47.84	-16.79	31.05	50.00	-18.95	AVG	100	79
5		1546.963	47.40	-14.67	32.73	50.00	-17.27	AVG	100	249
6		1547.101	50.12	-14.67	35.45	70.00	-34.55	peak	100	95
7		2383.038	40.86	-8.93	31.93	50.00	-18.07	AVG	199	316
8		2389.666	48.12	-8.89	39.23	70.00	-30.77	peak	199	350
9		2435.922	50.23	-8.62	41.61	70.00	-28.39	peak	199	58
10		2435.922	45.90	-8.62	37.28	50.00	-12.72	AVG	199	58
11		2537.268	52.09	-8.10	43.99	70.00	-26.01	peak	100	352
12	*	2537.268	45.53	-8.10	37.43	50.00	-12.57	AVG	100	352

Product	:	seeed studio reCamera 2002 Series			
Model/Type reference	:	reCamera 2002w 64GB			
Power	:	AC 230V/50Hz	**Temperature**	:	24℃
Mode	:	①	**Humidity**	:	54%R.H.
Polarization	:	Vertical	**Press**	:	101KPa



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		Antenna Height	Table Degree
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree
1		1171.940	50.94	-17.49	33.45	70.00	-36.55	peak	200	182
2		1171.940	47.79	-17.49	30.30	50.00	-19.70	AVG	200	182
3		1265.802	45.49	-16.79	28.70	50.00	-21.30	AVG	100	92
4		1546.963	50.18	-14.67	35.51	70.00	-34.49	peak	200	165
5		1546.963	47.47	-14.67	32.80	50.00	-17.20	AVG	200	165
6		1640.749	44.15	-13.96	30.19	50.00	-19.81	AVG	200	352
7		2321.091	46.97	-9.32	37.65	70.00	-32.35	peak	200	10
8		2381.331	47.38	-8.96	38.42	70.00	-31.58	peak	100	7
9		2438.324	54.16	-8.60	45.56	70.00	-24.44	peak	200	148
10	*	2438.324	45.43	-8.60	36.83	50.00	-13.17	AVG	200	148
11		4874.002	35.86	-0.63	35.23	54.00	-18.77	AVG	100	245
12		4877.060	40.17	-0.62	39.55	74.00	-34.45	peak	100	245

Note:
1. Margin=Measurement-Limit.
2. Measurement=Reading Level+Correct Factor.

8. IMMUNITY TEST

General Performance Criteria	
Product Standard	**EN 55035:2017+A11:2020 clause 8**
CRITERION A	The equipment shall continue to operate as intended without operator intervention. No degradation of performance, loss of function or change of operating state is allowed below a performance level specified by the manufacturer when the equipment is used as intended. The performance level may be replaced by a permissible loss of performance. If the minimum performance level or the permissible performance loss is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and by what the user may reasonably expect from the equipment if used as intended.
CRITERION B	During the application of the disturbance, degradation of performance is allowed. However, no unintended change of actual operating state or stored data is allowed to persist after the test. After the test, the equipment shall continue to operate as intended without operator intervention; no degradation of performance or loss of function is allowed, below a performance level specified by the manufacturer, when the equipment is used as intended. The performance level may be replaced by a permissible loss of performance. If the minimum performance level (or the permissible performance loss), or recovery time, is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and by what the user may reasonably expect from the equipment if used as intended.
CRITERION C	Loss of function is allowed, provided the function is self-recoverable, or can be restored by the operation of the controls by the user in accordance with the manufacturer's instructions. A reboot or re-start operation is allowed. Information stored in non-volatile memory, or protected by a battery backup, shall not be lost.

8.1 ELECTROSTATIC DISCHARGES (ESD)

8.1.1 TEST SPECIFICATION

Basic Standard	:	EN 55035 & IEC 61000-4-2
Test Port	:	Enclosure port
Discharge Impedance	:	330 ohm / 150 pF
Discharge Mode	:	Single Discharge
Discharge Period	:	one second between each discharge

8.1.2 BLOCK DIAGRAM OF TEST SETUP

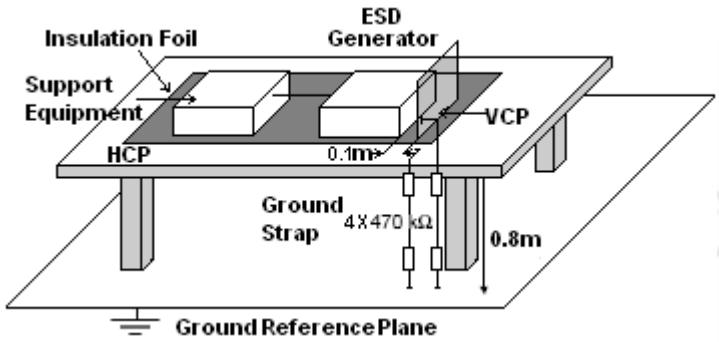


Table Top

8.1.3 TEST PROCEDURE

a. Electrostatic discharges were applied only to those points and surfaces of the product that are accessible to users during normal operation.

b. The test was performed with at least ten single discharges on the pre-selected points in the most sensitive polarity.

c. The time interval between two successive single discharges was at least 1 second.

d. The ESD generator was held perpendicularly to the surface to which the discharge was applied, and the return cable was at least 0.2 meters from the Product.

e. Contact discharges were applied to the non-insulating coating, with the pointed tip of the generator penetrating the coating and contacting the conducting substrate.

f. Air discharges were applied with the round discharge tip of the discharge electrode approaching the Product as fast as possible (without causing mechanical damage) to touch the Product. After each discharge, the ESD generator was removed from the product and re-triggered for a new single discharge. The test was repeated until all discharges were complete.

g. At least ten single discharges (in the most sensitive polarity) were applied to the Horizontal Coupling Plane at points on each side of the Product. The ESD generator was positioned vertically at a distance of 0.1 meters from the Product with the discharge electrode touching the HCP.

h. At least ten single discharges (in the most sensitive polarity) were applied to the center of one vertical edge of the Vertical Coupling Plane in sufficiently different positions that the four faces of the product were completely illuminated. The VCP (dimensions 0.5m x 0.5m) was placed vertically to and 0.1 meters from the product.

8.1.4 RESULTS & PERFORMANCE

Product	:	seeed studio reCamera 2002 Series			
Model/Type reference	:	reCamera 2002w 64GB			
Power	:	AC 230V/50Hz	**Temperature**	:	23℃
Mode	:	①	**Humidity**	:	54%R.H.
Press	:	101kPa			

Discharge Method	Discharge Position	Voltage(±kV)	Min. No. of Discharge per polarity(Each Point)	Performance Criterion	Test Result
Contact Discharge	Conductive Surfaces	4	10	B	B*
Contact Discharge	Indirect Discharge HCP	4	10	B	A
Contact Discharge	Indirect Discharge VCP	4	10	B	A
Air Discharge	Apertures and Insulating Surfaces	8	10	B	B*

Note*: The product stopped working during the test, but it can recover by itself after testing.

8.2 CONTINUOUS RF ELECTROMAGNETIC RADIATED FIELD DISTURBANCES

8.2.1 TEST SPECIFICATION

Basic Standard	:	EN 55035 & IEC 61000-4-3
Test Port	:	Enclosure port
Sweep Step	:	1%
Dwell Time	:	1s
Modulation	:	1 kHz 80% AM

8.2.2 BLOCK DIAGRAM OF TEST SETUP

80-1000MHz:

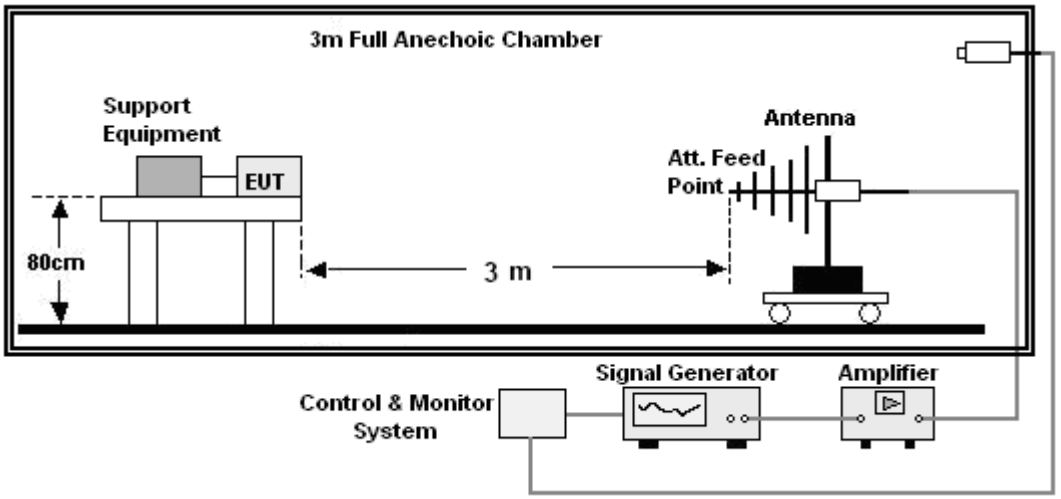


Table Top

Above 1000MHz:

