

UL TEST REPORT AND PROCEDURE

Standard:	UL 62368-1, 3rd Ed, 2021-10-22 (Audio/video, information and communication technology equipment Part 1: Safety requirements) CAN/CSA C22.2 No. 62368-1:19, 3rd Ed, 2021-10-22 (Audio/video, information and communication technology equipment Part 1: Safety requirements)
Certification Type:	Listing
CCN:	AZOT, AZOT7 (Audio/video, Information and Communication Technology Equipment)
Complementary CCN:	N/A
Product:	Network Camera
Model:	WV-U65301-Z1, WV-U65302-Z2, WV-S65301-Z1, WV-S65302-Z2
Rating:	1) 12 V d.c. 1.3 A 2) PoE 48 V d.c. 270 mA (Class 0) 3) PoE+ 54 V d.c. 340 mA (Class 4)
Applicant Name and Address:	i-PRO Co., Ltd. 7-9-66 HAKOZAKI HIGASHI-KU FUKUOKA-SHI FUKUOKA 812-0053 JAPAN

This is to certify that representative samples of the products covered by this Test Report have been investigated in accordance with the above referenced Standards. The products have been found to comply with the requirements covering the category and the products are judged to be eligible for Follow-Up Service under the indicated Test Procedure. The manufacturer is authorized to use the UL Mark on such products which comply with this Test Report and any other applicable requirements of UL LLC ('UL') in accordance with the Follow-Up Service Agreement. Only those products which properly bear the UL Mark are considered as being covered by UL's Follow-Up Service under the indicated Test Procedure.

The applicant is authorized to reproduce the referenced Test Report provided it is reproduced in its entirety.

UL authorizes the applicant to reproduce the latest pages of the referenced Test Report consisting of the first page of the Specific Technical Criteria through to the end of the Conditions of Acceptability.

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL.

Issue Date: 2022-04-14

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Report Reference #

E521573-A6040-UL

Revision Date: 2022-08-21

Prepared By: Nao Maede / Project Handler

Reviewed By: Tadao Nakayama / Reviewer

Supporting Documentation

The following documents located at the beginning of this Procedure supplement the requirements of this Test Report:

A. Authorization - The Authorization page may include additional Factory Identification Code markings.

B. Generic Inspection Instructions -

- i. Part AC details important information which may be applicable to products covered by this Procedure. Products described in this Test Report must comply with any applicable items listed unless otherwise stated in the body of this Test Report.
- ii. Part AE details any requirements which may be applicable to all products covered by this Procedure. Products described in this Test Report must comply with any applicable items listed unless otherwise stated in the body of each Test Report.
- iii. Part AF details the requirements for the UL Certification Mark which is not controlled by the technical standard used to investigate these products. Products are permitted to bear only the Certification Mark(s) corresponding to the countries for which it is certified, as indicated in each Test Report.

Product Description

This product is a Network Camera for use in an outdoor environment.

This equipment is supplied from the External Power Supply.

External Power Supply : That External Power Supply itself is not evaluated in this report.

Model Differences

Refer to Enclosure Id: 07-01 for details of model differences.

WV-U65302-Z2 was used for test purposes and is considered representative of the entire series.

Test Item Particulars

Product group	end product
Classification of use by	Ordinary person Instructed person Skilled person
Supply Connection	not mains connected: ES1
Supply tolerance	None
Supply connection – type	External Power Supply
Considered current rating of protective device	N/A
Equipment mobility	stationary wall/ceiling-mounted
Over voltage category (OVC)	OVC II
Class of equipment	Class III
Special installation location	N/A
Pollution degree (PD)	PD 2
Manufacturer's specified T _{ma} (°C)	55
IP protection class	IP 66
Power systems	not AC mains
Altitude during operation (m)	2000 m or less
Altitude of test laboratory (m)	1000 m

Mass of equipment (kg)	Approx. 1.6 kg (Model WV-U65301-Z1, WV-S65301-Z1) Approx. 1.7 kg (Model WV-U65302-Z2, WV-S65302-Z2)
Additional Information	
Maximum normal load is continuous recording.	
Additional Standards	
The product fulfills the requirements of: UL 62368-1 3rd Edition, Issued December 13, 2019, CAN/CSA C22.2 No. 62368-1:19, 3rd Edition	
Markings and Instructions	
Clause Title	Marking or Instruction Details
Equipment identification marking – Manufacturer identification	Listee's or Recognized Company's name, Trade Name, Trademark or File Number
Equipment identification marking – model identification	Model Number
Equipment rating marking – ratings	Input Ratings (voltage, frequency/dc, current/power)
Special Instructions to UL Representative	
N/A	

BD1.0	TABLE: Production-Line Testing Requirements					
BD1.1	Electric Strength Test Special Constructions – Refer to Generic Inspection Instructions, Part AC for further information.					
Model	Component	Removable parts	Test probe location	Test V rms	Test V dc	Test Time, s
--	--	--	--	--	--	--
BD1.2	Earthing Continuity Test Exemptions – This test is not required for the following models:					
	All models					
BD1.3	Electric Strength Test Exemptions – This test is not required for the following models:					
	All models					
BD1.4	Electric Strength Test Component Exemptions – The following solid-state components may be disconnected from the remainder of the circuitry during the performance of this test.					
	N/A					

BE1.0	Sample and Test Specifics for Follow-Up Tests at UL				
Model	Component	Material	Test	Sample (s)	Test Specifics
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4.1.2	TABLE: List of critical components					Pass
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Product Category CCN(s)	Mark(s) of conformity	Supplement ID
Multi-cable Connector (CN515)	Japan Solderless Terminal Mfg. Co., Ltd.	Type H, Series GH (BM12B-GHS-TBT (LF)(SN))	AC/DC 100V, 1.0A	ECBT2	UL	
LAN Connector (JK503)	YUQIU ELECTRONICS CO., LTD. (DONGGUAN YUQIU ELECTRONICS CO., LTD.)	RJ011- FD08S3B1G10	AC 150V, 0.5A, Housing: V-0	QMFZ2	UL	
Lithium Battery (B501)	Panasonic Corp.	BR-1225 or BR- 1225A	3.0V, 48mAh, Maximum Abnormal Charging Current: 3.0mA	BBCV2	UL	
Alternative	POWER GLORY BATTERY TECH (HK) CO., LTD.	BR1225	3.0V, 45mAh, Maximum Abnormal Charging Current: 10mA	BBCV2	UL	
Lens Module for WV-U65302-Z2, WV-S65302-Z2	Tamron Co., Ltd.	DF034N0000	Constructed with Focus motor: 1pcs, Zoom motor: 2pcs Iris motor: 1pcs	--	(Tested in equipment)	
Lens Module for WV-U65301-Z1, WV-S65301-Z1	UNION OPTEC	T5285-HQ11B	Constructed with Focus motor: 1pcs, Zoom motor: 1pcs, Iris motor: 1pcs	--	(Tested in equipment)	
TILT motor	MinebeaMitsumi Inc.	PM25S-048-PAE0	DC 13V, 15Ω	--	(Tested in equipment)	

PAN Motor	MinebeaMitsumi Inc.	PM35S-N48-PAD8	DC 10.5V, 9Ω	--	(Tested in equipment)	
PCBs	Interchangeable	Interchangeable	Minimum V-1, Minimum 130°C	ZPMV2	UL	
Flexible PCBs	Interchangeable	Interchangeable	Minimum V-1, Minimum 80°C	ZPXK2	UL	
Internal Wires	Interchangeable	Interchangeable	VW-1, Minimum 30V, Minimum 80°C	AVLV2	UL	
Dome Lens	Mitsubishi Engineering - Plastic Corp.	S-2000VUR(f1)	Minimum 0.38mm thick, V-2	QMFZ2	UL	
Alternative	Interchangeable	Interchangeable	Minimum HB at thickness and color used.(Suitable for outdoor use with respect to exposure to Ultraviolet Light, Water Exposure and Immersion in accordance with UL 746C.)	QMFZ2	UL	
Upper Caser	TEIJIN CHEMICALS PLASTIC COMPOUNDS SHANGHAI LTD.	LN-3520ZH(f1)	Minimum 1.0mm thick, V-0	QMFZ2	UL	
Alternative	Interchangeable	Interchangeable	Minimum HB at thickness and color used.(Suitable for outdoor use with respect to exposure to Ultraviolet Light, Water Exposure and Immersion in accordance with UL 746C.)	QMFZ2	UL	

