TEST REPORT

CTK Co., Ltd.	**CTK Co., Ltd.** 5 Dongbu-ro 221beon-gil, Cheoin-gu, Yongin-si, Gyeonggi-do, Republic of Korea Tel: +82-31-339-9970 Fax: +82-31-624-9501	Report No.: CTK-2023-01329 Page (1) / (29) pages	

1. Applicant

◦ Name : Hanwha Vision Co., Ltd

◦ Address : 6 Pangyo-ro 319Beon-gil, Bundang-gu, Seongnam-si, Gyeonggi-do, 13488 KOREA

◦ Date of Receipt : 2023-04-26

2. Manufacturer

◦ Name : Hanwha Vision Co., Ltd

3. Use of Report : Quality control

4. Test sample / Model : NETWORK CAMERA / PNM-C34404RQPZ

5. Date(s) of test : 2023-05-04 to 2023-06-13

6. Location of Test : ☒ Permanent Testing Lab ☐ On Site Testing

Address: 5 Dongbu-ro 221beon-gil, Cheoin-gu, Yongin-si, Gyeonggi-do, Republic of Korea

7. Test Standard (Method) used : IEC 60529:1989 +A1:1999+A2:2013

8. Testing Environment : Temperature: (25.0 ± 10.0) °C, Humidity: (50.0 ± 25.0) %R.H.

9. Test Results : Refer to each test items

The results shown in this test report refer only to the sample(s) tested unless otherwise stated. This Test Report cannot be reproduced, except in full.

Affirmation	Tested by: Name: Min-Gi Moon (Signature)	Technical Manager: Name: SooChan Bae (Signature)

Remark. This report is not related to KOLAS accreditation and relevant regulation.

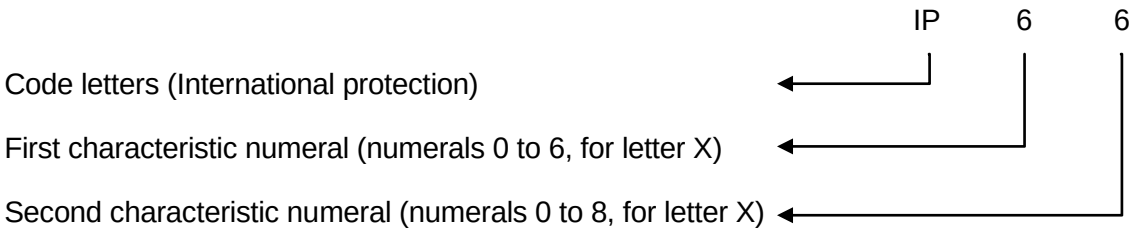
2023-06-14

CTK Co., Ltd

1. Degrees of protection provided by enclosures (IP code)

1.1 Test standard: IEC 60529:1989 +A1:1999+A2:2013

1.2 Arrangement of the IP code



1.2.1 Degree of protection against access to hazardous parts indicated by the first characteristic numeral

First characteristic numeral	Degree of protection	Application
6	Protected against access to hazardous parts with a wire. The access probe of 1.0 mmØ, shall not penetrate. Test force: 1 N ± 10 %	☒
NOTE In the case of the first characteristic numerals 3, 4, 5 and 6, protection against access to hazardous parts is satisfied if adequate clearance is kept. The adequate clearance should be specified by the relevant product committee in accordance with 12.3. Due to the simultaneous requirement specified in table 2, the definition “shall not penetrate” is given in table 1.		

1.2.2 Degree of protection against solid foreign objects indicated by the first characteristic numeral

First characteristic numeral	Degree of protection	Application
6	In Dust Testing Equipment, the test sample has to have no ingress of dust after testing atmospheric pressure present condition for 8 hr. (Talcum powder have to go through the measured sieve by Φ 50 um wire that are spacing 75 um in squared, per volume and union Talcum powder have to be 2 kg/m^3) Products in volume ..... **51 991.6** cm^3 → **51.99** L Target intake volume (Products in volume 80) ..... **4 159.3** L Suction volume (Max product in volume 60) ..... **3 119.5** LPH → **51.99** LPM Actual Suction volume ..... **51.99** L Suction pressure (Up to 2 kPa) ..... **2** kPa Test time (Up to 8 time) ..... **8** hr	☒
[1)] The full diameter of the object probe shall not pass through an opening of the enclosure. Due to the simultaneous requirement specified in table 2, the definition “shall not penetrate” is given in table 1.		

1.2.3 Degree of protection against water indicated by the second characteristic numeral

Second characteristic numeral	Degrees of protection	Application
6	The product must not be harmed in any direction even strong jet water. Water jet hose nozzle Fig.6, Nozzle 12.5 mm diameter Water flow rate: 100 l/min ± 5 % : **100 LPM** Distance: 2.5 m to 3 m: **3 m** Duration of test: 1 min/m^2 at least 3 min: **3 min**	☒

1.3 Test Result

IP Code	Remark
IP 6X	No penetration of probe. No ingress of dust.
IP X6	No ingress of water.

※ The results shown in this test report refer only to the sample(s) tested unless otherwise stated

Manufacturer's name

Name and address of factory (ies)	1) HANWHA VISION VIETNAM COMPANY LIMITED LOT O-2, Que Vo Industial Zone extended area, Nam Son commune, Bac Ninh, Bac Ninh province, Vietnam 2) D-TECH CO. LTD 173-25, Saneop-ro, Gwonseon-gu, Suwon-si, Gyeonggi-do, Korea(Suwon Industrial Complex)

List of test equipment used:

Instrument type	Model	Make	Serial	Calibration Effective Date
Stop Watch	NONE	Casio	612Q01R-1	2024-02-21
Aneroid Barometer	BAROMEX	SATO	84682	2024-02-02
Hygro Thermograph	ST-50M	SEKONIC	HE51-000147	2023-10-13
Push Pull Gage	FB30K	Imada	83805	2024-02-03
Test wire (1.0 mm)	TRP-02	ED&D	S1-J15	-
Big Dust Chamber	NONE	JFM	S3-IP34	2023-11-15
Area flow meter	Z-6504	NURITECH	04	2024-02-12
Waterproof test apparatus	IPX3-6	Kingpo	S3-IP37	-
Steel measuring meter	10 m	KOMELON	S3-D01	2024-11-11