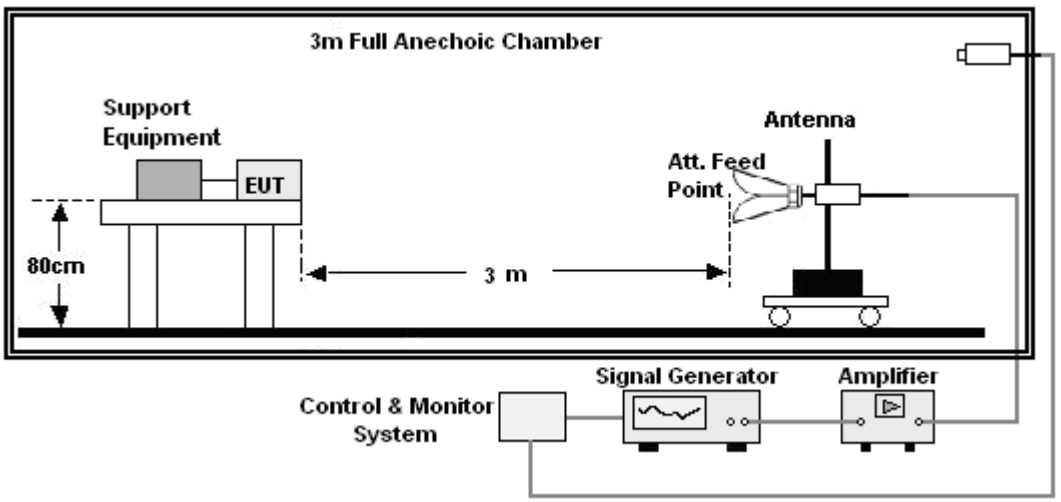


Table Top

8.2.3 TEST PROCEDURE

a. The testing was performed in a fully anechoic chamber. The transmit antenna was located at a distance of 3 meters from the Product.

b. The frequency range is swept from 80MHz to 1000MHz, 1800MHz, 2600MHz, 3500MHz, 5000MHz with the signal 80% amplitude modulated with a 1 kHz sine wave. The rate of

sweep did not exceed 1.5x 10^{-3} decade/s. Where the frequency range is swept incrementally, the step size was 1%.

c. The test was performed with the Product exposed to both vertically and horizontally polarized fields on each of the four sides.

8.2.4 RESULTS & PERFORMANCE

Product	:	seeed studio reCamera 2002 Series			
Model/Type reference	:	reCamera 2002w 64GB			
Power	:	AC 230V/50Hz	**Temperature**	:	22℃
Mode	:	①	**Humidity**	:	53%R.H.
Press	:	101kPa			

Frequency(MHz)	Position	Field Strength(V/m)	Performance Criterion	Test Result
80 - 1000	Front,Right,Back,Left	3	A	A
1800	Front,Right,Back,Left	3	A	A
2600	Front,Right,Back,Left	3	A	A
3500	Front,Right,Back,Left	3	A	A
5000	Front,Right,Back,Left	3	A	A

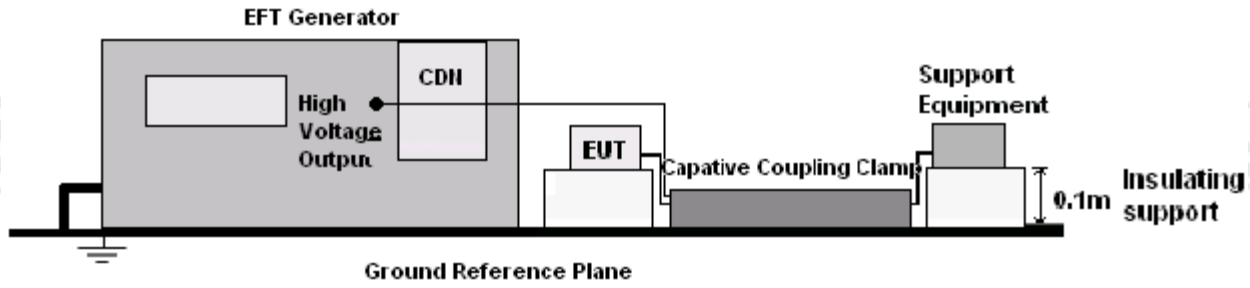
8.3 ELECTRICAL FAST TRANSIENTS/BURST (EFT/B)

8.3.1 TEST SPECIFICATION

Basic Standard	:	EN 55035 & IEC 61000-4-4
Test Port	:	input Signal port
Frequency	:	5kHz
Repeat Rate	:	15 ms
Burst duration	:	300ms
Duration	:	2Min
Wave Spec.	:	5/50 ns

8.3.2 BLOCK DIAGRAM OF TEST SETUP

For signal ports**:**



8.3.3 TEST PROCEDURE

a. The product and support units were located on a non-conductive table above ground reference plane.

b. A 0.5m-long power cord was attached to product during the test.

8.3.4 RESULTS & PERFORMANCE

Product	:	seeed studio reCamera 2002 Series			
Model/Type reference	:	reCamera 2002w 64GB			
Power	:	AC 230V/50Hz	**Temperature**	:	23℃
Mode	:	①	**Humidity**	:	50%R.H.
Press	:	101kPa			

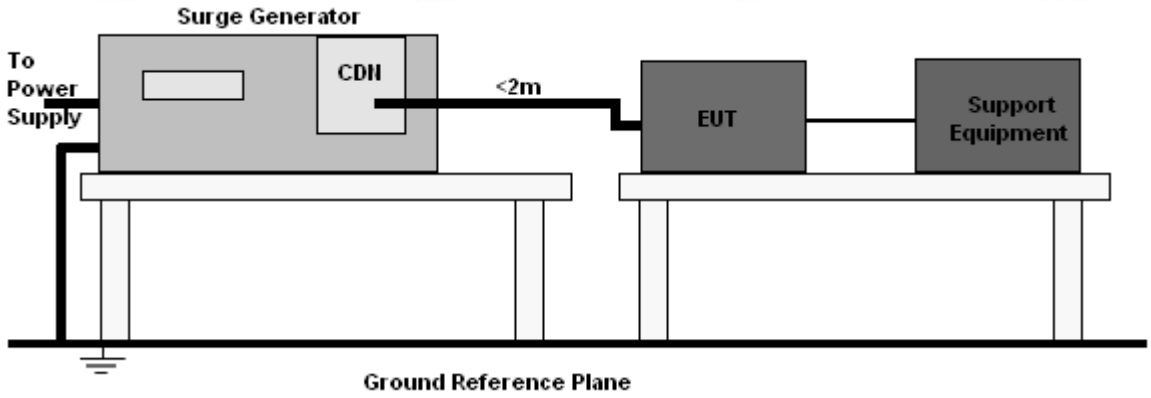
Coupling	Voltage(kV)	Polarity	Performance Criterion	Test Result
Signal port	0.5	±	B	A

8.4 SURGES

8.4.1 TEST SPECIFICATION

Basic Standard	:	EN 55035 & IEC 61000-4-5
Test Port	:	Signal port
Repeat Rate	:	1 pulse / 60s
Evaluation Times / Point	:	5 pulses for each polarity
Wave Spec.	:	1.2/50us & 8/20us

8.4.2 BLOCK DIAGRAM OF TEST SETUP



8.4.3 TEST PROCEDURE

a. The surge is to be applied to the product power supply terminals via the capacitive coupling network. Decoupling networks are required in order to avoid possible adverse effects on equipment not under test that may be powered by the same lines, and to provide sufficient decoupling impedance to the surge wave.

b. The power cord between the product and the coupling/decoupling networks shall be 2 meters in length (or shorter). Interconnection line between the product and the coupling/decoupling networks shall be 2 meters in length (or shorter).

8.4.4 RESULTS & PERFORMANCE

Product	:	seeed studio reCamera 2002 Series			
Model/Type reference	:	reCamera 2002w 64GB			
Power	:	AC 230V/50Hz	**Temperature**	:	23℃
Mode	:	①	**Humidity**	:	50%R.H.
Press	:	101kPa			

Coupling	Voltage(kV)	Polarity	Phase Angle	Performance Criterion	Test Result
Signal port	1	±	---	C	A

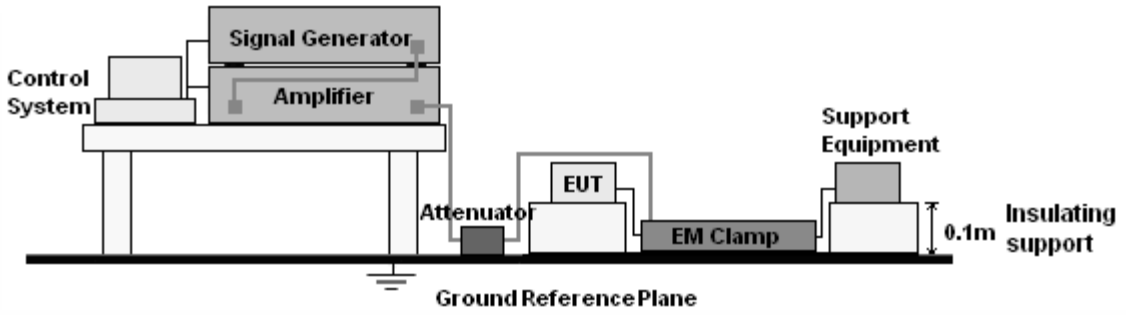
8.5 CONTINUOUS INDUCED RF DISTURBANCES

8.5.1 TEST SPECIFICATION

Basic Standard	:	EN 55035 & IEC 61000-4-6
Test Port	:	input Signal port
Sweep Step	:	1%
Dwell Time	:	1s
Modulation	:	1 kHz 80% AM

8.5.2 BLOCK DIAGRAM OF TEST SETUP

For signal ports:



8.5.3 TEST PROCEDURE

For signal ports:

a. The product and support units were located at a ground reference plane with the interposition of a 0.1 m thickness insulating support, and the telecommunication port under test was connected to support units through the current clamp.

b. The frequency range is swept from 150 kHz to 80MHz, with the signal 80% amplitude modulated with a 1 kHz sine wave. The rate of sweep did not exceed 1.5x 10^{-3} decade/s. Where the frequency range is swept incrementally, the step size was 1% of fundamental.

c. The dwell time at each frequency shall be not less than the time necessary for the Product to be able to respond.

d. Test level varies of changes linearly with respect to the logarithm of the frequency in the range10MHz to 30MHz.