Inner Top Cover	CHANG CHUN PLASTICS CO., LTD.	4115	Minimum 0.75mm thick, V-0	QMFZ2	UL	
Alternative	Interchangeable	Interchangeable	Minimum HB at thickness and color used.	QMFZ2	UL	
Lens Cover F	CHANG CHUN PLASTICS CO., LTD.	4115	Minimum 0.75mm thick, V-0	QMFZ2	UL	
Alternative	Interchangeable	Interchangeable	Minimum HB at thickness and color used.	QMFZ2	UL	
Lens Cover R	CHANG CHUN PLASTICS CO., LTD.	4115	Minimum 0.75mm thick, V-0	QMFZ2	UL	
Alternative	Interchangeable	Interchangeable	Minimum HB at thickness and color used.	QMFZ2	UL	
Inner PCB Cover	Teijin Chemicals Plastic Compounds Shanghai Ltd.	LN-1250G	Minimum 1.0mm thick, V-0	QMFZ2	UL	
Alternative	Interchangeable	Interchangeable	Minimum HB at thickness and color used.	QMFZ2	UL	
Inner Case	Interchangeable	AlSi10Mg	Aluminum alloy	--	(Tested in equipment)	
Case Lower	Interchangeable	AlSi10Mg	Aluminum alloy	--	(Tested in equipment)	
Dome Seal Rubber	Dow Toray Co., Ltd.	RBB-6640-40	Silicone, Black	QMFZ2	UL	
Alternative	JIANGSU PEARL SILICONE RUBBER MATERIAL CO., LTD.	HD-87XX (Hardness: 40)	Silicone, Black	QMFZ2	UL	

Alternative	WYNCA TINYO SILICONE CO., LTD.	TY856 (Hardness: 40)	Silicone, Black	QMFZ2	UL	
Lower Case Seal Rubber	Dow Toray Co., Ltd.	RBB-6640-40	Silicone, Black	QMFZ2	UL	
Alternative	JIANGSU PEARL SILICONE RUBBER MATERIAL CO., LTD.	HD-87XX (Hardness: 40)	Silicone, Black	QMFZ2	UL	
Alternate	WYNCA TINYO SILICONE CO., LTD.	TY856 (Hardness: 40)	Silicone, Black	QMFZ2	UL	
Grommet	Dow Toray Co., Ltd.	RBB-6630-30	Silicone, Black	QMFZ2	UL	
Alternate	WYNCA TINYO SILICONE CO., LTD.	TY856 (Hardness: 30)	Silicone, Natural	QMFZ2	UL	
Alternate	WYNCA TINYO SILICONE CO., LTD.	TY856 (Hardness: 20)	Silicone, Natural	QMFZ2	UL	

Enclosures

Type	Supplement Id	Description
Photographs	03-01	Overall view_1
Photographs	03-02	Overall view_2
Photographs	03-03	Overall view_3
Photographs	03-04	PWB_1
Photographs	03-05	PWB_2
Schematics + PWB	05-01	Schematics for RTC circuit
Miscellaneous	07-01	Model Differences
Miscellaneous	07-02	Marking Label for Models WV-U65301-Z1, WV-U65302-Z2
Miscellaneous	07-03	Marking Label for Models WV-S65301-Z1, WV-S65302-Z2

Description of Differences

¶

Model	Basic model	Similar model	□	□
Item	WV-U65302-Z2	WV-U65301-Z1	WV-S65302-Z2	WV-S65301-Z1
Dimensions	□	□	□	□
Diameter	φ165-mm × 153-mm (H)	φ165-mm × 139-mm (H)	φ165-mm × 153-mm (H)	φ165-mm × 139-mm (H)
Dome radius	63.5-mm	63.5-mm	63.5-mm	63.5-mm
Mass	Approx. 1.7kg	Approx. 1.6kg	Approx. 1.7kg	Approx. 1.6kg
Optical zoom factor	x21	x10	x21	x10
Auto-track function	Not provided	Not provided	Provided	Provided

Auto-track function: ¶

The auto-track function automatically tracks and captures images of the subject when it is detected in an auto-pan, preset sequence/preset position, patrol or area, that has been set in advance. This is a software feature. □

¶

i-PRO

IP66 TYPE 4X
ENCLOSURE



Network Camera
ネットワークカメラ

Model No. WV-U65301-Z1

POWER 12 V ≐ 1.3 A

PoE 48 V ≐ 270 mA (Class0)

PoE+ 54 V ≐ 340 mA (Class4)

i-PRO Co., Ltd. Engineered in Japan
Made in China



i-PRO Co., Ltd. Fukuoka, Japan
Authorised Representative in EU: i-PRO EMEA B.V.
Laarderhoogtweg 25, 1101 EB Amsterdam, Netherlands

CAN ICES-3 (A)/NMB-3(A)

i-PRO

IP66 TYPE 4X
ENCLOSURE

C  **US LISTED**
I.T.E. E521573

Network Camera

ネットワークカメラ

Model No. **WV-U65302-Z2**

POWER 12 V \equiv 1.3 A

PoE 48 V \equiv 270 mA (Class0)

PoE+ 54 V \equiv 340 mA (Class4)

i-PRO Co., Ltd. Engineered in Japan
Made in China



CE

FC



i-PRO Co., Ltd. Fukuoka, Japan
Authorised Representative in EU: i-PRO EMEA B.V.
Laarderhoogtweg 25, 1101 EB Amsterdam, Netherlands

CAN ICES-3 (A)/NMB-3(A)

i-PRO

IP66

**TYPE 4X
ENCLOSURE**



Network Camera

Model No. **WV-S65301-Z1**

POWER 12 V = 1.3 A

PoE 48 V = 270 mA (Class0)

PoE+ 54 V = 340 mA (Class4)

i-PRO Co., Ltd. Engineered in Japan
Made in China



i-PRO Co., Ltd. Tokyo, Japan
Authorised Representative in EU: i-PRO EMEA B.V.
Laarderhoogtweg 25, 1101 EB Amsterdam, Netherlands

CAN ICES-3 (A)/NMB-3(A)

i-PRO

IP66

**TYPE 4X
ENCLOSURE**



Network Camera

Model No. **WV-S65302-Z2**

POWER 12 V = 1.3 A

PoE 48 V = 270 mA (Class0)

PoE+ 54 V = 340 mA (Class4)