2 APPENDIX

2.1 Product Photographs

< Photo 1 > Product Front View

< Photo 2 > Product Rear View

2.2 Test Setup Photos and Configuration

< Photo 3 > The First Characteristic Numeral Test

< Photo 4 > The Second Characteristic Numeral Test

2.3 Product internal photographs after test

< Photo 5 > The First Characteristic Numeral Test

< Photo 6 >

< Photo 7 > The First Characteristic Numeral Test

< Photo 8 >

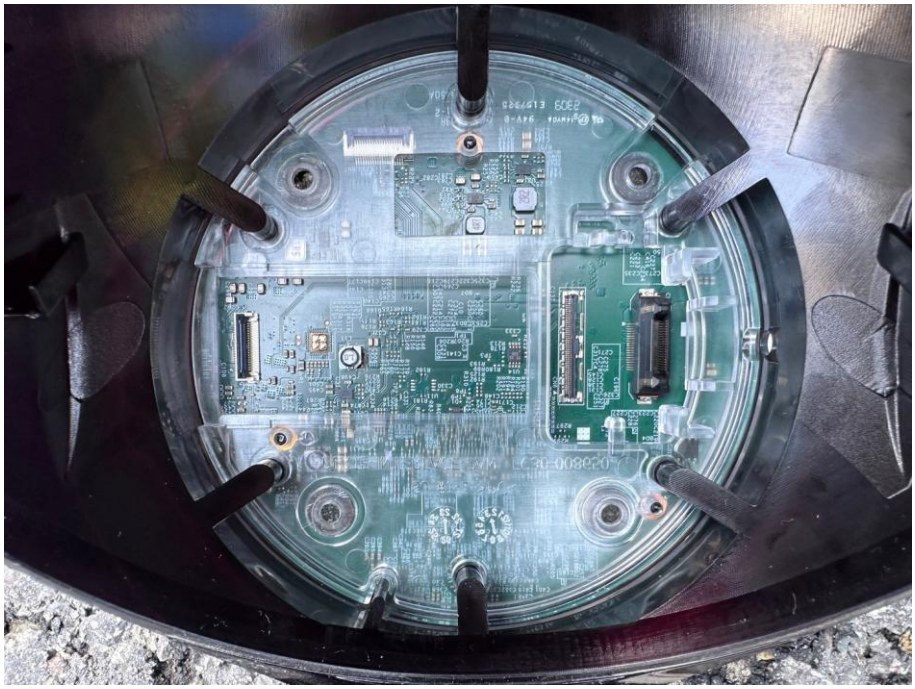
< Photo 9 > The First Characteristic Numeral Test

< Photo 10 >

< Photo 11 > The First Characteristic Numeral Test

< Photo 12 >

< Photo 13 > The First Characteristic Numeral Test



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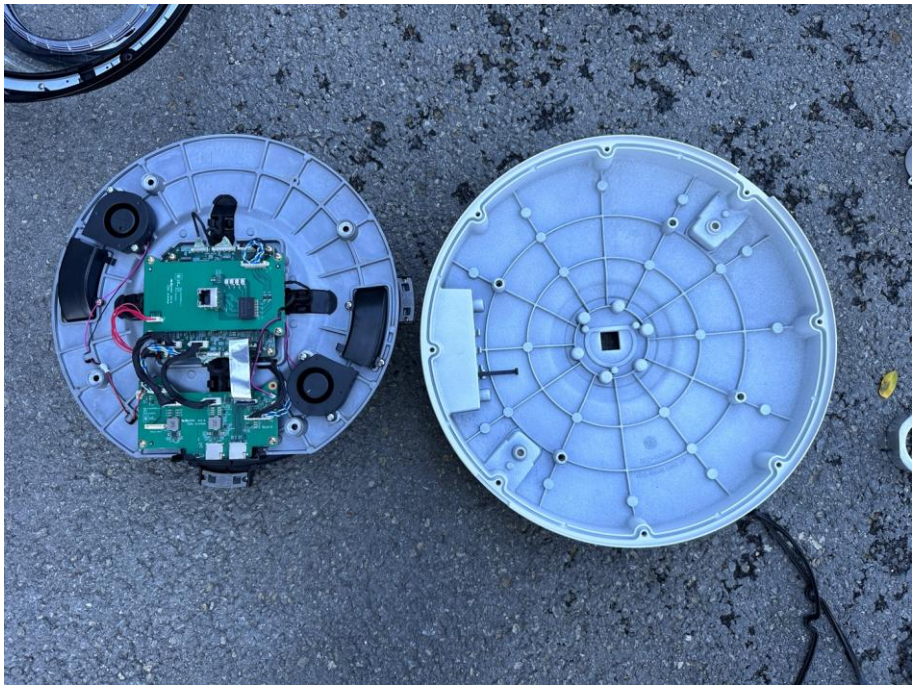
< Photo 15 > The First Characteristic Numeral Test



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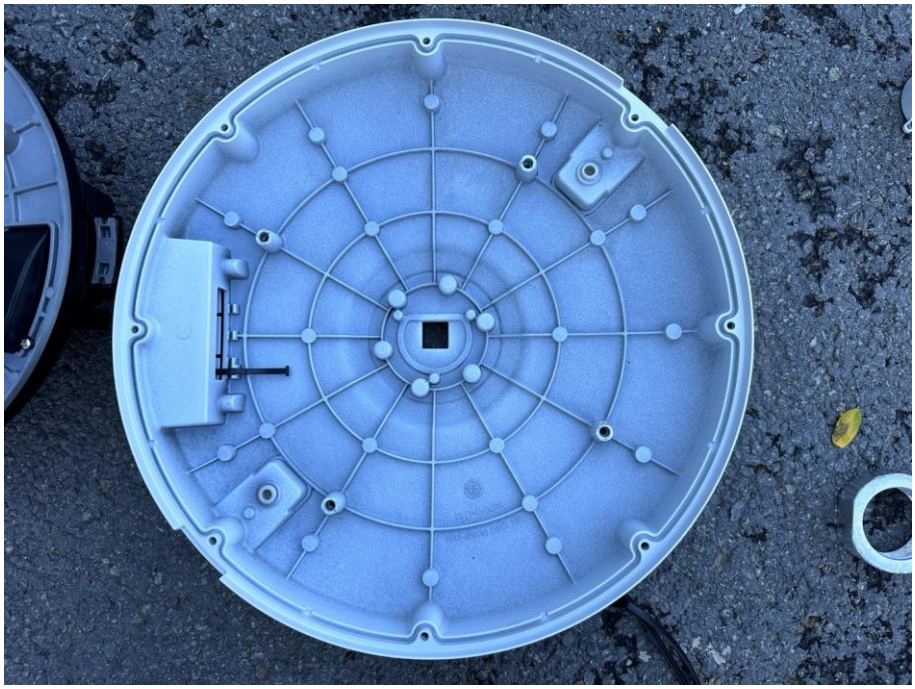

