

# TEST REPORT

**Product Name** : Camera Hub G5 Pro (PoE)  
**Model Number** : CH-C03E, CH-C03D  
**FCC ID** : 2AKIT-CHC03

**Prepared for** : Lumi United Technology Co., Ltd  
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**Report Number** : EDG2407040196E01202R  
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**Date of issue** : Oct 09, 2024

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## 1. TEST RESULT CERTIFICATION

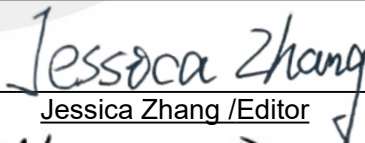
Applicant : Lumi United Technology Co., Ltd  
Address : B1, Chongwen Park, Nanshan iPark, Liuxian Avenue, Taoyuan Residential District, Nanshan District, Shenzhen, China  
Manufacturer : Lumi United Technology Co., Ltd  
Address : B1, Chongwen Park, Nanshan iPark, Liuxian Avenue, Taoyuan Residential District, Nanshan District, Shenzhen, China  
EUT : Camera Hub G5 Pro (PoE)  
Model Name : CH-C03E, CH-C03D  
Trademark : Aqara

Measurement Procedure Used:

| APPLICABLE STANDARDS                |             |
|-------------------------------------|-------------|
| STANDARD                            | TEST RESULT |
| § 15.247(i), § 2.1091, 1.1307(b)(1) | PASS        |

The above equipment was tested by EMTEK(DONGGUAN) CO., LTD. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10 (2013) and the energy emitted by the sample EUT tested as described in this report is in compliance with the requirements of FCC Rules FCC § 15.247(i), § 2.1091, 1.1307(b)(1).  
The test results of this report relate only to the tested sample identified in this report

Date of Test : Jul 04, 2024 to Oct 08, 2024

Prepared by :   
Jessica Zhang /Editor

Reviewer :   
Warren Deng /Supervisor

Approve & Authorized Signer :   
Sam Lv / Manager

Modified History

| Version | Report No.           | Revision Date | Summary         |
|---------|----------------------|---------------|-----------------|
|         | EDG2407040196E01202R | /             | Original Report |
|         |                      |               |                 |
|         |                      |               |                 |



## 2. EUT Specification

| Characteristics                | Description                                                                                                                                                                                    |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product:                       | Camera Hub G5 Pro (PoE)                                                                                                                                                                        |
| Model Number:                  | CH-C03E, CH-C03D<br>All models are the same, except the model name and sale channels. Here, CH-C03E is selected to test all the test items. Each model has two color, white and graphite-grey. |
| Sample:                        | 2#                                                                                                                                                                                             |
| Device Type:                   | Zigbee                                                                                                                                                                                         |
| Modulation:                    | O-QPSK                                                                                                                                                                                         |
| Operating Frequency Range(s) : | 2405-2480 MHz                                                                                                                                                                                  |
| Number of Channels:            | 16 channels                                                                                                                                                                                    |
| Transmit Power Max:            | 6.58 dBm(0.004550 W)                                                                                                                                                                           |
| Antenna Gain:                  | 0.32 dBi                                                                                                                                                                                       |
| Power supply:                  | PoE Input: 48V $\pm$ 0.27A<br>USB-C Input: 5V $\pm$ 2A                                                                                                                                         |
| Evaluation applied:            | <input checked="" type="checkbox"/> MPE Evaluation<br><input type="checkbox"/> SAR Evaluation                                                                                                  |

### 3. Test Requirement:

## RF EXPOSURE EVALUATION

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of 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 <sup>2</sup> ) | Average Time |
|--------------------------------------------------------------|------------------------------|------------------------------|------------------------------------|--------------|
| <b>(A) Limits for Occupational/Control Exposures</b>         |                              |                              |                                    |              |
| <b>300-1500</b>                                              | --                           | --                           | <b>F/300</b>                       | <b>6</b>     |
| <b>1500-100000</b>                                           | --                           | --                           | <b>5</b>                           | <b>6</b>     |
| <b>(B) Limits for General Population/Uncontrol Exposures</b> |                              |                              |                                    |              |
| <b>300-1500</b>                                              | --                           | --                           | <b>F/1500</b>                      | <b>6</b>     |
| <b>1500-100000</b>                                           | --                           | --                           | <b>1</b>                           | <b>30</b>    |

**Friis transmission formula:  $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot R^2)$**

Where

$P_d$ = Power density in mW/cm<sup>2</sup>

$P_{out}$ =output power to antenna in mW

$G$ = Numeric gain of the antenna relative to isotropic antenna

$\pi$ =3.1416

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

$P_d$  the limit of MPE, 1mW/cm<sup>2</sup>. If we know the maximum gain of the antenna and total power input to the antenna, through the calculation, we will know the distance where the MPE limit is reached.

## 4. Measurement Result

Antenna gain:0.32 dBi

| Channel Freq. (MHz) | modulation | conducted power | Tune-up power (dBm) | Max           |       | Antenna |         | Evaluation result | Power density Limits |
|---------------------|------------|-----------------|---------------------|---------------|-------|---------|---------|-------------------|----------------------|
|                     |            | (dBm)           |                     | tune-up power |       | Gain    |         | (mW/cm2 )         | (mW/cm2)             |
|                     |            |                 |                     | (dBm)         | (mW)  | (dBi)   | Numeric |                   |                      |
| 2405                | O-QPSK     | 6.58            | 6±1                 | 7             | 5.012 | 0.32    | 1.08    | 0.0011            | 1                    |
| 2440                |            | 6.29            | 6±1                 | 7             | 5.012 | 0.32    | 1.08    | 0.0011            | 1                    |
| 2480                |            | 5.42            | 5±1                 | 6             | 3.981 | 0.32    | 1.08    | 0.0009            | 1                    |

According to KDB 447498, no stand-alone required for Zigbee antenna, and no simultaneous SAR measurement is required.

\*\*\* End of Report \*\*\*