i-PRO Co., Ltd. Engineered in Japan
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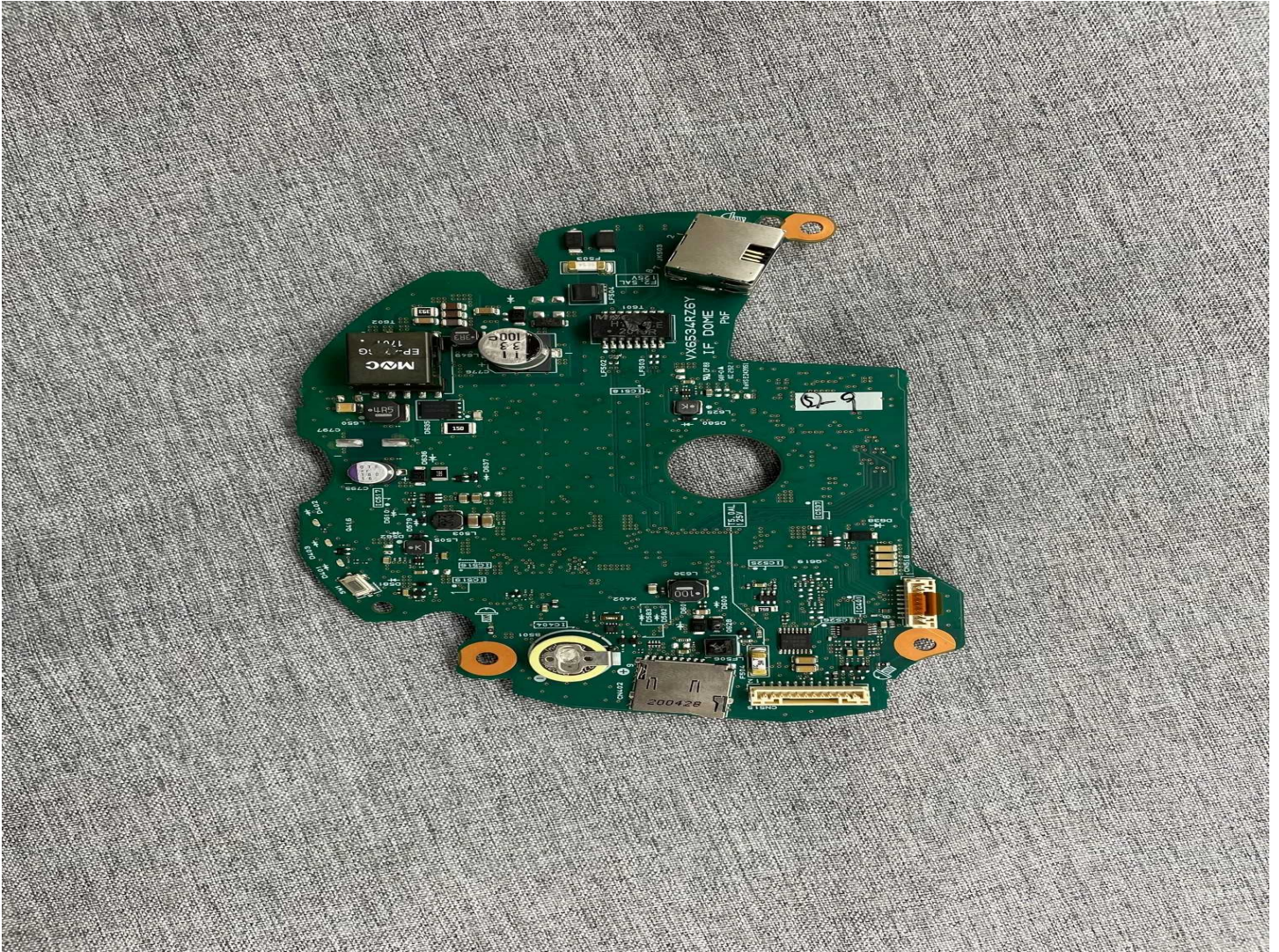
i-PRO Co., Ltd. Tokyo, Japan
Authorised Representative in EU: i-PRO EMEA B.V.
Laarderhoogtweg 25, 1101 EB Amsterdam, Netherlands

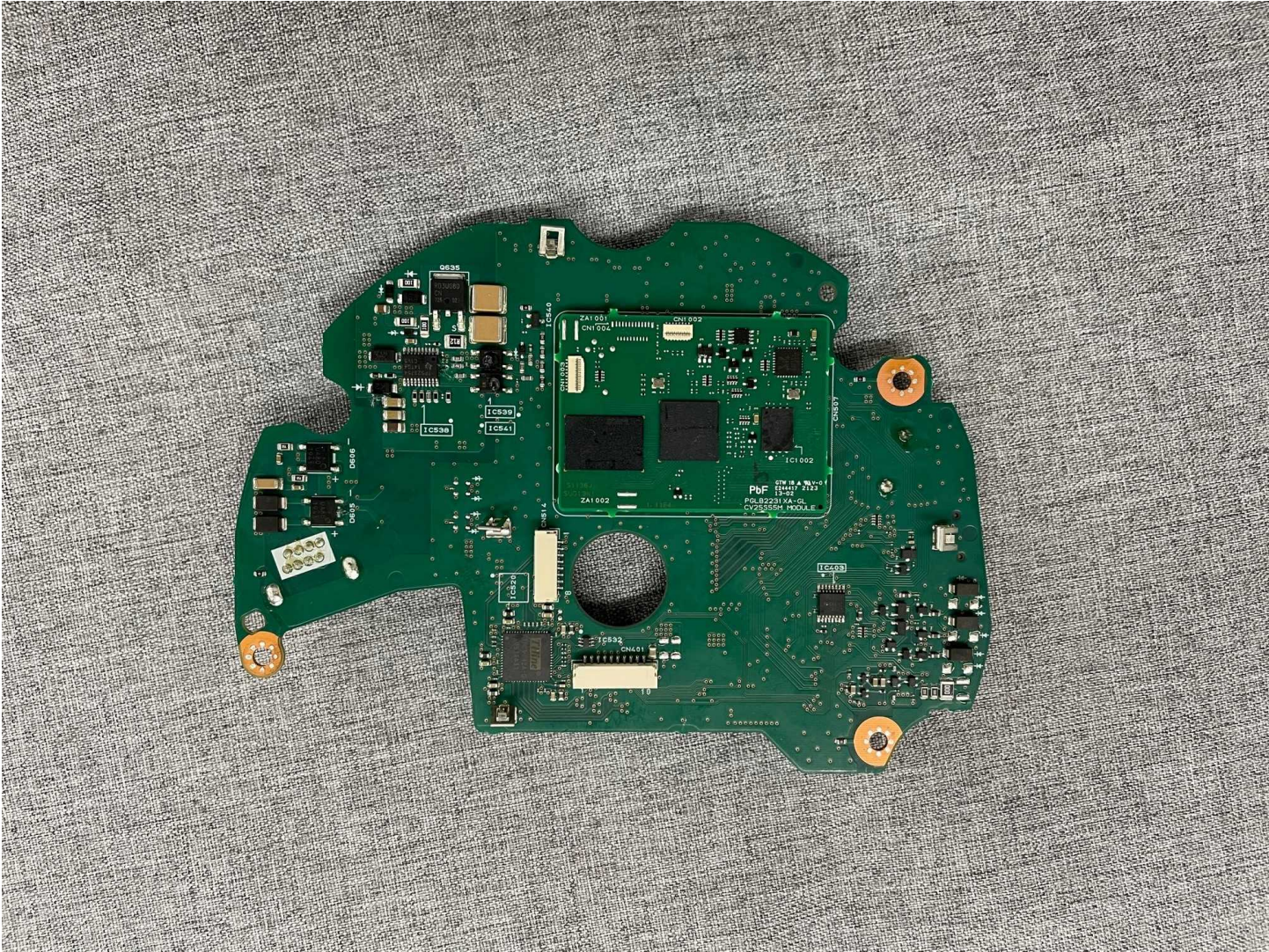
CAN ICES-3 (A)/NMB-3(A)