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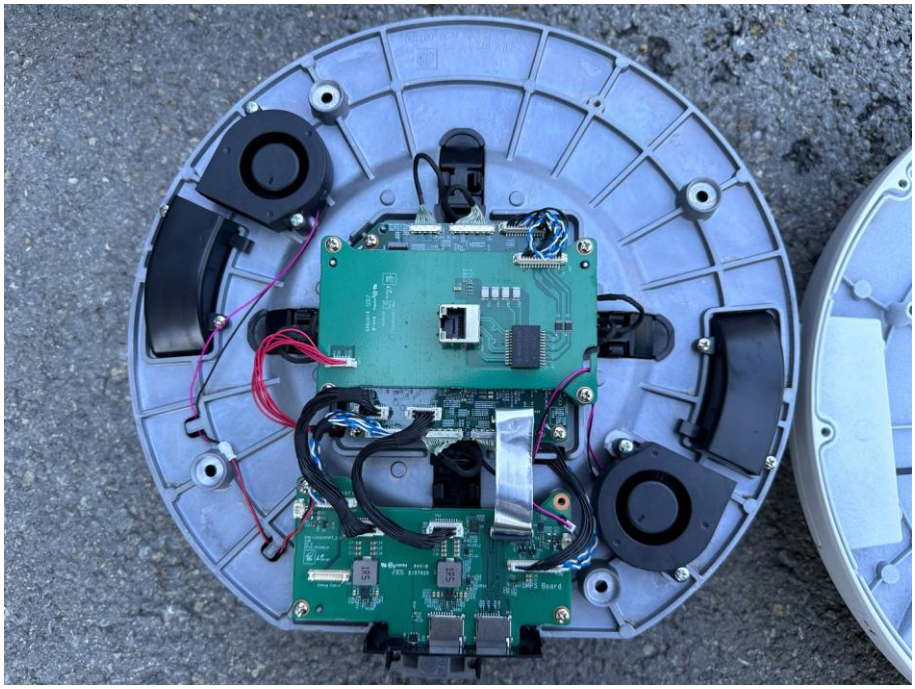

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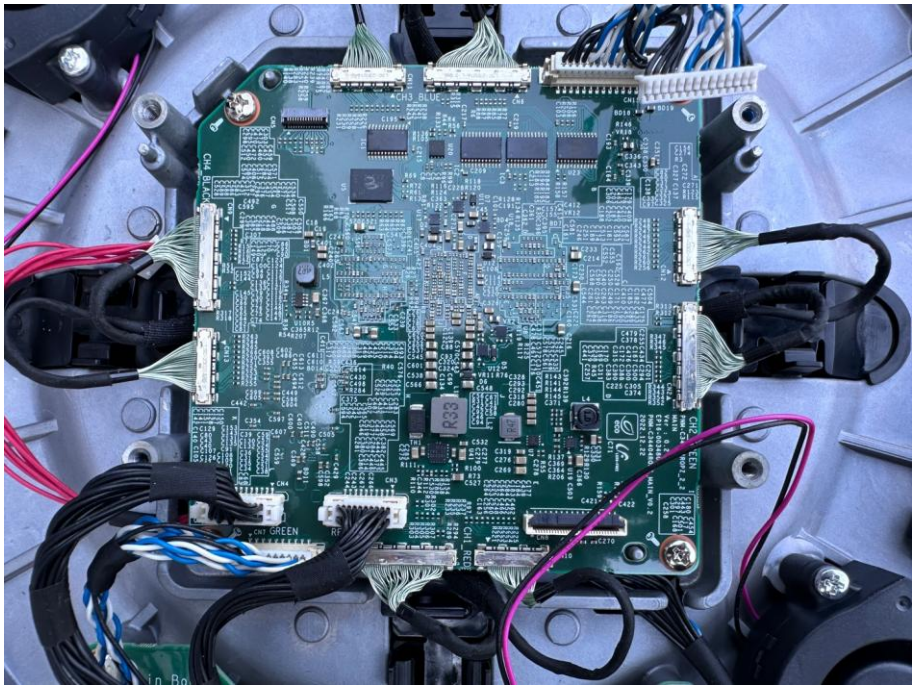

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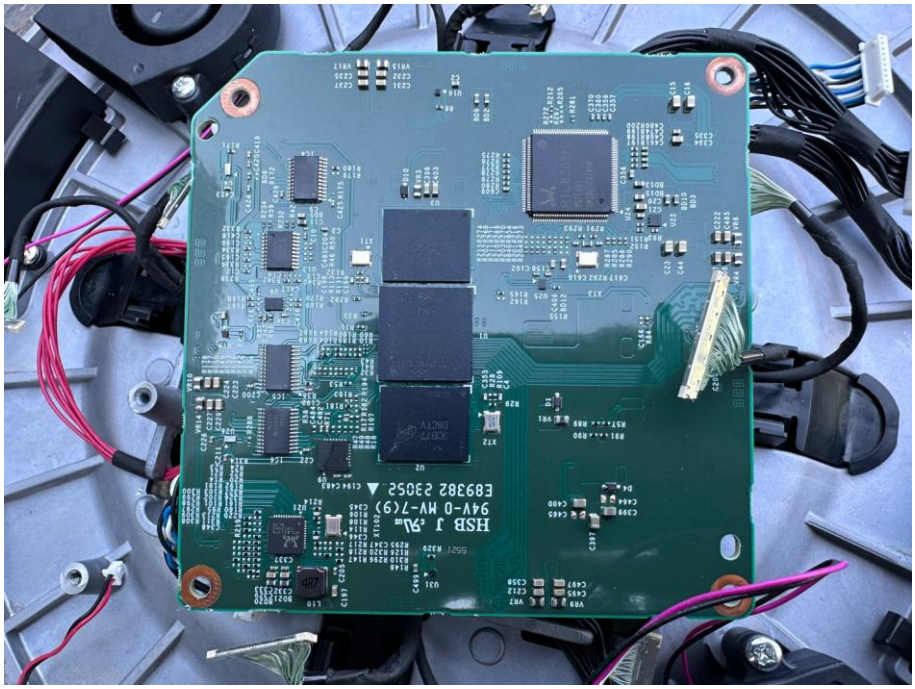

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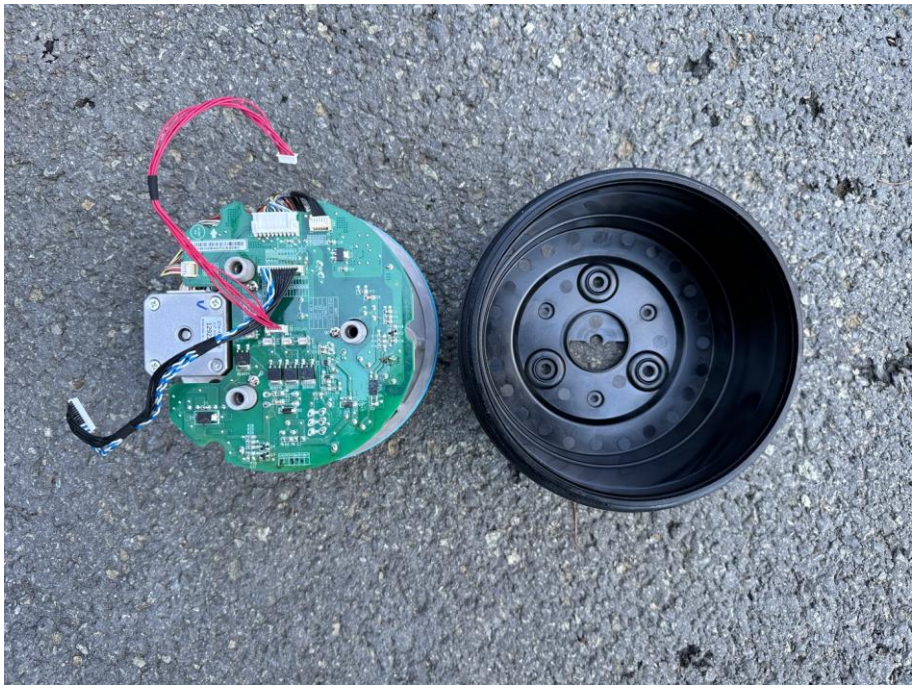