8.5.4 RESULTS & PERFORMANCE

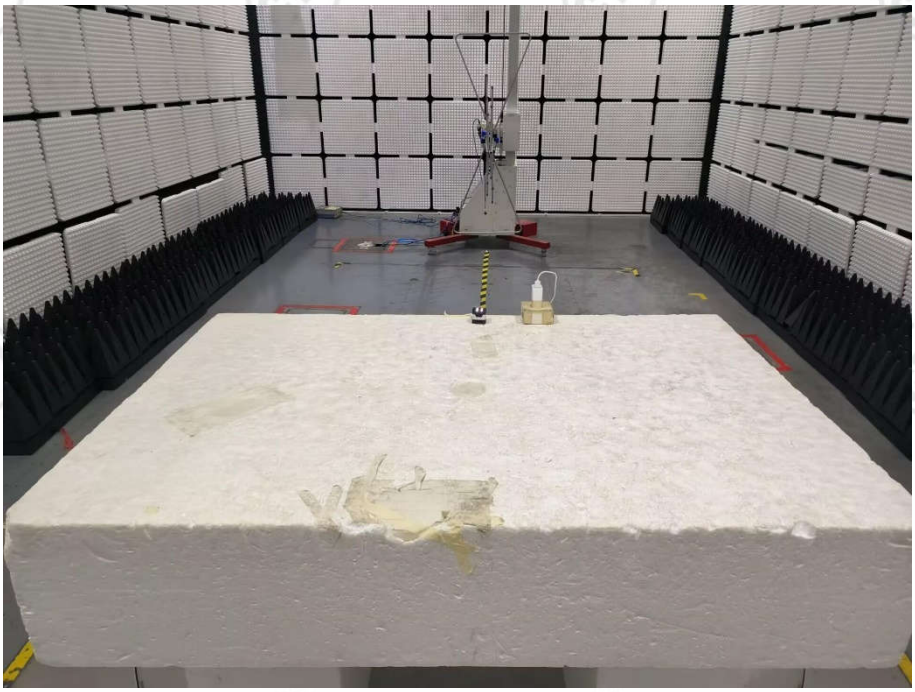
Product	:	seeed studio reCamera 2002 Series			
Model/Type reference	:	reCamera 2002w 64GB			
Power	:	AC 230V/50Hz	**Temperature**	:	24℃
Mode	:	①	**Humidity**	:	55%R.H.
Press	:	101kPakPa			

Inject Line	Frequency(MHz)	Voltage Level(V r.m.s.)	Performance Criterion	Test Result
Signal port	0.15 to 10	3	A	A
Signal port	10 to 30	3 to 1	A	A
Signal port	30 to 80	1	A	A

