

235

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晶睿通訊股份有限公司  
JOANNE CHANG



JOANNE CHANG  
 VIVOTEK INC  
 6TH FL, 192 LIEN CHENG RD  
 CHUNG HO DISTRICT  
 NEW TAIPEI  
 235 TAIWAN

Date: 2016/03/03  
 Subscriber: 100504413  
 PartySite: 125336  
 File No: E324690  
 Project No: 4787315496  
 PD No: 16007895  
 Type: R  
 PO Number:

Subject: **Procedure And/Or Report Material**

The following material resulting from the investigation under the above numbers is enclosed.

**Issue**

<u>Date</u>	<u>Vol</u>	<u>Sec</u>	<u>Pages</u>	<u>Revised Date</u>
	X2		Index Page(s)	
2016/02/23	X2	A90	Cert of Compliance	
2016/02/23	X2	A90	Add New Proc/Report Sect	

Purchase Order: CHANG JOANNE 15-JAN-2016

If there are illegible images in this package, legible images may be found online via MyHome@UL under My UL Reports/CDA

Please file revised pages and illustrations in place of material of like identity. New material should be filed in its proper numerical order.

NOTE: Follow-Up Service Procedure revisions DO NOT include Cover Pages, Test Records and Conclusion Pages. Report revisions DO NOT include Authorization Pages, Indices, Section General Pages and Appendixes.

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TPI File

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## Index

Product Type	Model/Type Reference	Report Reference #	Status
Outdoor Network Camera	IP8330, IP8332	E324690-A4-UL	
Network Camera	IP8162, IP8162P, CIVS-IPC-6000P	E324690-A9-UL	
Network Camera	FD8162, FD8162V, FD8362, FD8362E, CIVS-IPC-6020, CIVS-IPC-6030, CIVS-IPC-3530, CIVS-IPC-3535 and CIVS-IPC-3520	E324690-A10-UL	
Network Video Recorder	NR8201, NR8301	E324690-A12-UL	
Network Camera	IP8352	E324690-A13-UL	
Network Camera	FE8171V	E324690-A15-UL	
Video Encoder, 4 Port, Standalone; Video Encoder, 8 Port, Standalone	CIVS-SENC-4P-K9, CIVS-SENC-8P-K9, CIVS-SENC-4P, CIVS-SENC-8P	E324690-A16-UL	
Network Camera	1) MD8562 2) MD8562D	E324690-A17-UL	
Network Camera	IP8362	E324690-A18-UL	
Network Camera	IK-WD14A, IK-WR14A	E324690-A21-UL	
Outdoor Dome Network Camera	FD8372, CIVS-IPC-7030, CIVS-IPC-7030E	E324690-A22-UL	
Network Camera	FE8172, FE8172V, FE8173, FE8174, FE8174V, SF8174, SF8174V	E324690-A25-UL	
Network Camera	IP8332-C	E324690-A28-UL	
Outdoor Speed Dome Network Camera	SD83XXE (X = 0-9, A-Z or blank), CIVS-IPC-6930, CIVS-IPC-2830, CIVS-IPC-2835	E324690-A29-UL	
Network Camera	IP8172, IP8172P	E324690-A30-UL	
Network Camera	CIVS-IPC-6400	E324690-A31-UL	
Network Camera	CIVS-IPC-3421V	E324690-A33-UL	
Indoor Dome Network Camera	FD8136-FXX, FD8166-FXX (The X=0-9, A-Z, a-z or blank for marketing purpose)	E324690-A34-UL	
Network Camera	IK-WR04A, IK-WD04A	E324690-A36-UL	
Network Camera	IP8372	E324690-A37-UL	
IP Camera VGA	S5003FDXXXXXXXXXXXXX (X can be 0-9, A-Z, a-z, blank or "-", and no impact safety related critical components and construction.)	E324690-A38-UL	
Network Camera	IK-WB81A	E324690-A39-UL	
1080P Fixed Dome Network Camera	FD8163, FD8363	E324690-A40-UL	
Network Camera	CIVS-IPC-6050	E324690-A44-UL	
Network Camera	FD8355EHV, FD8365EHV, FD8155H, FD8165H	E324690-A49-UL	
Network Camera	IK-WD05A, IK-WR05A	E324690-A50-UL	
Network Camera	FD8371EV	E324690-A51-UL	
Network Camera	CIVS-IPC-6400E	E324690-A52-UL	
Network Camera	IP8355EH, IP8365EH	E324690-A53-UL	
Network Camera	CIVS-IPC-6500PD	E324690-A54-UL	
Network Camera	(1) CIVS-IPC-7530PD (2) CIVS-IPC-7030P	E324690-A56-UL	
Network Camera	CIVS-IPC-3050, MD8531H-FXX, MD8531H-	E324690-A58-UL	