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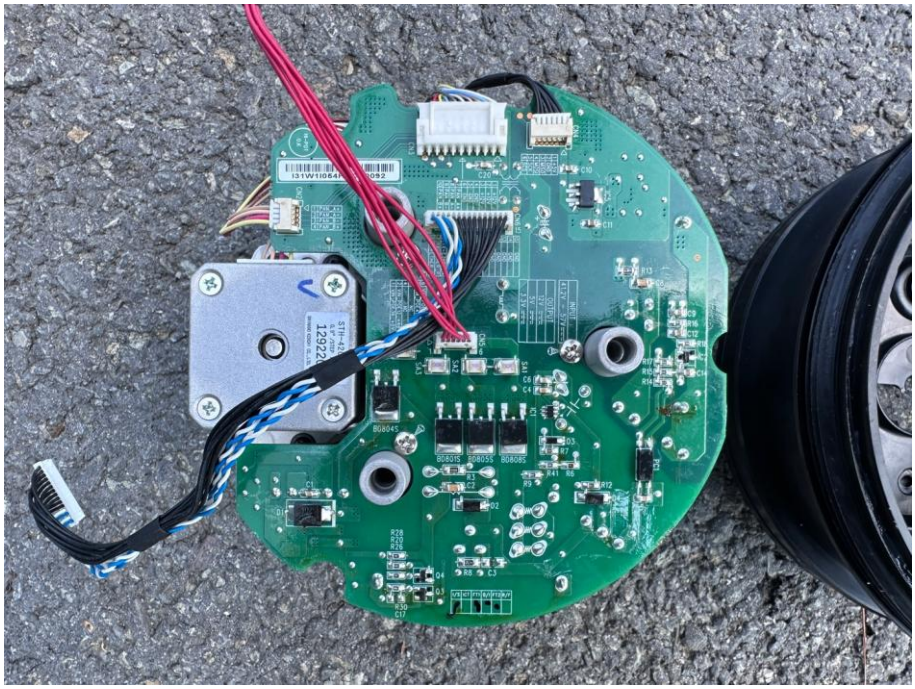

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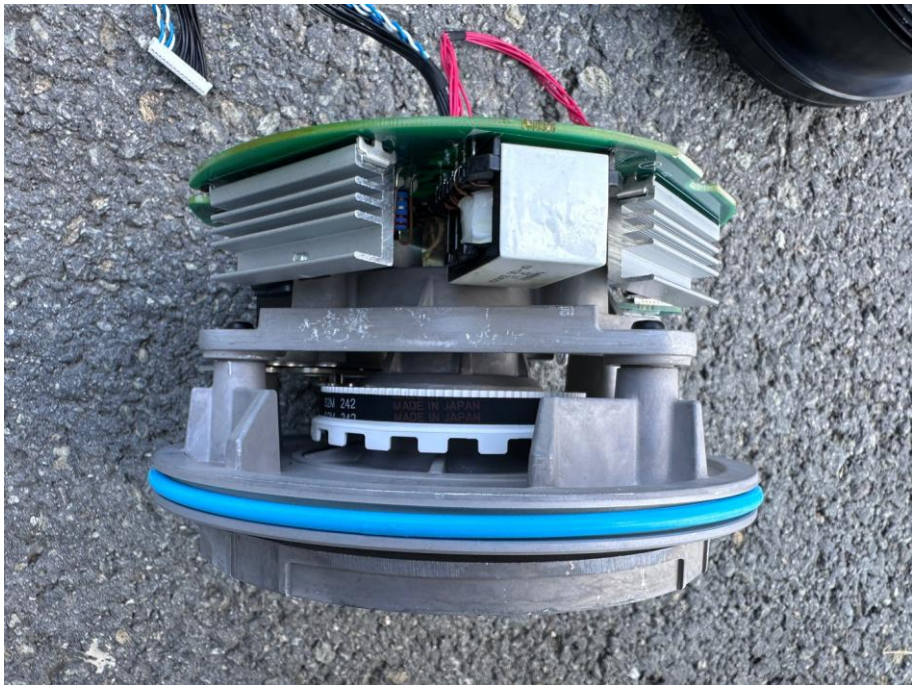

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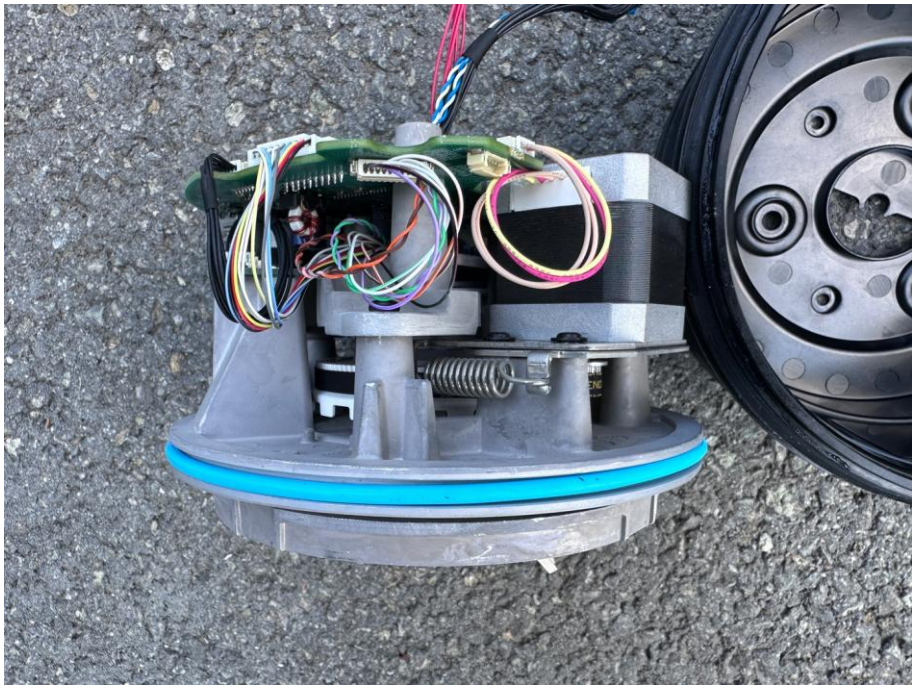