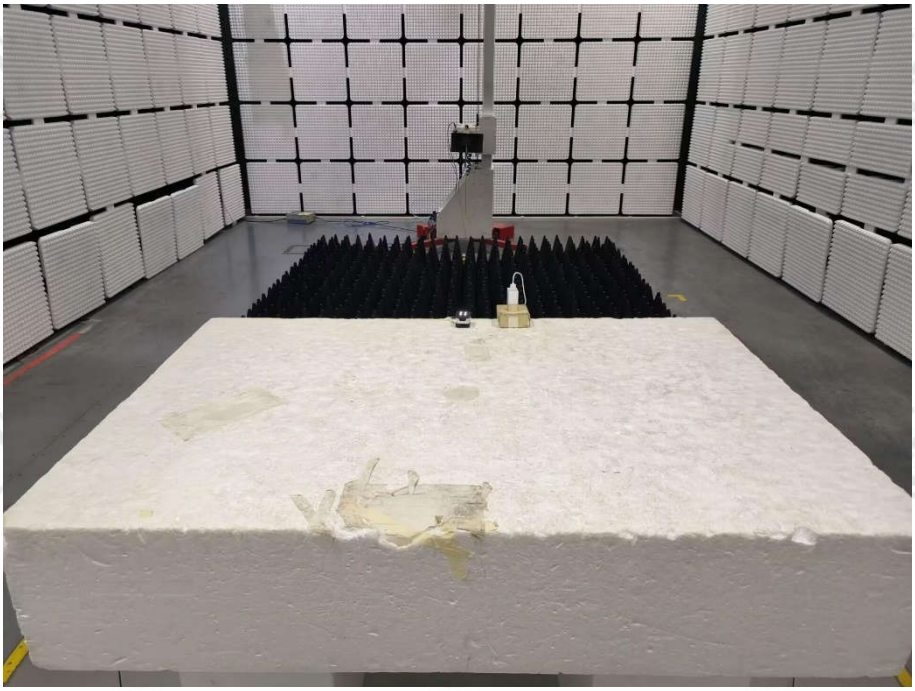
APPENDIX 1 PHOTOGRAPHS OF TEST SETUP



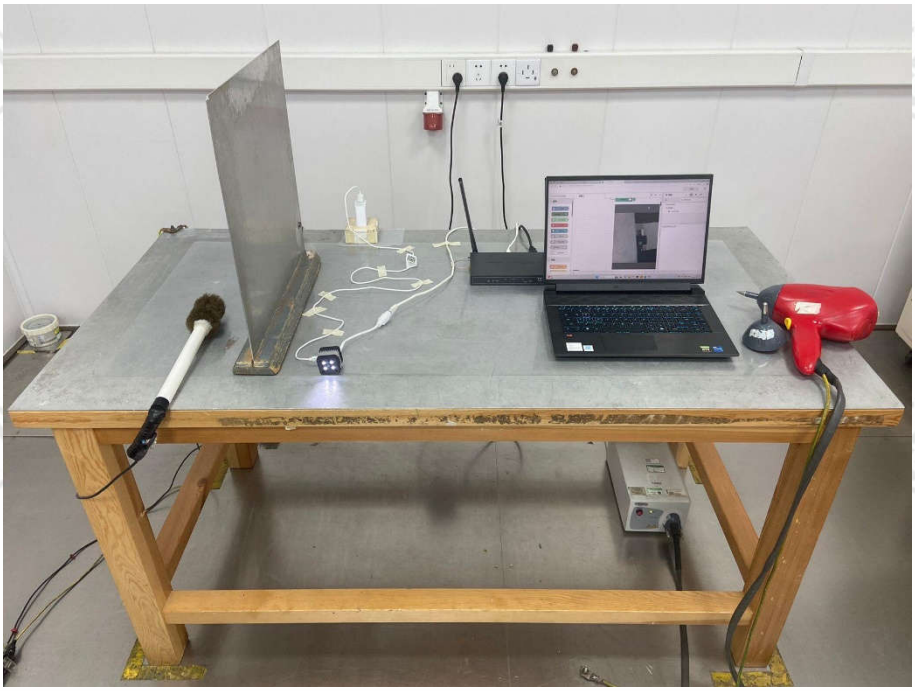
Conducted emissions Test Setup-1



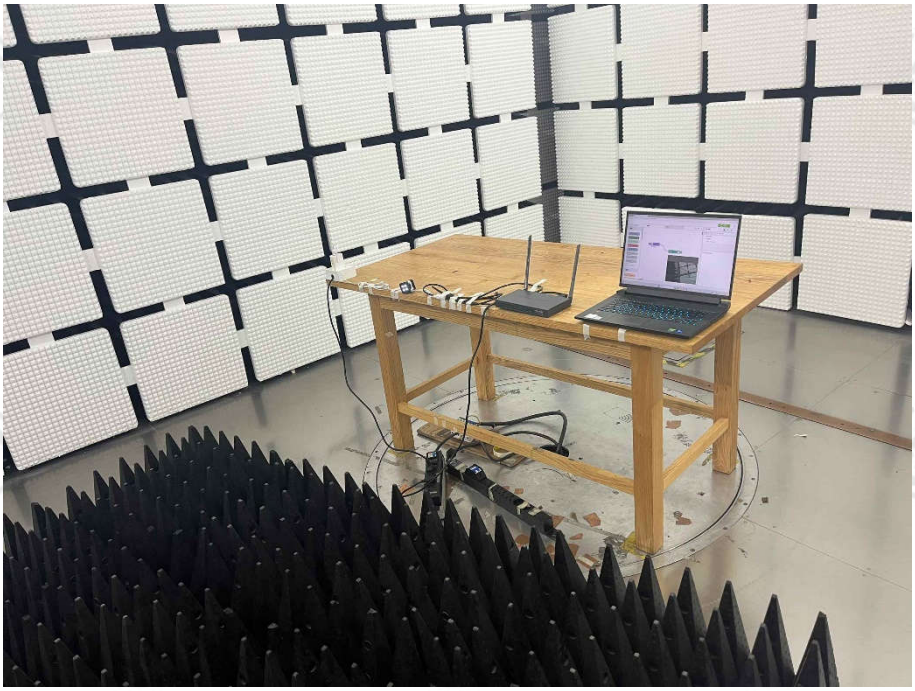
Radiated emissions Test Setup-1



Radiated emissions Test Setup-2



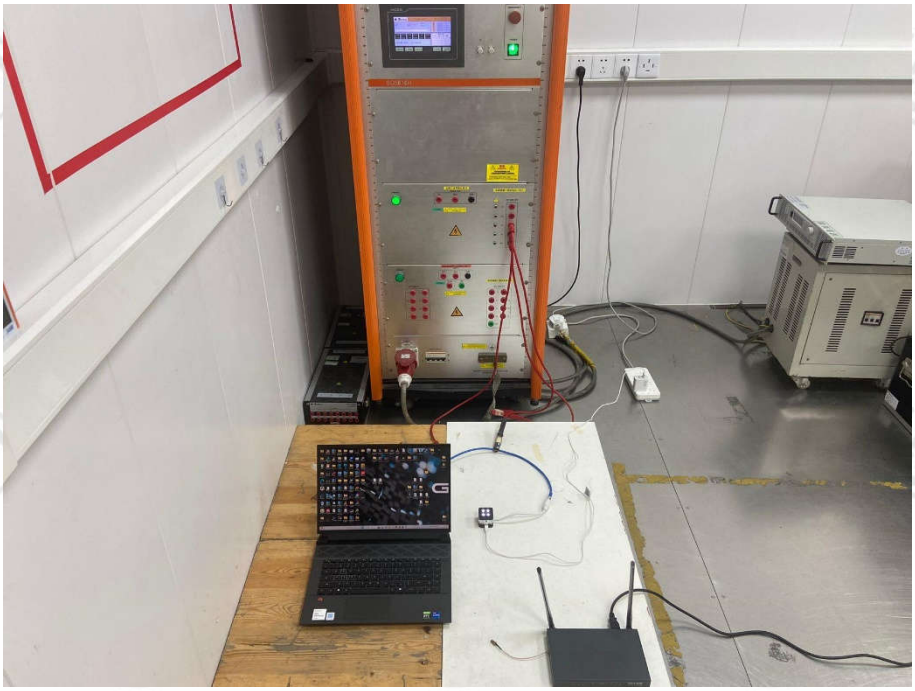
Electrostatic discharge Test Setup-1



Continuous RF electromagnetic radiated field disturbances Test Setup-1



Electrical fast transients burst Test Setup-1