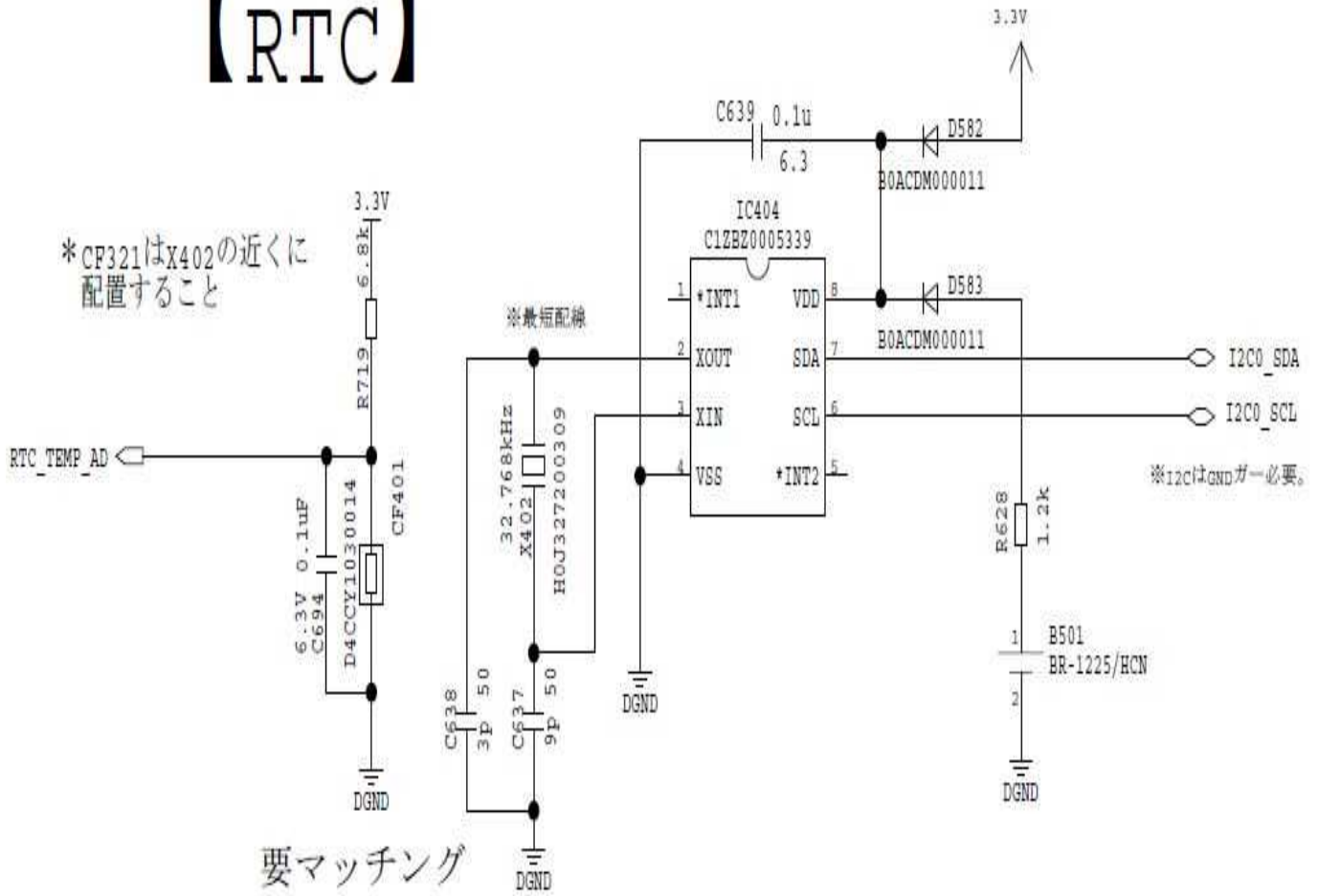








【RTC】



CERTIFICATE OF COMPLIANCE

Certificate Number UL-US-2215400-0
Report Reference E521573-A6040-UL
Date 28-Apr-2022

Issued to: i-PRO Co., Ltd.
SHINAGAWA INTERCITY A (14F) 2-15-1 KONAN
MINATO-KU, TOKYO 108-6014
Japan

**This is to certify that
representative samples of**

AZOT - Audio/Video, Information and Communication
Technology Equipment

See Addendum Page for Product Designation(s).

Have been investigated by UL in accordance with the
Standard(s) indicated on this Certificate.

Standard(s) for Safety: UL 62368-1, 3rd Ed., Issue Date: 2019-12-13

Additional Information: See the UL Online Certifications Directory at
<https://iq.ulprospector.com> for additional information

This Certificate of Compliance does not provide authorization to apply the UL Mark. Only the UL Follow-Up Services Procedure provides authorization to apply the UL Mark.

Only those products bearing the UL Mark should be considered as being UL Certified and covered under UL's Follow-Up Services.

Look for the UL Certification Mark on the product.

B. Mahlenz

Bruce Mahrenholz, Director North American Certification Program

UL LLC

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CERTIFICATE OF COMPLIANCE

Certificate Number UL-US-2215400-0
Report Reference E521573-A6040-UL
Date 28-Apr-2022

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements

Model	Category Description
WV-U65301-Z1	Network Camera
WV-U65302-Z2	Network Camera



Bruce Mahrenholz, Director North American Certification Program

UL LLC

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CERTIFICATE OF COMPLIANCE

Certificate Number UL-CA-2214706-0
Report Reference E521573-A6040-UL
Date 28-Apr-2022

Issued to: i-PRO Co., Ltd.
SHINAGAWA INTERCITY A (14F) 2-15-1 KONAN
MINATO-KU, TOKYO 108-6014
Japan

**This is to certify that
representative samples of**

AZOT7 - Audio/Video, Information and Communication
Technology Equipment Certified for Canada
See Addendum Page for Product Designation(s).

Have been investigated by UL in accordance with the
Standard(s) indicated on this Certificate.

Standard(s) for Safety: CSA C22.2 No. 62368-1:19, 3rd Ed., Issue Date: 2019-12-13, Revision Date: 2021-10-22

Additional Information: See the UL Online Certifications Directory at
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Date 28-Apr-2022

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WV-U65301-Z1	Network Camera
WV-U65302-Z2	Network Camera



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Certification Type:	Listing
CCN:	AZOT, AZOT7 (Audio/video, Information and Communication Technology Equipment)
Complementary CCN:	N/A
Product:	Network Camera
Model:	WV-U65301-Z1, WV-U65302-Z2
Rating:	1) 12 V d.c. 1.3 A 2) PoE 48 V d.c. 270 mA (Class 0) 3) PoE+ 54 V d.c. 340 mA (Class 4)
Applicant Name and Address:	i-PRO Co., Ltd. 7-9-66 HAKOZAKI HIGASHI-KU FUKUOKA-SHI FUKUOKA 812-0053 JAPAN

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Issue Date: 2022-04-14

Page 2 of 10

Report Reference #

E521573-A6040-UL

Revision Date: 2022-06-06

Prepared By: Nao Maede / Project Handler

Reviewed By: Tadao Nakayama / Reviewer

Supporting Documentation

The following documents located at the beginning of this Procedure supplement the requirements of this Test Report:

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Product Description

This product is a Network Camera for use in an outdoor environment.

This equipment is supplied from the External Power Supply.

External Power Supply : That External Power Supply itself is not evaluated in this report.

Model Differences

Refer to Enclosure Id: 07-01 for details of model differences.

WV-U65302-Z2 was used for test purposes and is considered representative of the entire series.

Test Item Particulars

Product group	end product
Classification of use by	Ordinary person Instructed person Skilled person
Supply Connection	not mains connected: ES1
Supply tolerance	None
Supply connection – type	External Power Supply
Considered current rating of protective device	N/A
Equipment mobility	stationary wall/ceiling-mounted
Over voltage category (OVC)	OVC II
Class of equipment	Class III
Special installation location	N/A
Pollution degree (PD)	PD 2
Manufacturer's specified Tma (°C)	55
IP protection class	IP 66
Power systems	not AC mains
Altitude during operation (m)	2000 m or less
Altitude of test laboratory (m)	1000 m

Mass of equipment (kg)	Approx. 1.6 kg (Model WV-U65301-Z1) Approx. 1.7 kg (Model WV-U65302-Z2)
Additional Information Maximum normal load is continuous recording.	
Additional Standards The product fulfills the requirements of: UL 62368-1 3rd Edition, Issued December 13, 2019, CAN/CSA C22.2 No. 62368-1:19, 3rd Edition	
Markings and Instructions	
Clause Title	Marking or Instruction Details
Equipment identification marking – Manufacturer identification	Listee's or Recognized Company's name, Trade Name, Trademark or File Number
Equipment identification marking – model identification	Model Number
Equipment rating marking – ratings	Input Ratings (voltage, frequency/dc, current/power)
Special Instructions to UL Representative N/A	

BD1.0	TABLE: Production-Line Testing Requirements					
BD1.1	Electric Strength Test Special Constructions – Refer to Generic Inspection Instructions, Part AC for further information.					
Model	Component	Removable parts	Test probe location	Test V rms	Test V dc	Test Time, s
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	N/A					

BE1.0	Sample and Test Specifics for Follow-Up Tests at UL				
Model	Component	Material	Test	Sample (s)	Test Specifics
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Lithium Battery (B501)	Panasonic Corp.	BR-1225 or BR- 1225A	3.0V, 48mAh, Maximum Abnormal Charging Current: 3.0mA	BBCV2	UL	
Alternative	POWER GLORY BATTERY TECH (HK) CO., LTD.	BR1225	3.0V, 45mAh, Maximum Abnormal Charging Current: 10mA	BBCV2	UL	
Lens Module for WV-U65302-Z2	Tamron Co., Ltd.	DF034N0000	Constructed with Focus motor: 1pcs, Zoom motor: 2pcs Iris motor: 1pcs	--	(Tested in equipment)	
Lens Module for WV-U65301-Z1	UNION OPTEC	T5285-HQ11B	Constructed with Focus motor: 1pcs, Zoom motor: 1pcs, Iris motor: 1pcs	--	(Tested in equipment)	
TILT motor	MinebeaMitsumi Inc.	PM25S-048-PAE0	DC 13V, 15Ω	--	(Tested in equipment)	