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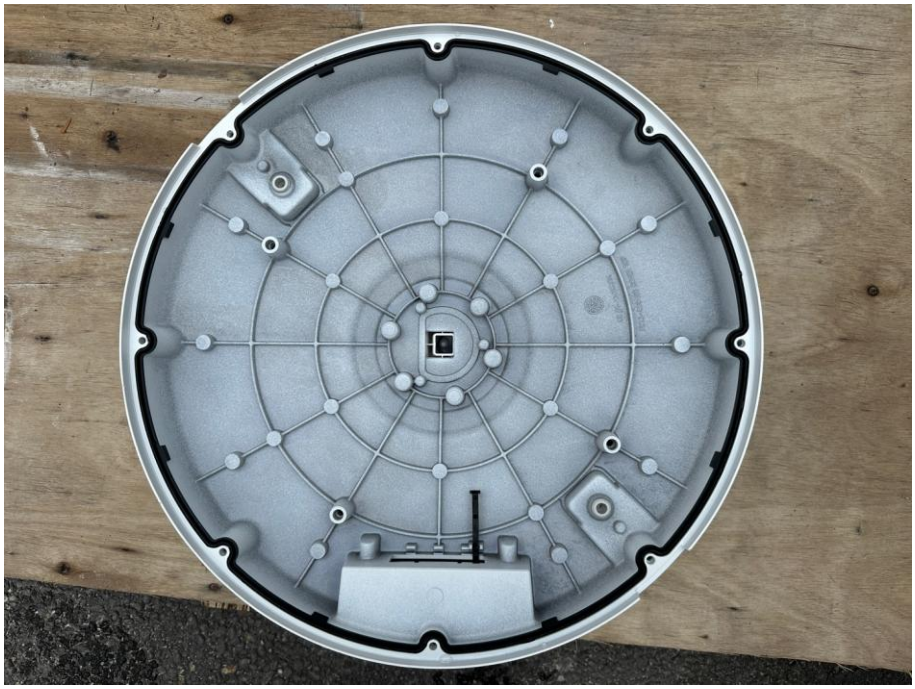

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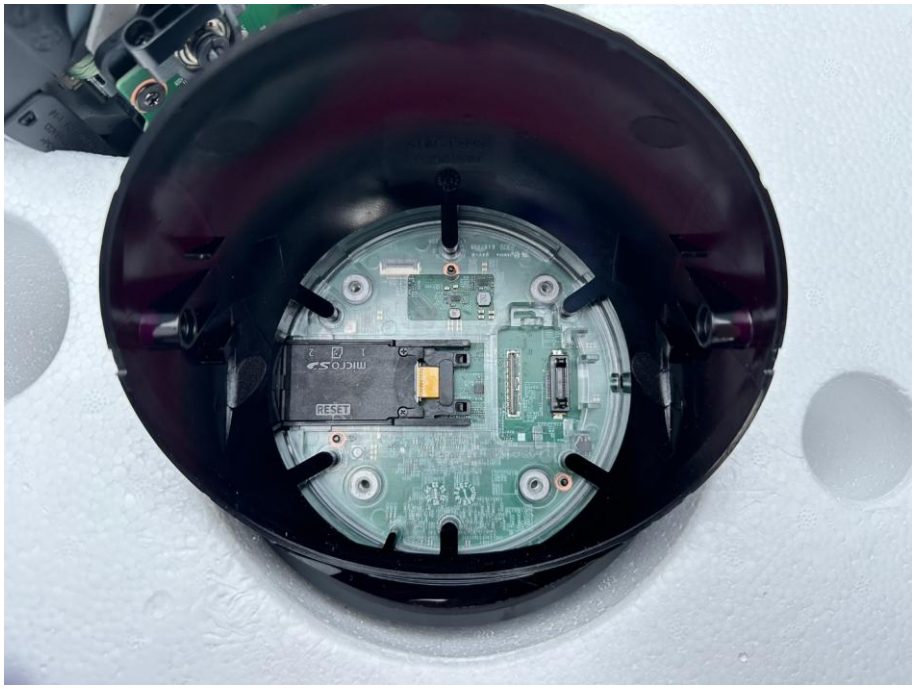

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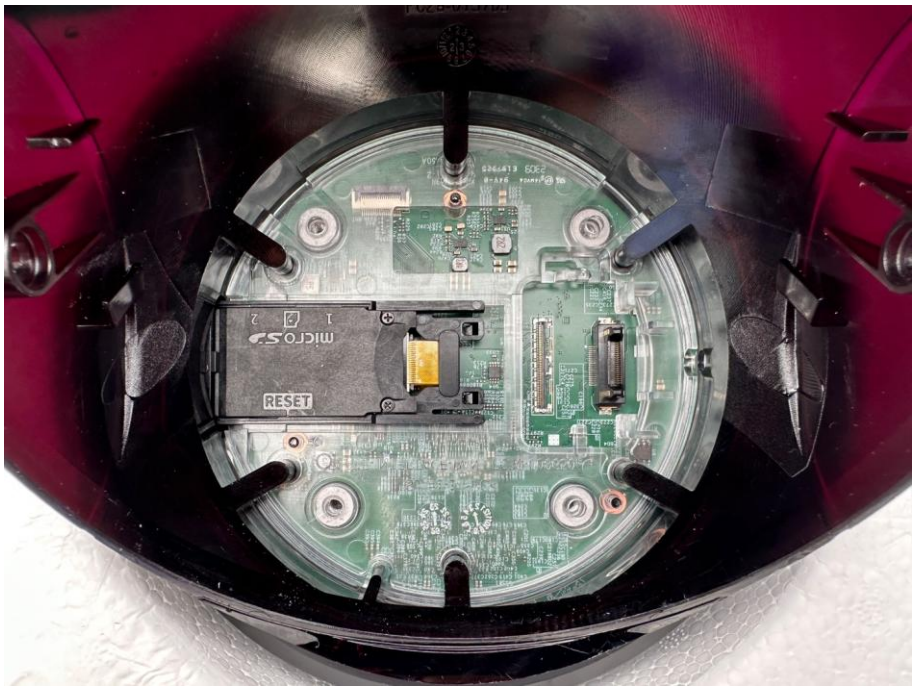