Surges Test Setup-1

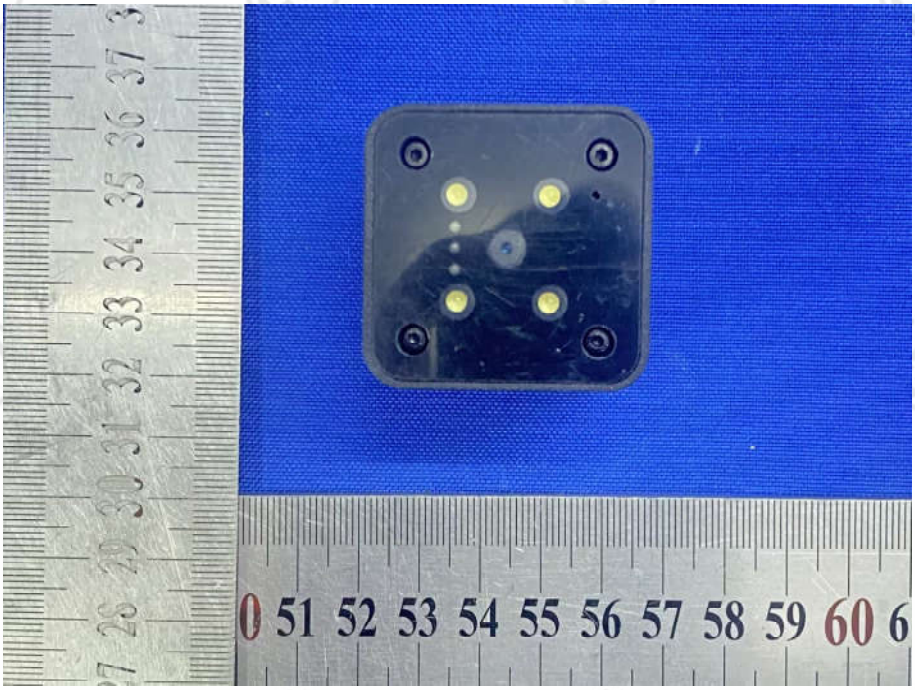


Continuous induced RF disturbances Test Setup-1

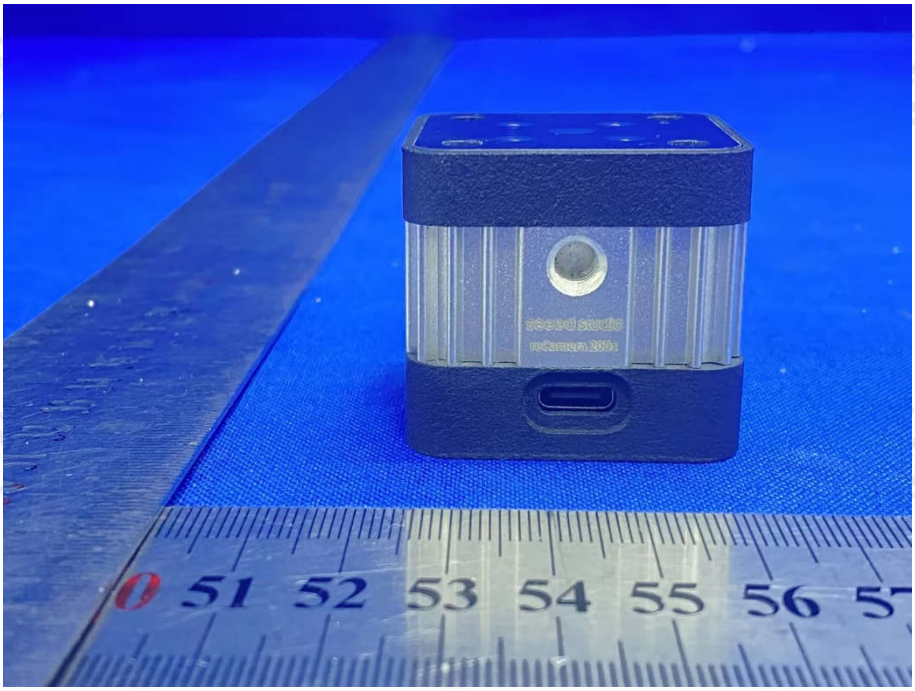
APPENDIX 2 PHOTOGRAPHS OF PRODUCT



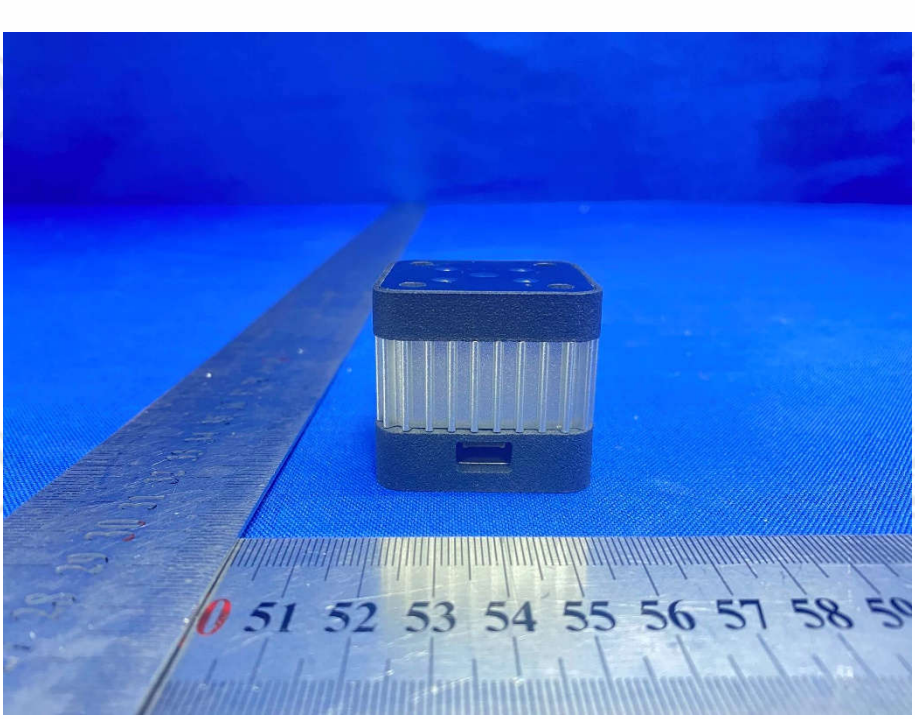
View Of Product-01



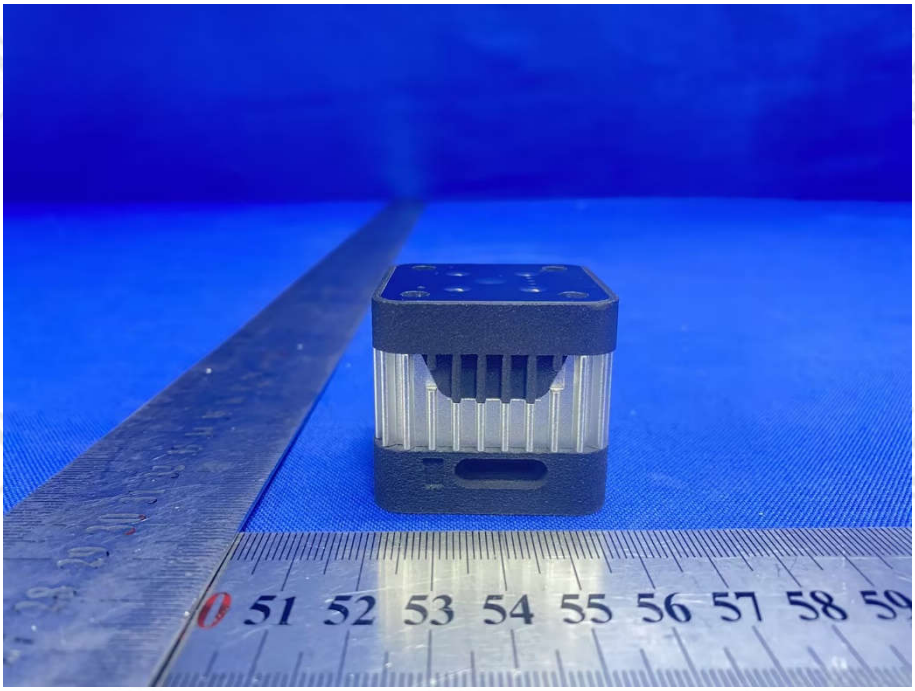
View Of Product-02



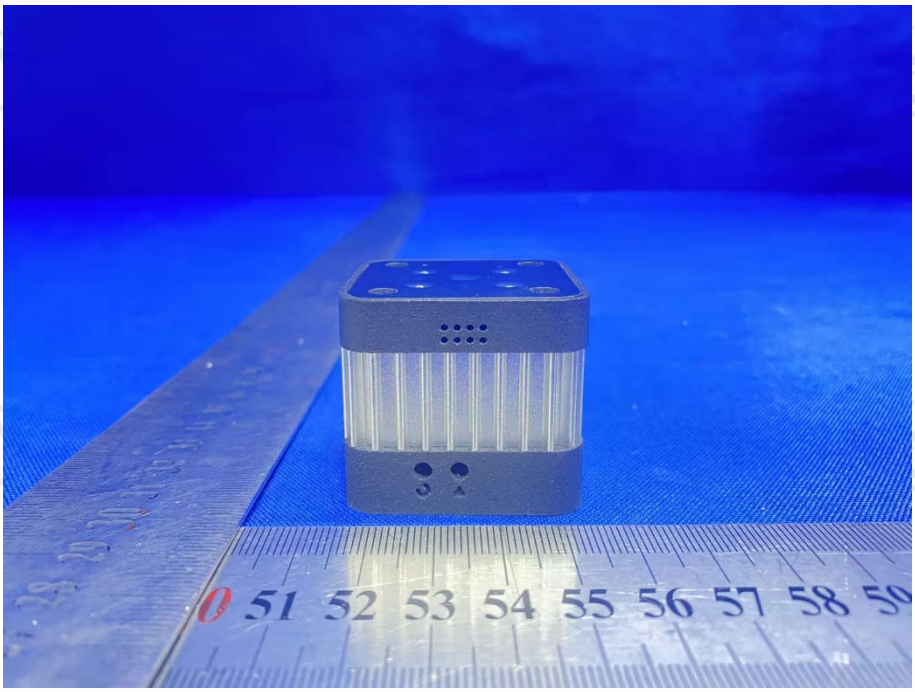
View Of Product-03



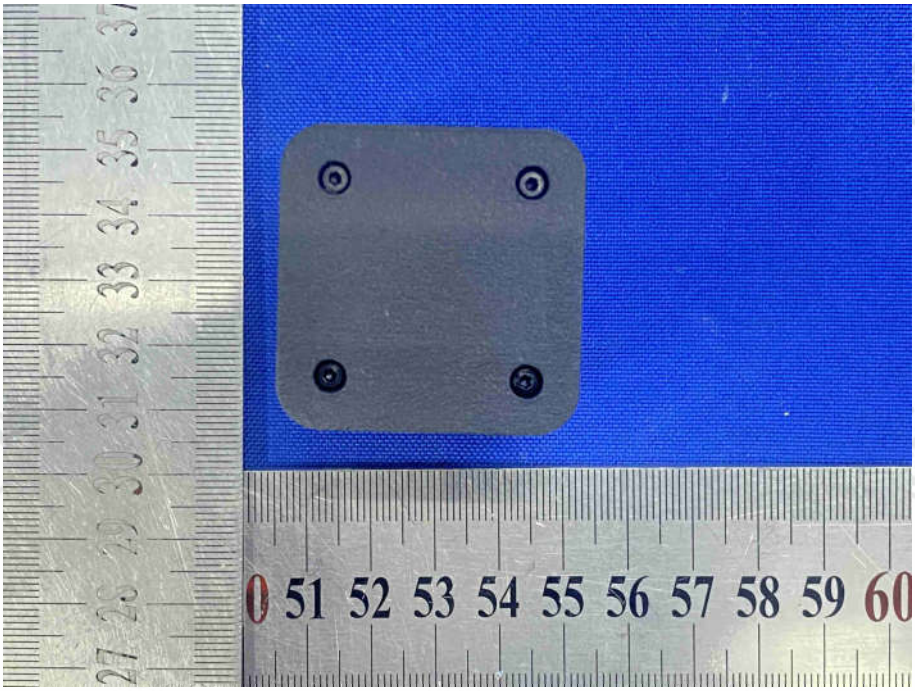
View Of Product-04