PAN Motor	MinebeaMitsumi Inc.	PM35S-N48-PAD8	DC 10.5V, 9Ω	--	(Tested in equipment)	
PCBs	Interchangeable	Interchangeable	Minimum V-1, Minimum 130°C	ZPMV2	UL	
Flexible PCBs	Interchangeable	Interchangeable	Minimum V-1, Minimum 80°C	ZPK2	UL	
Internal Wires	Interchangeable	Interchangeable	VW-1, Minimum 30V, Minimum 80°C	AVLV2	UL	
Dome Lens	Mitsubishi Engineering - Plastic Corp.	S-2000VUR(f1)	Minimum 0.38mm thick, V-2	QMFZ2	UL	
Alternative	Interchangeable	Interchangeable	Minimum HB at thickness and color used.(Suitable for outdoor use with respect to exposure to Ultraviolet Light, Water Exposure and Immersion in accordance with UL 746C.)	QMFZ2	UL	
Upper Caser	TEIJIN CHEMICALS PLASTIC COMPOUNDS SHANGHAI LTD.	LN-3520ZH(f1)	Minimum 1.0mm thick, V-0	QMFZ2	UL	
Alternative	Interchangeable	Interchangeable	Minimum HB at thickness and color used.(Suitable for outdoor use with respect to exposure to Ultraviolet Light, Water Exposure and Immersion in accordance with UL 746C.)	QMFZ2	UL	

Inner Top Cover	CHANG CHUN PLASTICS CO., LTD.	4115	Minimum 0.75mm thick, V-0	QMFZ2	UL	
Alternative	Interchangeable	Interchangeable	Minimum HB at thickness and color used.	QMFZ2	UL	
Lens Cover F	CHANG CHUN PLASTICS CO., LTD.	4115	Minimum 0.75mm thick, V-0	QMFZ2	UL	
Alternative	Interchangeable	Interchangeable	Minimum HB at thickness and color used.	QMFZ2	UL	
Lens Cover R	CHANG CHUN PLASTICS CO., LTD.	4115	Minimum 0.75mm thick, V-0	QMFZ2	UL	
Alternative	Interchangeable	Interchangeable	Minimum HB at thickness and color used.	QMFZ2	UL	
Inner PCB Cover	Teijin Chemicals Plastic Compounds Shanghai Ltd.	LN-1250G	Minimum 1.0mm thick, V-0	QMFZ2	UL	
Alternative	Interchangeable	Interchangeable	Minimum HB at thickness and color used.	QMFZ2	UL	
Inner Case	Interchangeable	AlSi10Mg	Aluminum alloy	--	(Tested in equipment)	
Case Lower	Interchangeable	AlSi10Mg	Aluminum alloy	--	(Tested in equipment)	
Dome Seal Rubber	Dow Toray Co., Ltd.	RBB-6640-40	Silicone, Black	QMFZ2	UL	
Alternative	JIANGSU PEARL SILICONE RUBBER MATERIAL CO., LTD.	HD-87XX (Hardness: 40)	Silicone, Black	QMFZ2	UL	

Alternative	WYNCA TINYO SILICONE CO., LTD.	TY856 (Hardness: 40)	Silicone, Black	QMFZ2	UL	
Lower Case Seal Rubber	Dow Toray Co., Ltd.	RBB-6640-40	Silicone, Black	QMFZ2	UL	
Alternative	JIANGSU PEARL SILICONE RUBBER MATERIAL CO., LTD.	HD-87XX (Hardness: 40)	Silicone, Black	QMFZ2	UL	
Alternate	WYNCA TINYO SILICONE CO., LTD.	TY856 (Hardness: 40)	Silicone, Black	QMFZ2	UL	
Grommet	Dow Toray Co., Ltd.	RBB-6630-30	Silicone, Black	QMFZ2	UL	
Alternate	WYNCA TINYO SILICONE CO., LTD.	TY856 (Hardness: 30)	Silicone, Natural	QMFZ2	UL	
Alternate	WYNCA TINYO SILICONE CO., LTD.	TY856 (Hardness: 20)	Silicone, Natural	QMFZ2	UL	

Enclosures

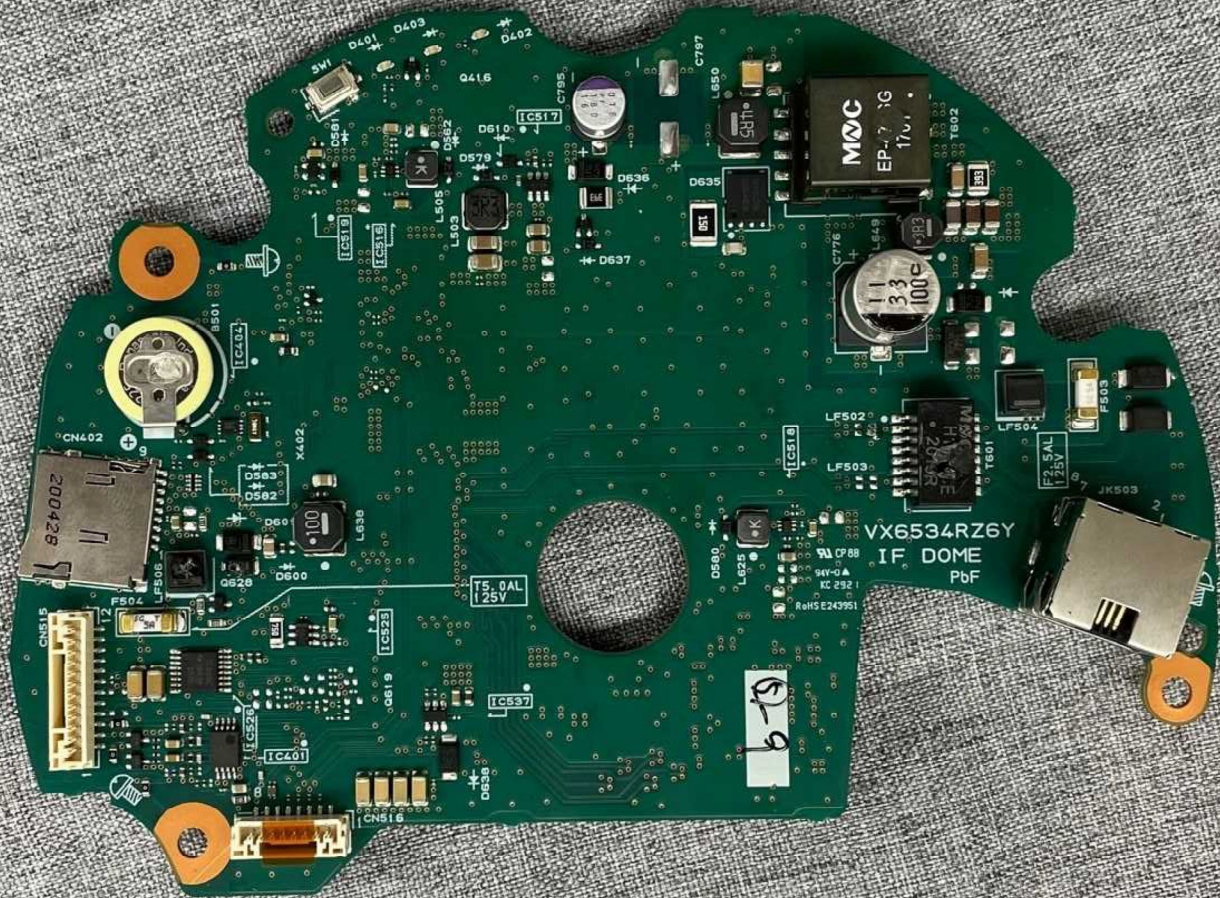
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Photographs	03-01	Overall view_1
Photographs	03-02	Overall view_2
Photographs	03-03	Overall view_3
Photographs	03-04	PWB_1
Photographs	03-05	PWB_2
Schematics + PWB	05-01	Schematics for RTC circuit
Miscellaneous	07-01	Model Differences
Miscellaneous	07-02	Marking Label