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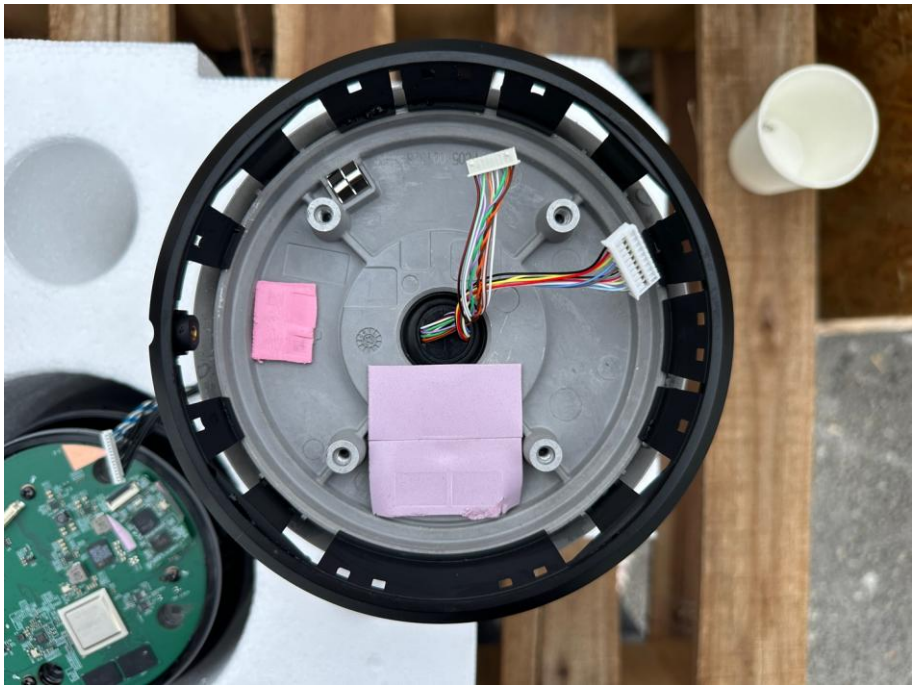

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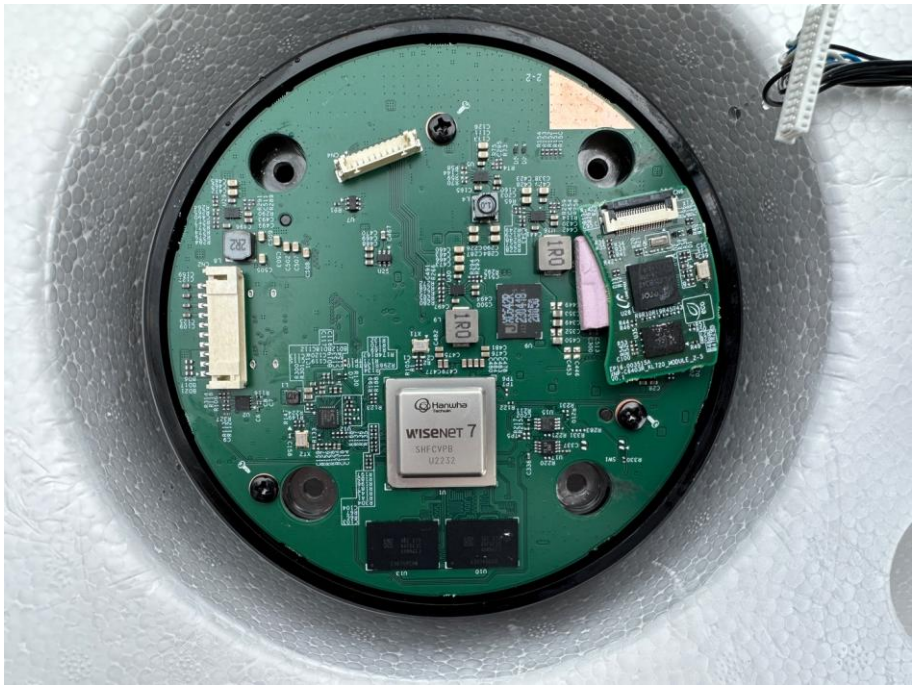

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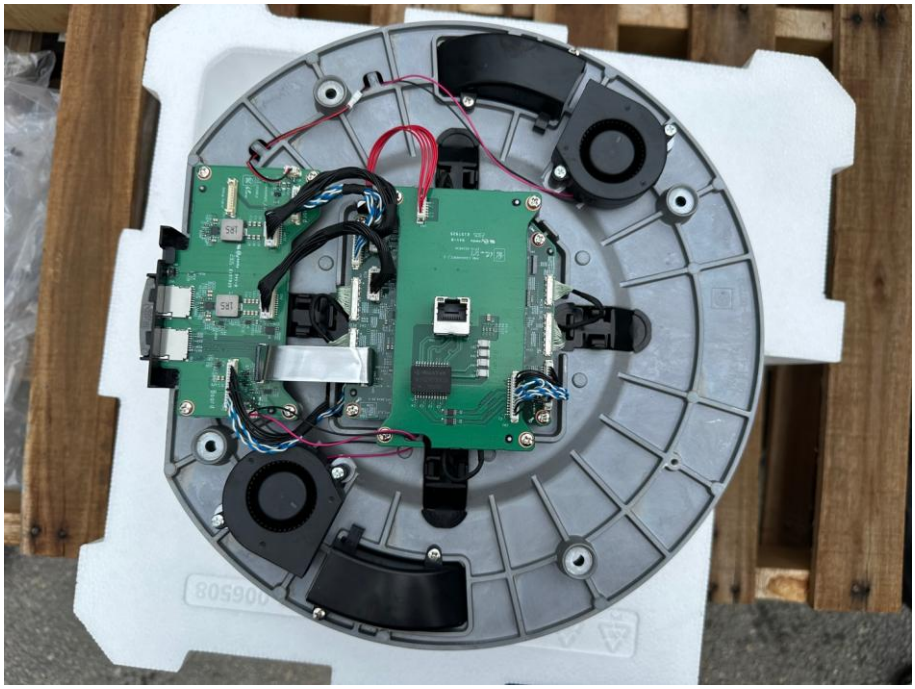

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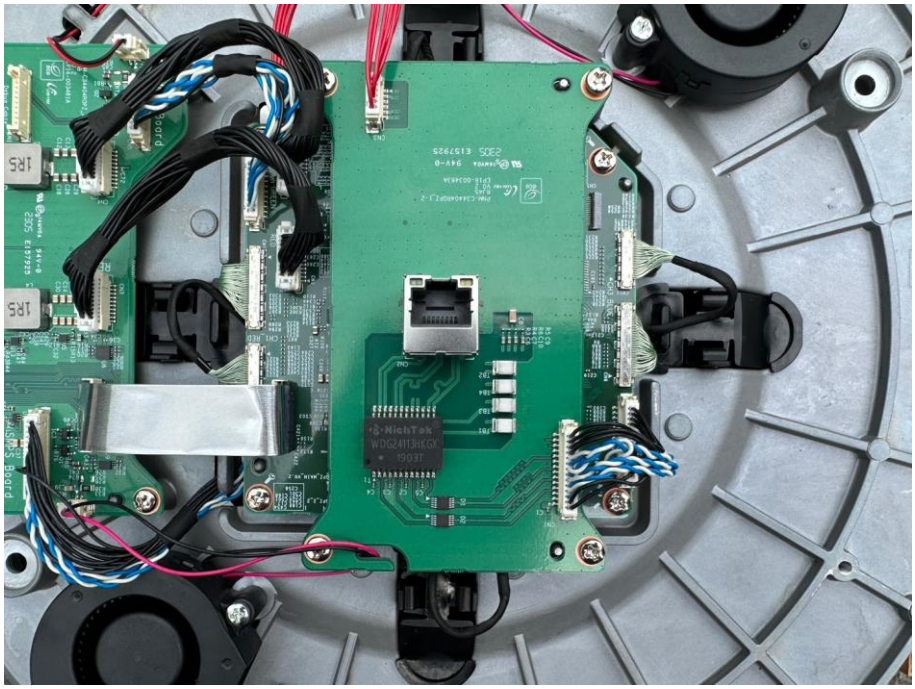