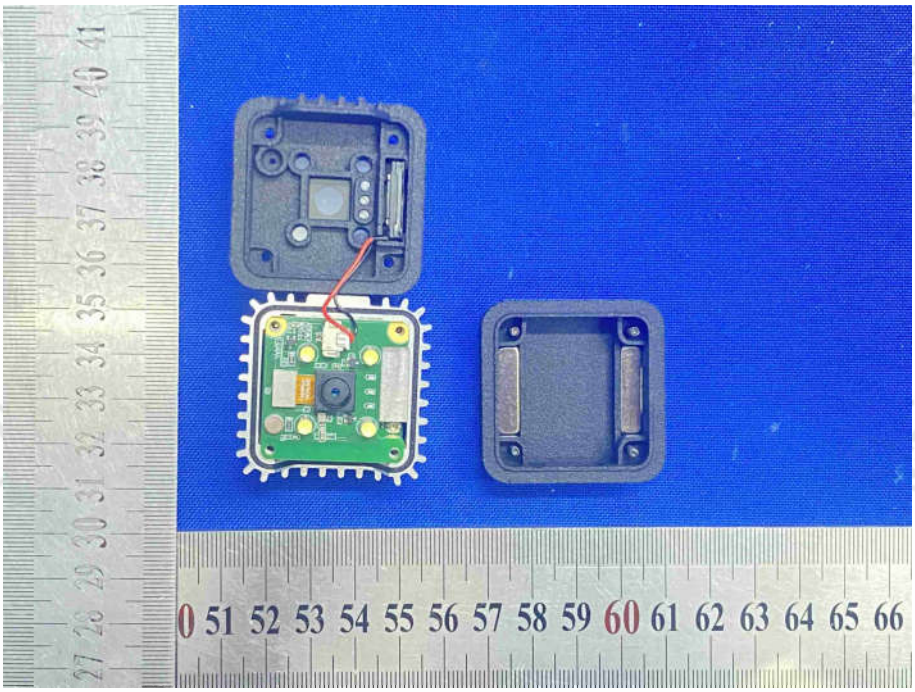
View Of Product-05



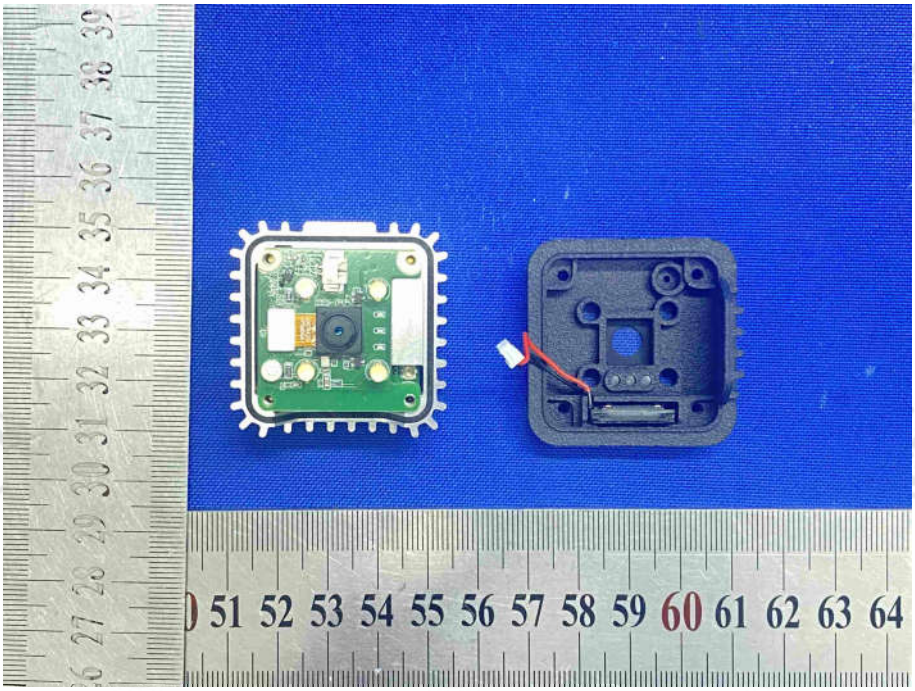
View Of Product-06



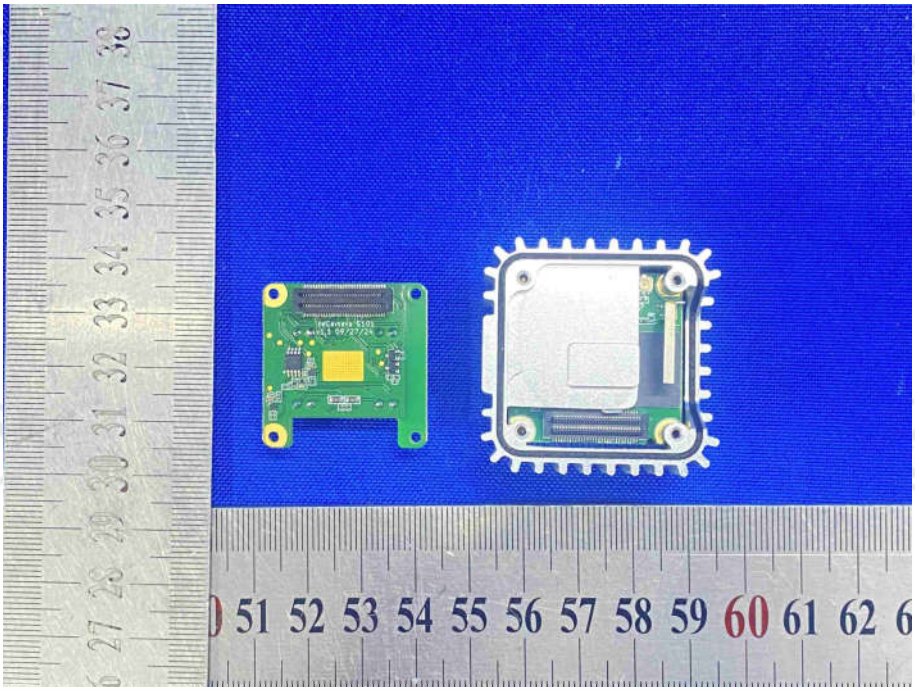
View Of Product-07



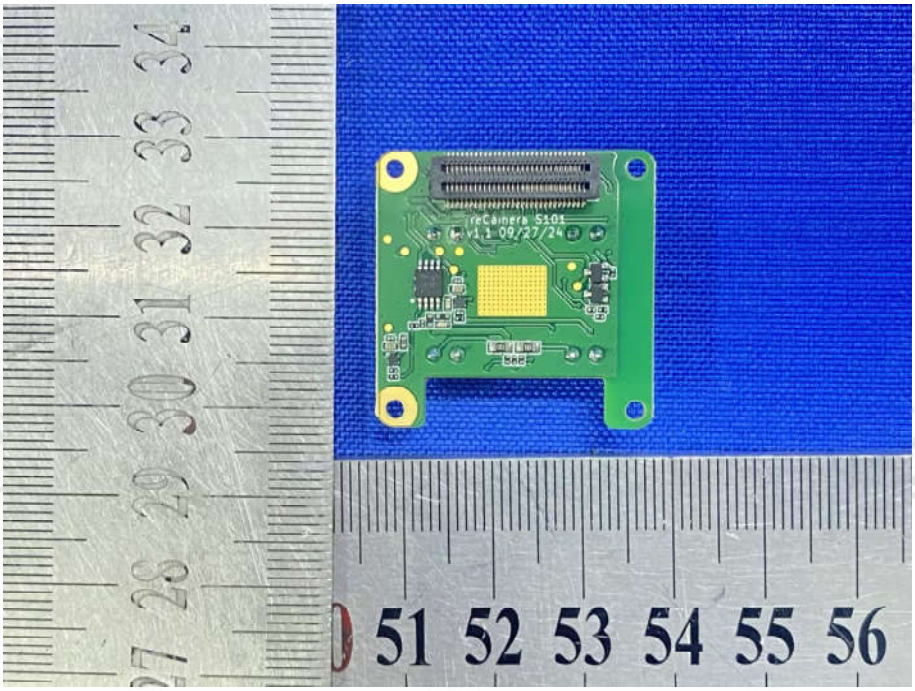
View Of Product-08



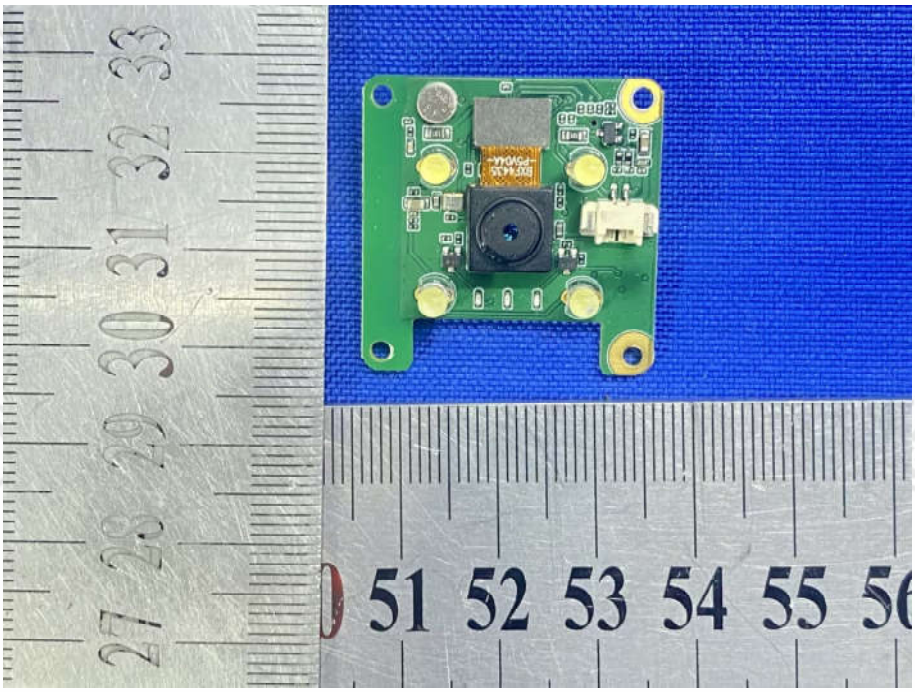
View Of Product-09



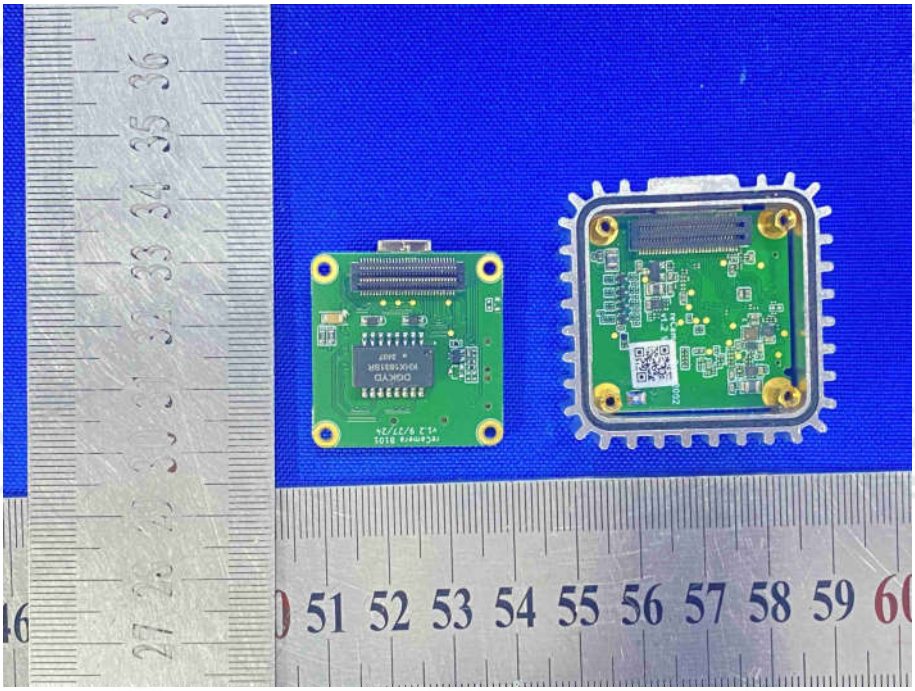
View Of Product-10



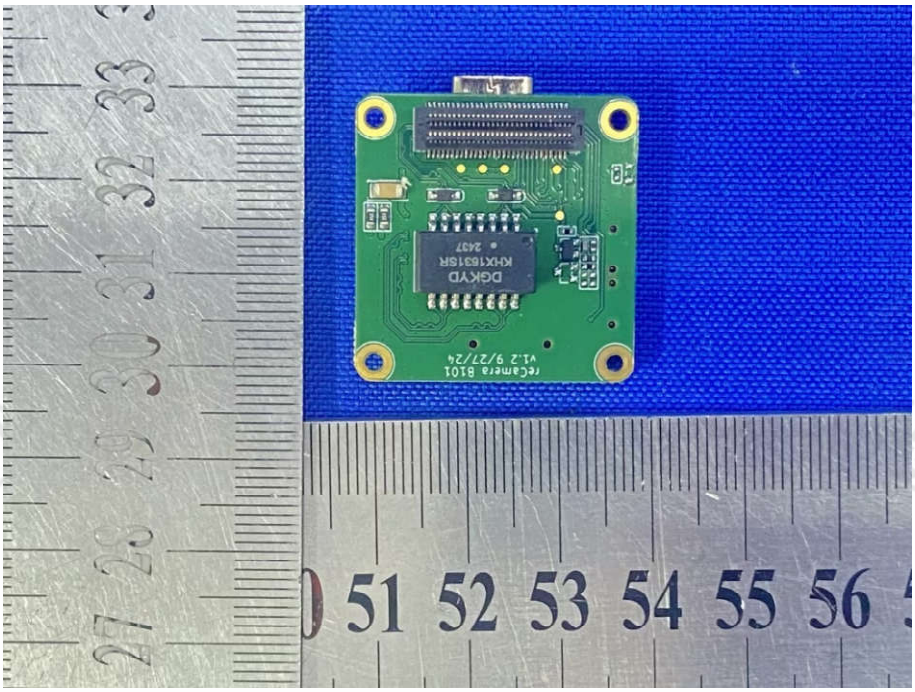
View Of Product-11



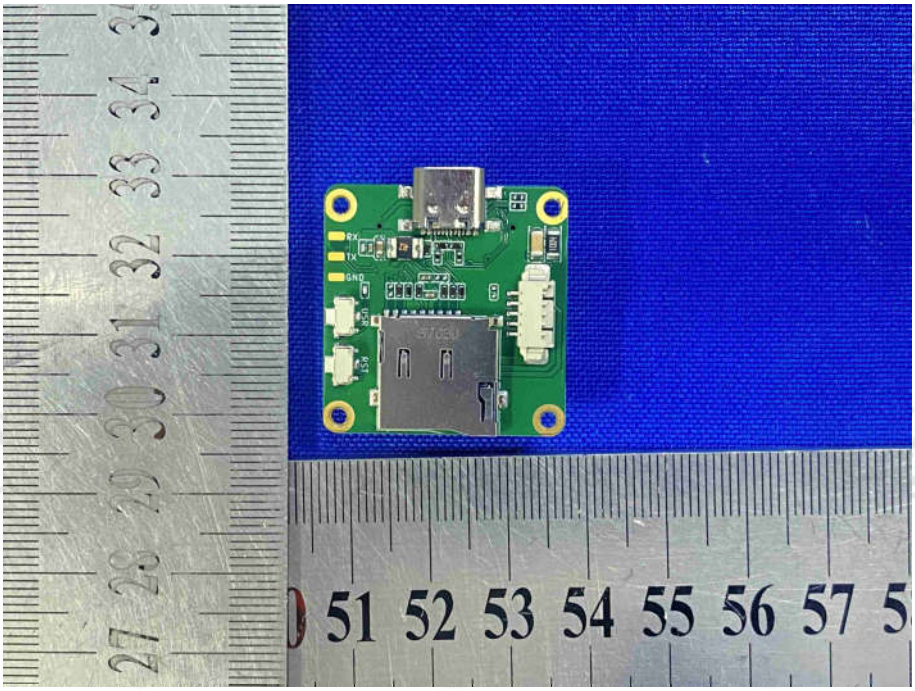