UL 470



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EP-7
17uV

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VX6534RZ6Y
IF DOME
PbF

6-19

RoHS E243951

IC537

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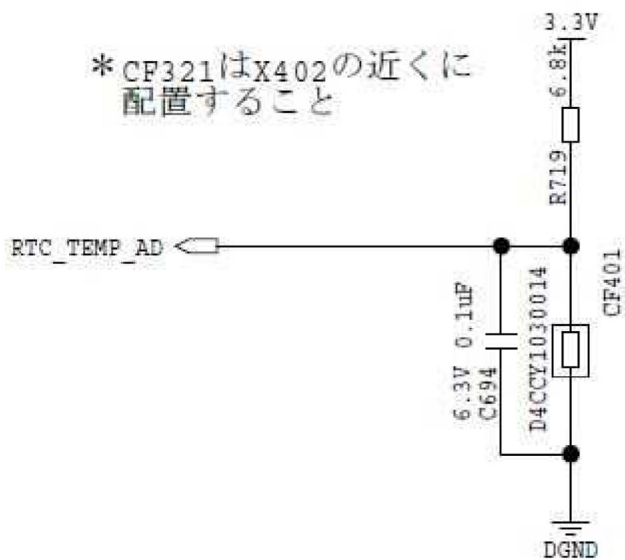
IC302

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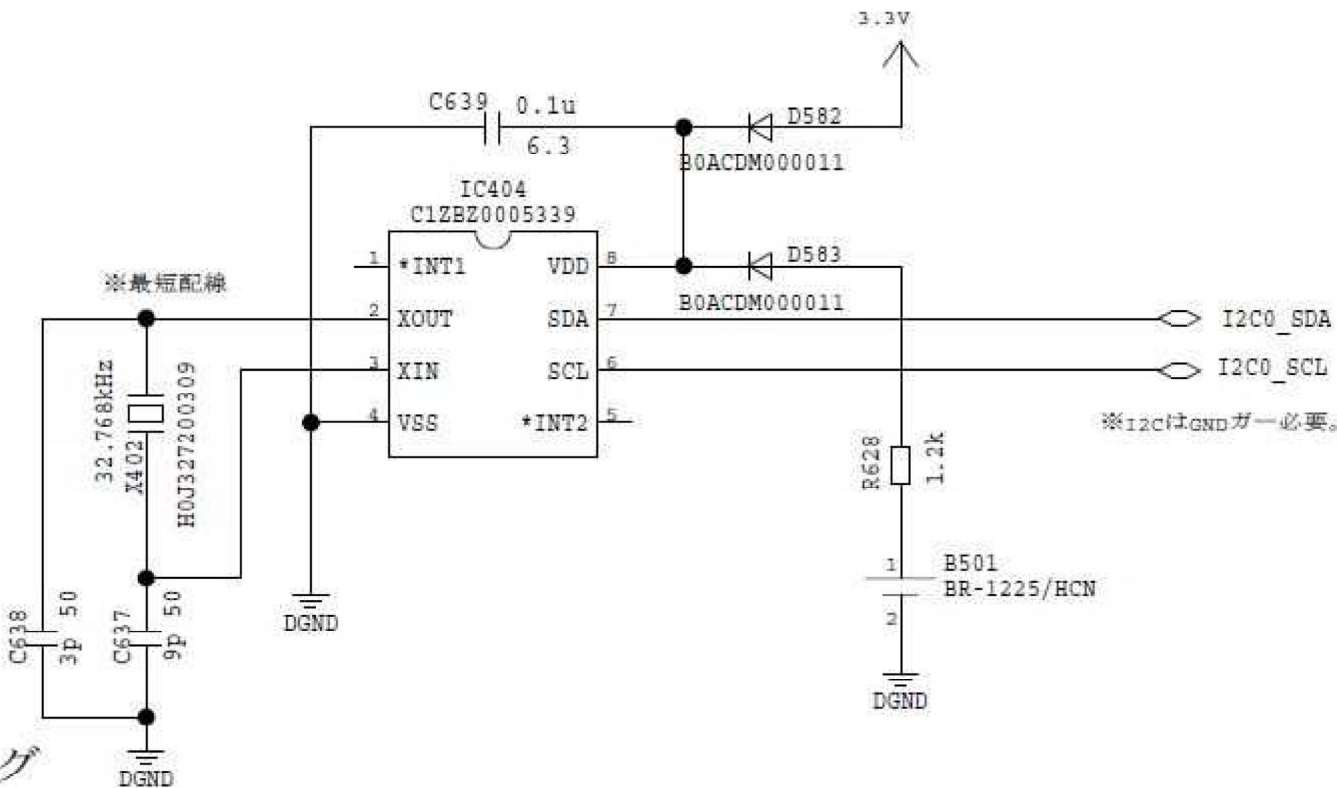
IC302

【RTC】

*CF321はX402の近くに配置すること



要マッチング



UL TEST REPORT AND PROCEDURE

Standard:	UL 62368-1, 3rd Ed, Issued: 2019-12-13 (Audio/video, information and communication technology equipment Part 1: Safety requirements) CAN/CSA C22.2 No. 62368-1:19, 3rd Ed, Issued: 2019-12-13 (Audio/video, information and communication technology equipment Part 1: Safety requirements)
Certification Type:	Listing
CCN:	AZOT, AZOT7 (Audio/video, Information and Communication Technology Equipment)
Complementary CCN:	N/A
Product:	Network Camera
Model:	WV-U65301-Z1, WV-U65302-Z2
Rating:	1) 12 V d.c. 1.3 A 2) PoE 48 V d.c. 270 mA (Class 0) 3) PoE+ 54 V d.c. 340 mA (Class 4)
Applicant Name and Address:	i-PRO Co., Ltd. 7-9-66 HAKOZAKI HIGASHI-KU FUKUOKA-SHI FUKUOKA 812-0053 JAPAN

This is to certify that representative samples of the products covered by this Test Report have been investigated in accordance with the above referenced Standards. The products have been found to comply with the requirements covering the category and the products are judged to be eligible for Follow-Up Service under the indicated Test Procedure. The manufacturer is authorized to use the UL Mark on such products which comply with this Test Report and any other applicable requirements of UL LLC ('UL') in accordance with the Follow-Up Service Agreement. Only those products which properly bear the UL Mark are considered as being covered by UL's Follow-Up Service under the indicated Test Procedure.

The applicant is authorized to reproduce the referenced Test Report provided it is reproduced in its entirety.

UL authorizes the applicant to reproduce the latest pages of the referenced Test Report consisting of the first page of the Specific Technical Criteria through to the end of the Conditions of Acceptability.

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL.

Issue Date: 2022-04-14

Page 2 of 10

Report Reference #

E521573-A6040-UL

Prepared By: Kenshi Shimomura / Project
Handler

Reviewed By: Tadao Nakayama / Reviewer

Supporting Documentation

The following documents located at the beginning of this Procedure supplement the requirements of this Test Report:

A. Authorization - The Authorization page may include additional Factory Identification Code markings.

B. Generic Inspection Instructions -

- i. Part AC details important information which may be applicable to products covered by this Procedure. Products described in this Test Report must comply with any applicable items listed unless otherwise stated in the body of this Test Report.
- ii. Part AE details any requirements which may be applicable to all products covered by this Procedure. Products described in this Test Report must comply with any applicable items listed unless otherwise stated in the body of each Test Report.
- iii. Part AF details the requirements for the UL Certification Mark which is not controlled by the technical standard used to investigate these products. Products are permitted to bear only the Certification Mark(s) corresponding to the countries for which it is certified, as indicated in each Test Report.

Product Description

This product is a Network Camera for use in an outdoor environment.

This equipment is supplied from the External Power Supply.

External Power Supply : That External Power Supply itself is not evaluated in this report.

Model Differences

Refer to Enclosure Id: 07-01 for details of model differences.

WV-U65302-Z2 was used for test purposes and is considered representative of the entire series.

Test Item Particulars

Product group	end product
Classification of use by	Ordinary person Instructed person Skilled person
Supply Connection	not mains connected: ES1
Supply tolerance	None
Supply connection – type	External Power Supply
Considered current rating of protective device	N/A
Equipment mobility	stationary wall/ceiling-mounted
Over voltage category (OVC)	OVC II
Class of equipment	Class III
Special installation location	N/A
Pollution degree (PD)	PD 2
Manufacturer's specified T _{ma} (°C)	55
IP protection class	IP 66
Power systems	not AC mains
Altitude during operation (m)	2000 m or less
Altitude of test laboratory (m)	1000 m
Mass of equipment (kg)	Approx. 1.6 kg (Model WV-U65301-Z1) Approx. 1.7 kg (Model WV-U65302-Z2)

Additional Information

Maximum normal load is continuous recording.