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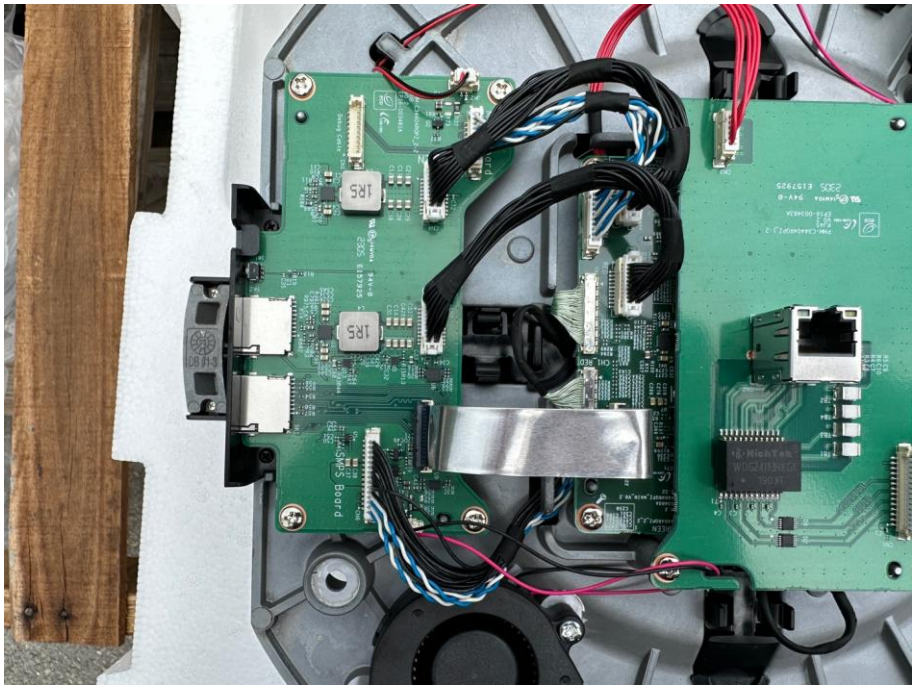

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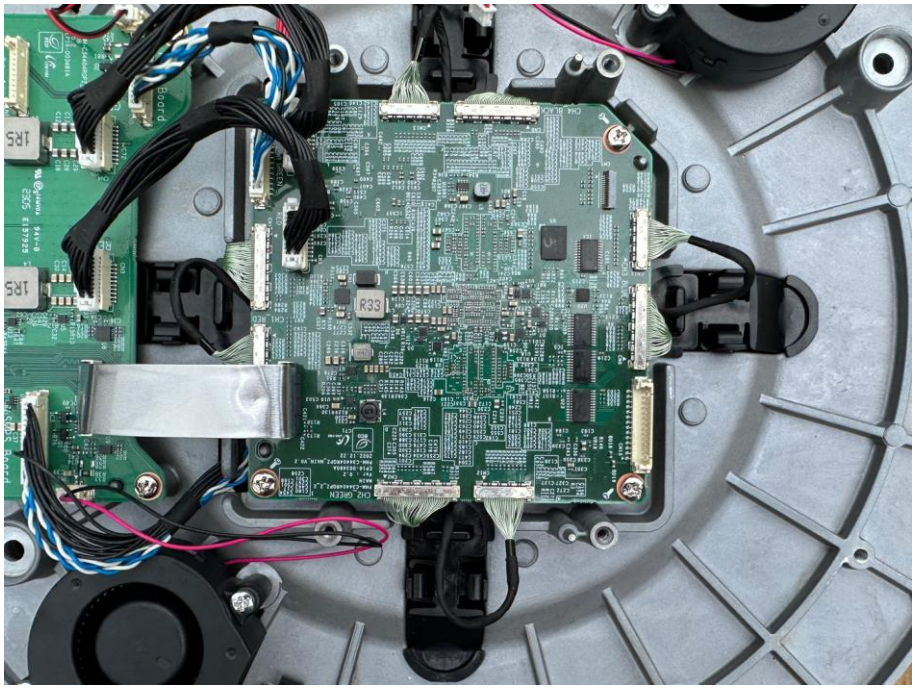

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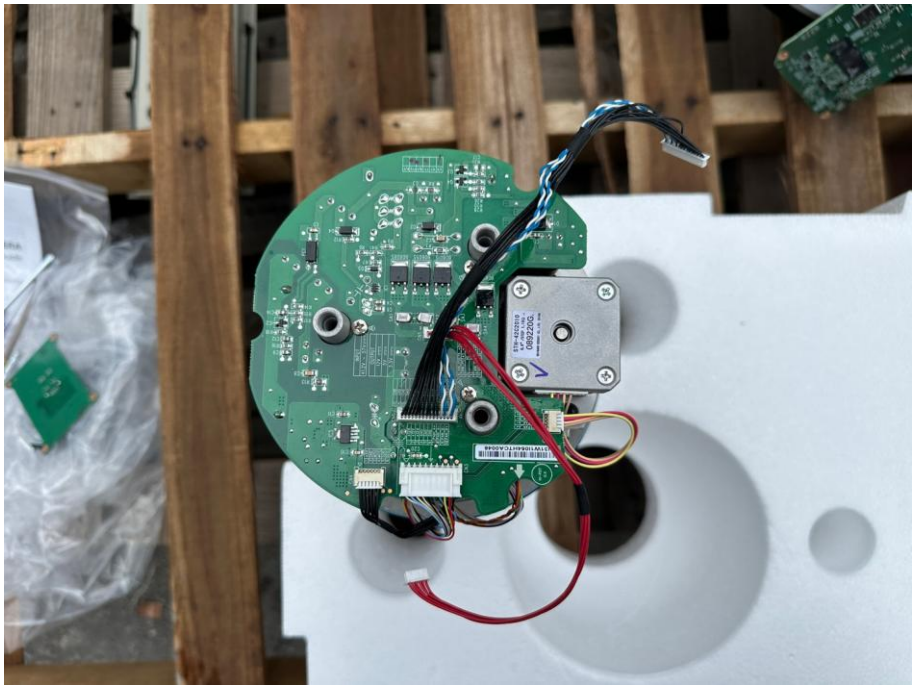