View Of Product-12



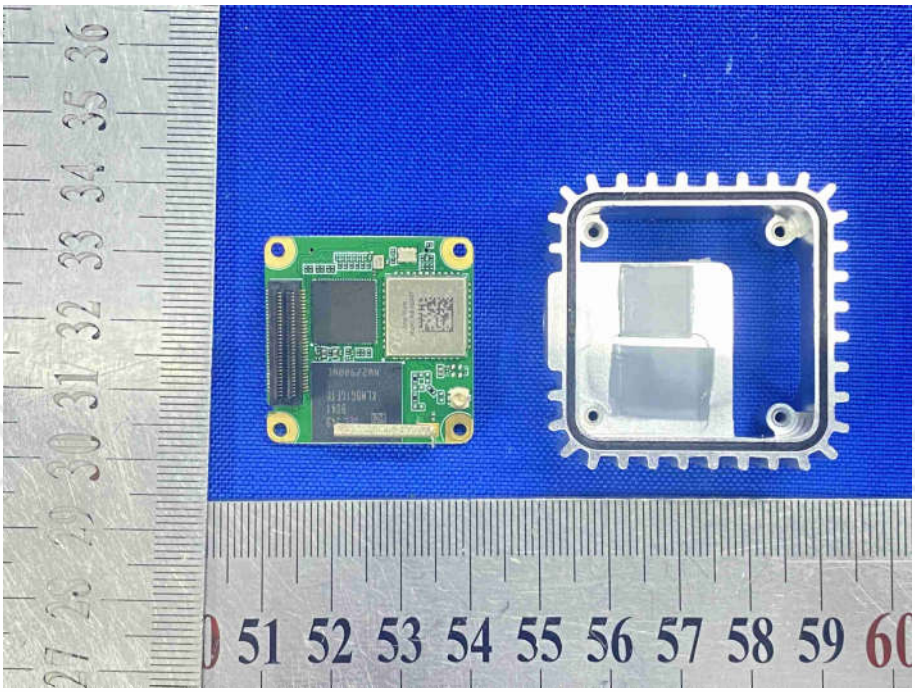
View Of Product-13



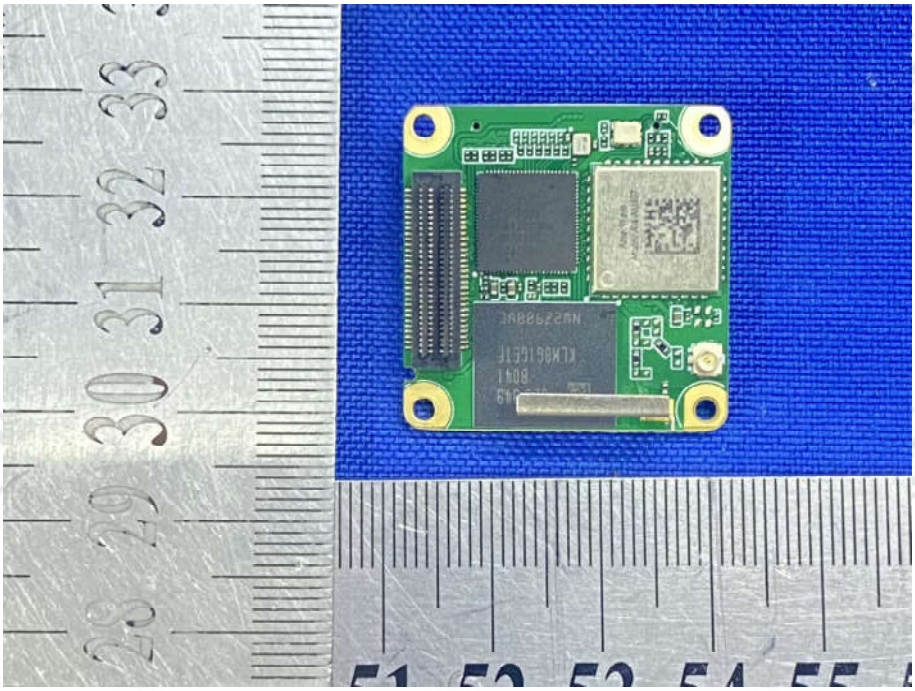
View Of Product-14



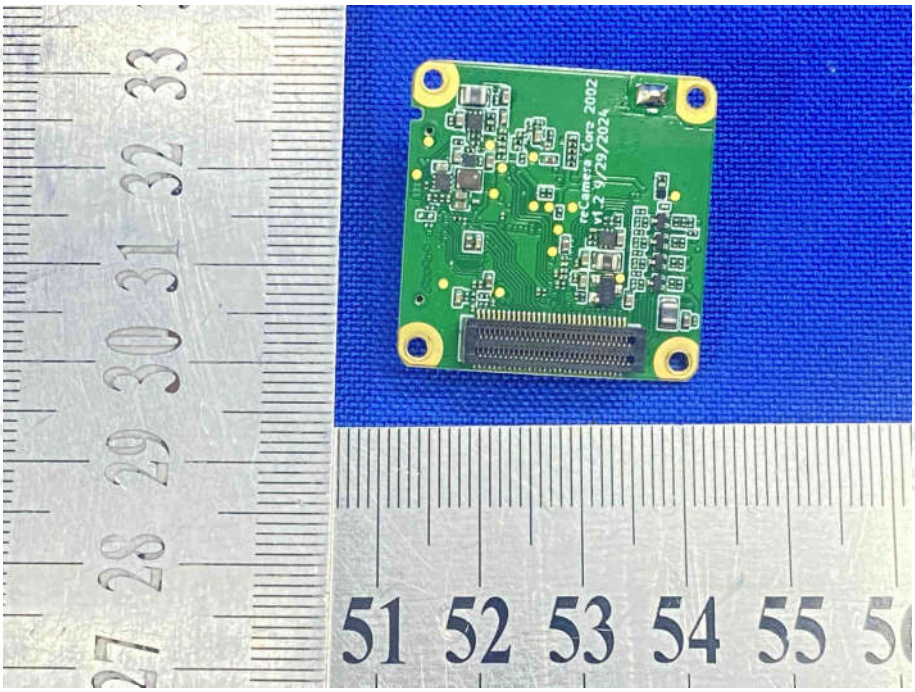
View Of Product-15



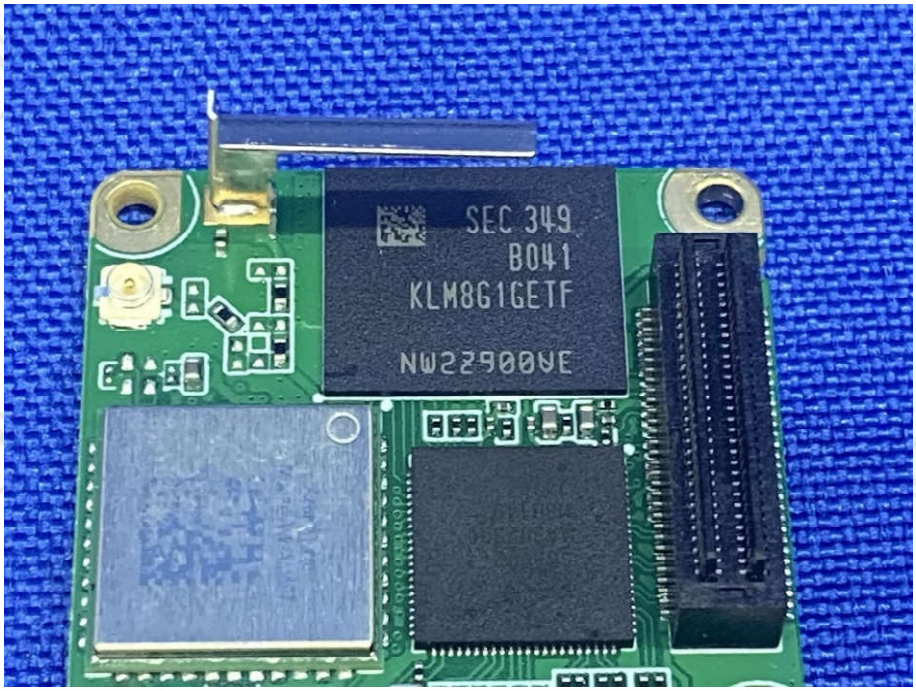
View Of Product-16



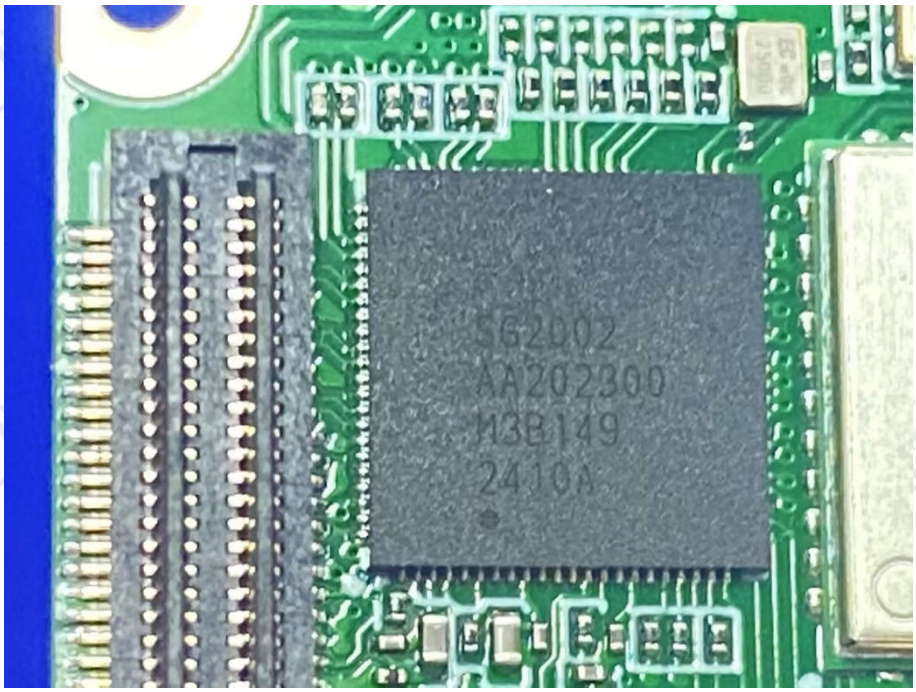
View Of Product-17



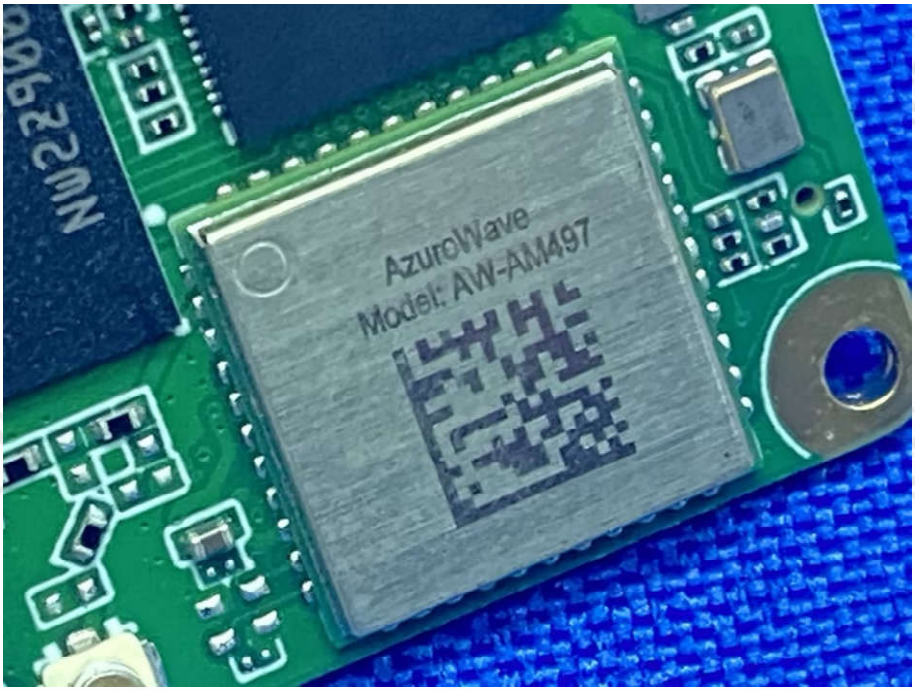
View Of Product-18



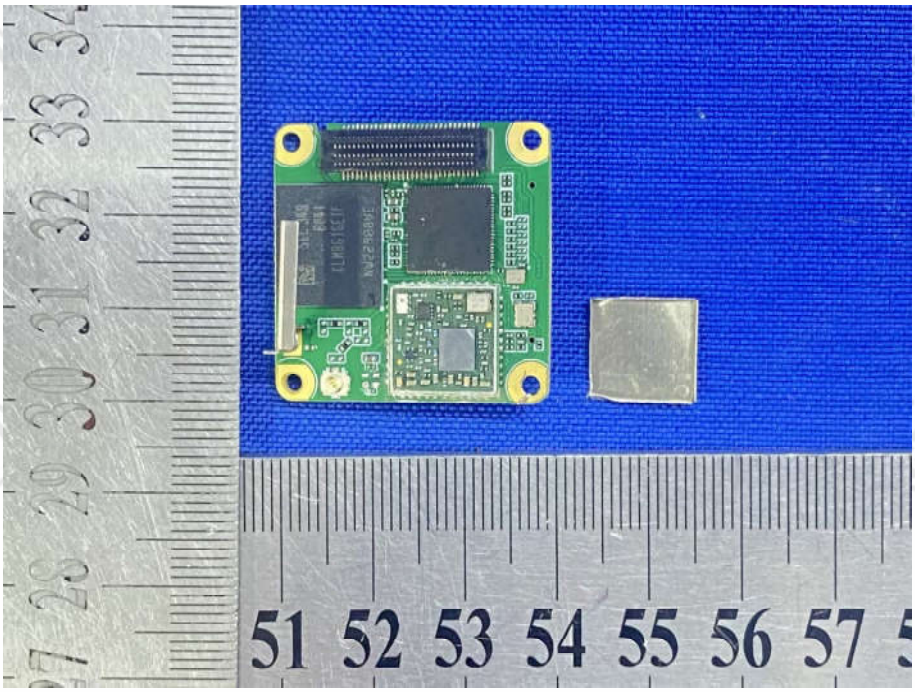