Additional Standards

The product fulfills the requirements of: UL 62368-1 3rd Edition, Issued December 13, 2019, CAN/CSA C22.2 No. 62368-1:19, 3rd Edition

Markings and Instructions

Clause Title	Marking or Instruction Details
Equipment identification marking – Manufacturer identification	Listee's or Recognized Company's name, Trade Name, Trademark or File Number
Equipment identification marking – model identification	Model Number
Equipment rating marking – ratings	Input Ratings (voltage, frequency/dc, current/power)

Special Instructions to UL Representative

N/A

BD1.0	TABLE: Production-Line Testing Requirements					
BD1.1	Electric Strength Test Special Constructions – Refer to Generic Inspection Instructions, Part AC for further information.					
Model	Component	Removable parts	Test probe location	Test V rms	Test V dc	Test Time, s
--	--	--	--	--	--	--
BD1.2	Earthing Continuity Test Exemptions – This test is not required for the following models:					
	All models					
BD1.3	Electric Strength Test Exemptions – This test is not required for the following models:					
	All models					
BD1.4	Electric Strength Test Component Exemptions – The following solid-state components may be disconnected from the remainder of the circuitry during the performance of this test.					
	N/A					

BE1.0	Sample and Test Specifics for Follow-Up Tests at UL				
Model	Component	Material	Test	Sample (s)	Test Specifics
--	--	--	--	--	--

4.1.2	TABLE: List of critical components					Pass
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Product Category CCN(s)	Mark(s) of conformity	Supplement ID
Multi-cable Connector (CN515)	Japan Solderless Terminal Mfg. Co., Ltd.	Type H, Series GH (BM12B-GHS-TBT (LF)(SN))	AC/DC 100V, 1.0A	ECBT2	UL	
LAN Connector (JK503)	YUQIU ELECTRONICS CO., LTD. (DONGGUAN YUQIU ELECTRONICS CO., LTD.)	RJ011- FD08S3B1G10	AC 150V, 0.5A, Housing: V-0	QMFZ2	UL	
Lithium Battery (B501)	Panasonic Corp.	BR-1225	3.0V, 48mAh, Maximum Abnormal Charging Current: 3.0mA	BBCV2	UL	
Alternative	POWER GLORY BATTERY TECH (HK) CO., LTD.	BR1225	3.0V, 45mAh, Maximum Abnormal Charging Current: 10mA	BBCV2	UL	
Lens Module for WV-U65302-Z2	Tamron Co., Ltd.	DF034N0000	Constructed with Focus motor: 1pcs, Zoom motor: 2pcs Iris motor: 1pcs	--	(Tested in equipment)	
Lens Module for WV-U65301-Z1	UNION OPTEC	T5285-HQ11B	Constructed with Focus motor: 1pcs, Zoom motor: 1pcs, Iris motor: 1pcs	--	(Tested in equipment)	
TILT motor	MinebeaMitsumi Inc.	PM25S-048-PAE0	DC 13V, 15Ω	--	(Tested in equipment)	
PAN Motor	MinebeaMitsumi Inc.	PM35S-N48-PAD8	DC 10.5V, 9Ω	--	(Tested in equipment)	

PCBs	Interchangeable	Interchangeable	Minimum V-1, Minimum 130°C	ZPMV2	UL	
Flexible PCBs	Interchangeable	Interchangeable	Minimum V-1, Minimum 80°C	ZPK2	UL	
Internal Wires	Interchangeable	Interchangeable	VW-1, Minimum 30V, Minimum 80°C	AVLV2	UL	
Dome Lens	Mitsubishi Engineering - Plastic Corp.	S-2000VUR(f1)	Minimum 0.38mm thick, V-2	QMFZ2	UL	
Alternative	Interchangeable	Interchangeable	Minimum HB at thickness and color used.(Suitable for outdoor use with respect to exposure to Ultraviolet Light, Water Exposure and Immersion in accordance with UL 746C.)	QMFZ2	UL	
Upper Caser	TEIJIN CHEMICALS PLASTIC COMPOUNDS SHANGHAI LTD.	LN-3520ZH(f1)	Minimum 1.0mm thick, V-0	QMFZ2	UL	
Alternative	Interchangeable	Interchangeable	Minimum HB at thickness and color used.(Suitable for outdoor use with respect to exposure to Ultraviolet Light, Water Exposure and Immersion in accordance with UL 746C.)	QMFZ2	UL	
Inner Top Cover	CHANG CHUN PLASTICS CO., LTD.	4115	Minimum 0.75mm thick, V-0	QMFZ2	UL	

Alternative	Interchangeable	Interchangeable	Minimum HB at thickness and color used.	QMFZ2	UL	
Lens Cover F	CHANG CHUN PLASTICS CO., LTD.	4115	Minimum 0.75mm thick, V-0	QMFZ2	UL	
Alternative	Interchangeable	Interchangeable	Minimum HB at thickness and color used.	QMFZ2	UL	
Lens Cover R	CHANG CHUN PLASTICS CO., LTD.	4115	Minimum 0.75mm thick, V-0	QMFZ2	UL	
Alternative	Interchangeable	Interchangeable	Minimum HB at thickness and color used.	QMFZ2	UL	
Inner PCB Cover	Teijin Chemicals Plastic Compounds Shanghai Ltd.	LN-1250G	Minimum 1.0mm thick, V-0	QMFZ2	UL	
Alternative	Interchangeable	Interchangeable	Minimum HB at thickness and color used.	QMFZ2	UL	
Inner Case	Interchangeable	AlSi10Mg	Aluminum alloy	--	(Tested in equipment)	
Case Lower	Interchangeable	AlSi10Mg	Aluminum alloy	--	(Tested in equipment)	
Dome Seal Rubber	Dow Toray Co., Ltd.	RBB-6640-40	Silicone, Black	QMFZ2	UL	
Alternative	JIANGSU PEARL SILICONE RUBBER MATERIAL CO., LTD.	HD-87XX (Hardness: 40)	Silicone, Black	QMFZ2	UL	
Alternative	WYNCA TINYO SILICONE CO., LTD.	TY856 (Hardness: 40)	Silicone, Black	QMFZ2	UL	

Lower Case Seal Rubber	Dow Toray Co., Ltd.	RBB-6640-40	Silicone, Black	QMFZ2	UL	
Alternative	JIANGSU PEARL SILICONE RUBBER MATERIAL CO., LTD.	HD-87XX (Hardness: 40)	Silicone, Black	QMFZ2	UL	
Alternate	WYNCA TINYO SILICONE CO., LTD.	TY856 (Hardness: 40)	Silicone, Black	QMFZ2	UL	
Grommet	Dow Toray Co., Ltd.	RBB-6630-30	Silicone, Black	QMFZ2	UL	
Alternate	WYNCA TINYO SILICONE CO., LTD.	TY856 (Hardness: 30)	Silicone, Natural	QMFZ2	UL	

Enclosures

Type	Supplement Id	Description
Photographs	03-01	Overall view_1
Photographs	03-02	Overall view_2
Photographs	03-03	Overall view_3
Photographs	03-04	PWB_1
Photographs	03-05	PWB_2
Schematics + PWB	05-01	Schematics for RTC circuit
Miscellaneous	07-01	Model Differences
Miscellaneous	07-02	Marking Label

Description of Differences

Item \ Model	Basic model	Similar model
	WV-U65302-Z2	WV-U65301-Z1
Dimensions Diameter Dome radius	$\varnothing 165 \text{ mm} \times 153 \text{ mm (H)}$ 63.5 mm	$\varnothing 165 \text{ mm} \times 139 \text{ mm (H)}$ 63.5 mm
Mass	Approx. 1.7kg	Approx. 1.6kg
Optical zoom factor	x21	x10

i-PRO

IP66 TYPE 4X
ENCLOSURE



Network Camera
ネットワークカメラ

Model No. WV-U65301-Z1

POWER 12 V ≐ 1.3 A

PoE 48 V ≐ 270 mA (Class0)

PoE+ 54 V ≐ 340 mA (Class4)

i-PRO Co., Ltd. Engineered in Japan
Made in China



i-PRO Co., Ltd. Fukuoka, Japan
Authorised Representative in EU: i-PRO EMEA B.V.
Laarderhoogtweg 25, 1101 EB Amsterdam, Netherlands

CAN ICES-3 (A)/NMB-3(A)

i-PRO

IP66 TYPE 4X
ENCLOSURE

C  **US LISTED**
I.T.E. E521573

Network Camera

ネットワークカメラ

Model No. **WV-U65302-Z2**

POWER 12 V \equiv 1.3 A

PoE 48 V \equiv 270 mA (Class0)