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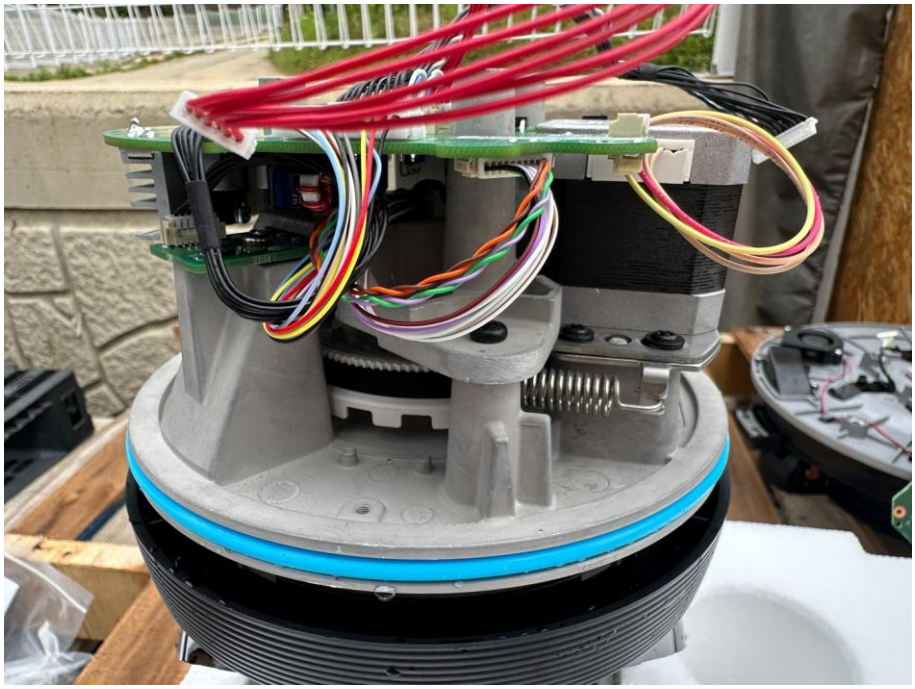

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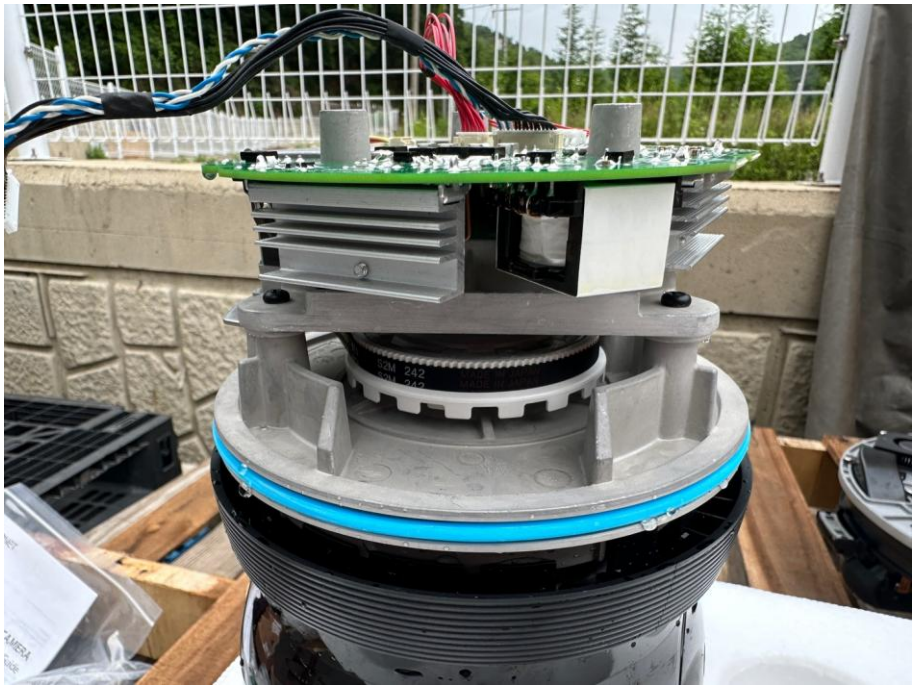
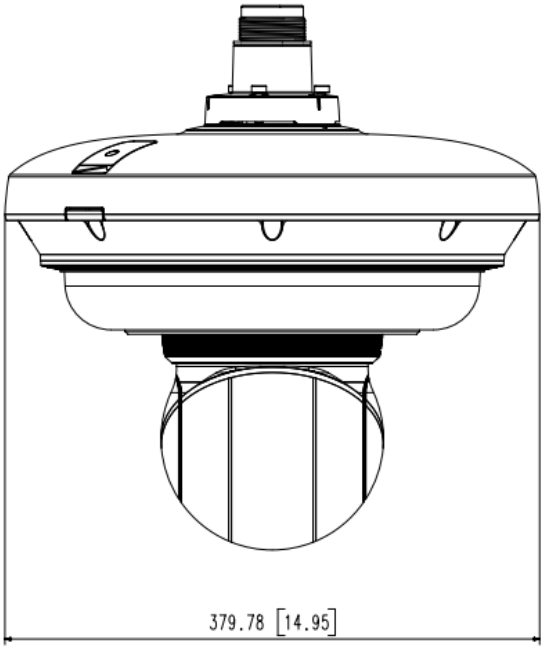
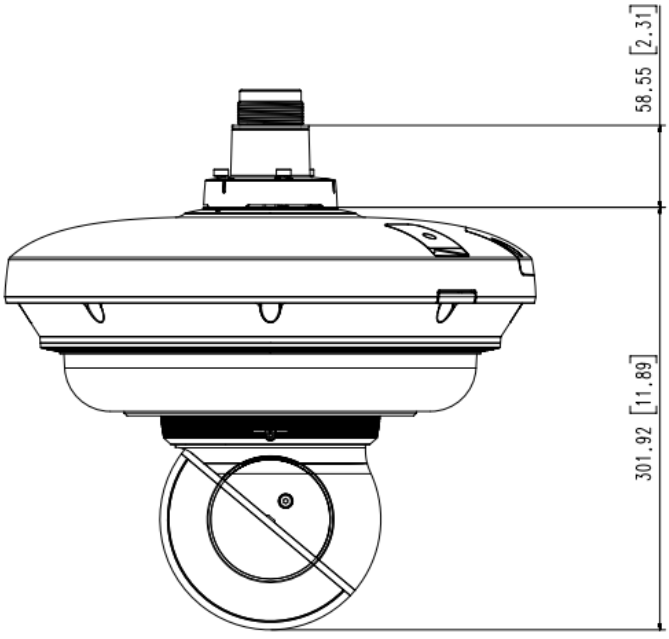


2.4 Product Appearance

Enclosure Dimensions [Unit: mm]





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