View Of Product-19



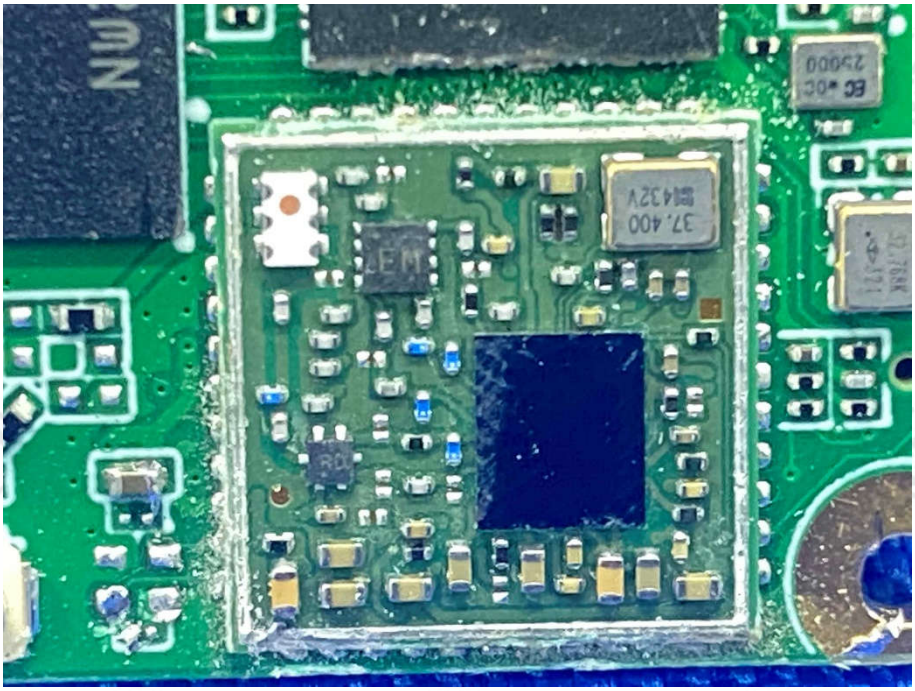
View Of Product-20



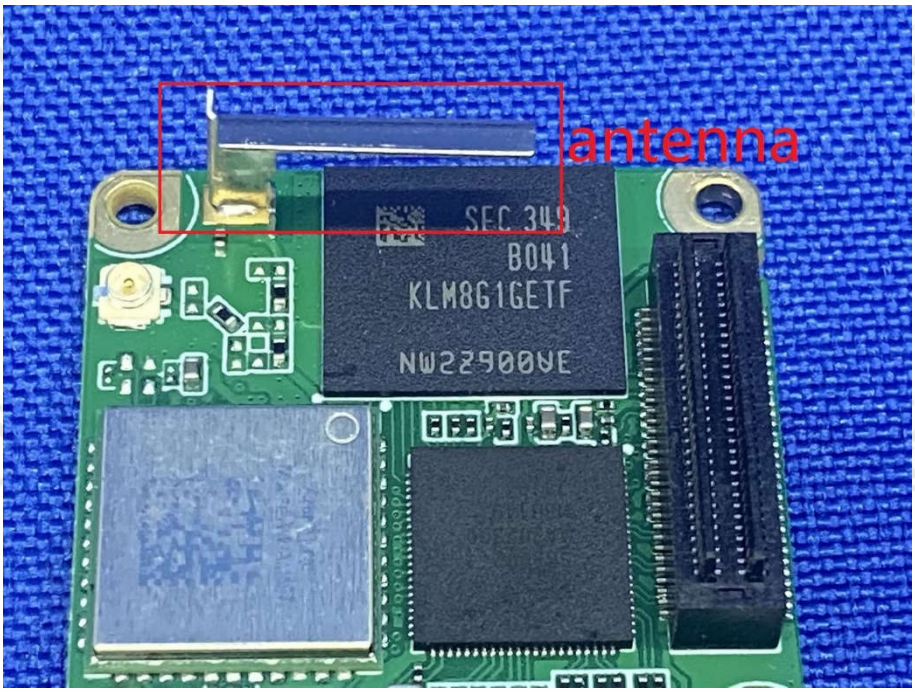
View Of Product-21



View Of Product-22



View Of Product-23



View Of Product-24

The test report is effective only with both signature and specialized stamp. The result(s) shown in this report refer only to the sample(s) tested. Without written approval of CTI, this report can't be reproduced except in full.

*** End of Report ***