PoE+ 54 V \equiv 340 mA (Class4)

i-PRO Co., Ltd. Engineered in Japan
Made in China



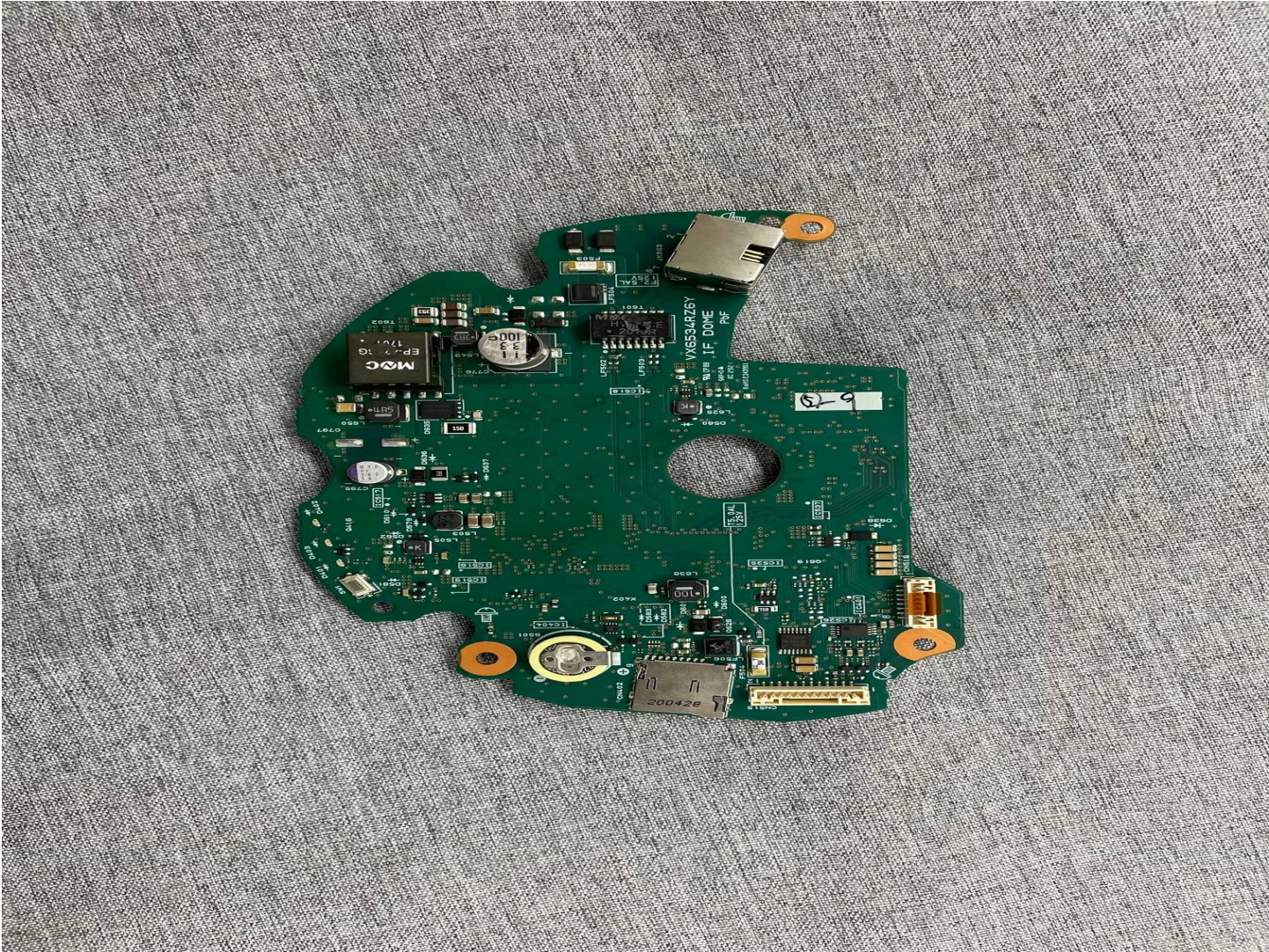
i-PRO Co., Ltd. Fukuoka, Japan
Authorised Representative in EU: i-PRO EMEA B.V.
Laarderhoogtweg 25, 1101 EB Amsterdam, Netherlands

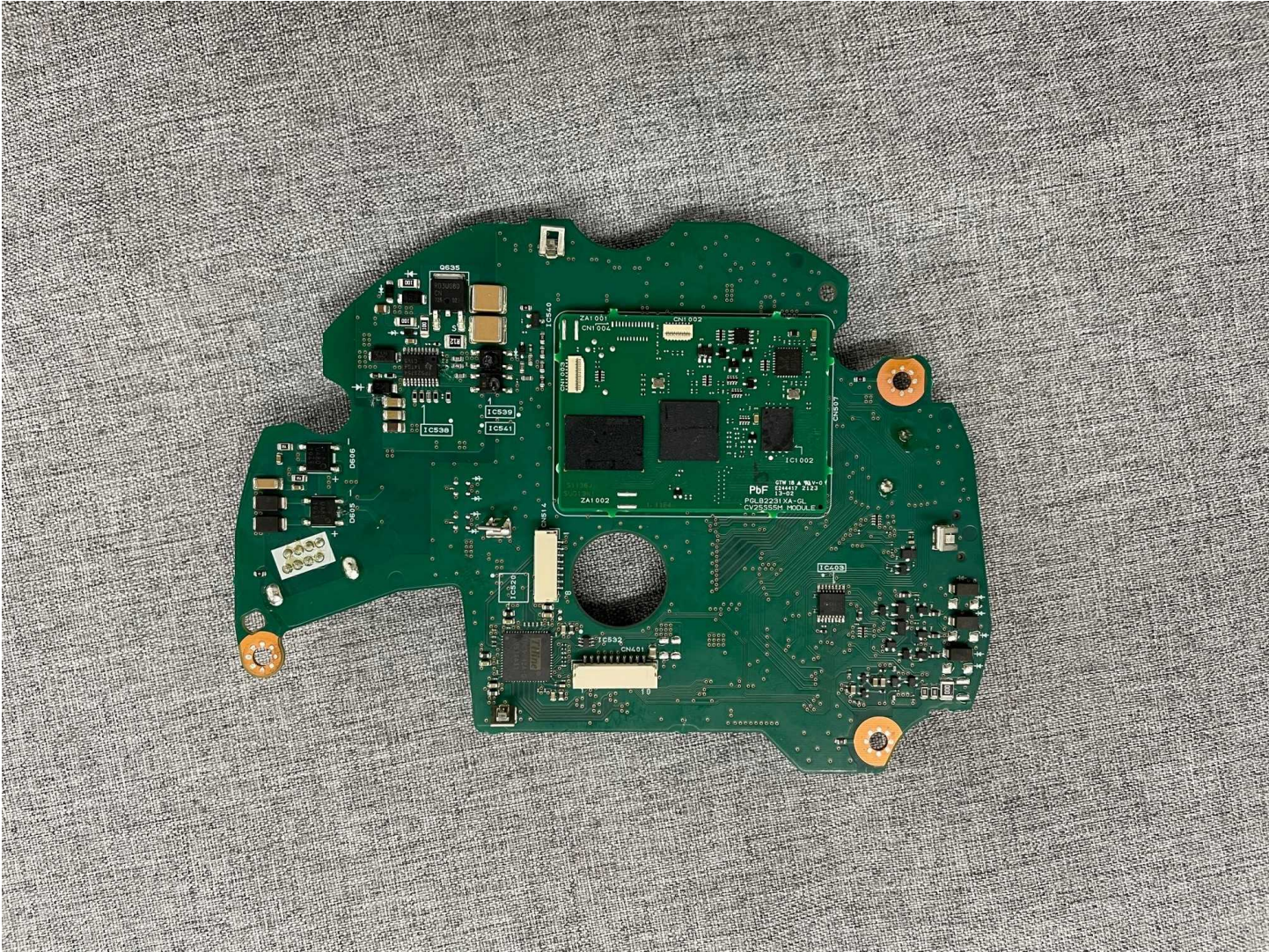
CAN ICES-3 (A)/NMB-3(A)











【RTC】