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	FXX(W)(X= 0-9, a-z, A-Z, "-", "/" or blank for marketing purpose)		
Network Camera	IP8155HP, IP8165HP, IP8166	E324690-A59-UL	
Network Camera	FD8152V-FX(B), FD8152V-FX(W) (X=0-9,a-z,A-Z,"-", "/" or blank for marketing purpose: (B) Black for enclosure color; (W) White for enclosure color).	E324690-A60-UL	
Network Camera	FE8181, FE8181V, FE8191 ,FE8391-V, CIVS-IPC-7070	E324690-A61-UL	
Network Video Recorder	ND8401	E324690-A62-UL	
Camera	IB8367, IB8367-R, IB8367-T, IB8367-RT	E324690-A63-UL	
Network Camera	SD8161, SD8161-XX (X = 0-9, a-z, A-Z or blank for marketing purpose)	E324690-A64-UL	
Network Camera	IB8338-H, IB8338-HR	E324690-A66-UL	
Network Camera	FD8173-H, FD8373-EHV	E324690-A67-UL	
Network Camera	FD8181, FD8381-EV	E324690-A68-UL	
Network Camera	IK-WD31A, IK-WR31A	E324690-A71-UL	
Network Camera	IB8373-EH, IK-WB82A	E324690-A72-UL	
Network Camera	FD8167, FD8167-T, FD8138H (indoor use)  FD8367-V, FD8367-TV, FD8338-HV (outdoor use)	E324690-A73-UL	
Network Camera	IP816A-HP	E324690-A74-UL	
Network Camera	IK-WF51A, IK-WF51R	E324690-A75-UL	
Stereo Camera	SC8131	E324690-A76-UL	
IP 360 Dome Camera (5M)	V6050FDxxxxxxx, V6050FDWxxxxxxx (x =0-9, a-z, space or "-" for marketing purpose).	E324690-A77-UL	
Network Camera	CC8370-HV	E324690-A78-UL	
Network Camera	CIVS-IPC-3630, CIVS-IPC-6630, CIVS-IPC-3620, CIVS-IPC-6620	E324690-A79-UL	
Network Camera	IP9171-HP, IP9181-H	E324690-A80-UL	
Network Camera	FD9171-HT, FD9371-HTV, FD9371-EHTV, FD9181-HT, FD9381-EHTV, FD9381-HTV	E324690-A81-UL	
Network Camera	(1) IB9371-HT, (2) IB9371-EHT	E324690-A82-UL	
Network Camera	FE8182	E324690-A83-UL	
Network Camera	FD816C-HF2	E324690-A84-UL	
Communication IP Camera	KX-NTV150XX (X=0~9, A~Z, a~z, space or "-" for marketing purpose)	E324690-A85-UL	
IP Video Doorphone	KX-NTV160XX (X=0~9, A~Z, a~z, space or "-" for marketing purpose)	E324690-A86-UL	
Network Camera	MD8563-EHFX (X= 0-9, a-z, A-Z, "-", "/" or blank for marketing purpose)	E324690-A88-UL	
Network Camera	VC8101	E324690-A90-UL	

# CERTIFICATE OF COMPLIANCE

**Certificate Number** 20160303-E324690  
**Report Reference** E324690-A90-UL  
**Issue Date** 2016-MARCH-03

**Issued to:** VIVOTEK INC  
6TH FL, 192 LIEN CHENG RD  
CHUNG HO DISTRICT  
NEW TAIPEI  
235 TAIWAN

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

INFORMATION TECHNOLOGY EQUIPMENT INCLUDING  
ELECTRICAL BUSINESS EQUIPMENT  
Network Camera, models VC8101


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

**Standard(s) for Safety:** UL 60950-1 and CAN/CSA C22.2 No. 60950-1-07,  
Information Technology Equipment - Safety - Part 1:  
General Requirements.

**Additional Information:** See the UL Online Certifications Directory at  
[www.ul.com/database](http://www.ul.com/database) for additional information

Only those products bearing the UL Certification Mark should be considered as being covered by UL's  
Certification and Follow-Up Service.

Look for the UL Certification Mark on the product.



Bruce Mahrenholz, Director North American Certification Program  
UL LLC

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contact a local UL Customer Service Representative at <http://ul.com/about/locations/>



## UL TEST REPORT AND PROCEDURE

<b>Standard:</b>	UL 60950-1, 2nd Edition, 2014-10-14 (Information Technology Equipment - Safety - Part 1: General Requirements) CAN/CSA C22.2 No. 60950-1-07, 2nd Edition, 2014-10 (Information Technology Equipment - Safety - Part 1: General Requirements)
<b>Certification Type:</b>	Listing
<b>CCN:</b>	NWGQ, NWGQ7 (Information Technology Equipment Including Electrical Business Equipment)
<b>Product:</b>	Network Camera
<b>Model:</b>	VC8101
<b>Rating:</b>	(Optional) IP: PoE 36~57V, 0.15~0.1A or DC 8~36V, 0.6~0.14A
<b>Applicant Name and Address:</b>	VIVOTEK INC 6TH FL, 192 LIEN CHENG RD CHUNG HO DISTRICT NEW TAIPEI 235 TAIWAN

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.

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Prepared by: Stanley Tsai

Reviewed by: Chris Kao

**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**

The equipment is a Class III Network Camera, consists of electronic components mounted on PWB then housed with plastic enclosure, and power supplied from POE connector and DC adapter.

**Model Differences**

N/A

**Technical Considerations**

- Equipment mobility : Fixed
- Connection to the mains : N/A
- Operating condition : continuous
- Access location : operator accessible
- Over voltage category (OVC) : OVC I
- Mains supply tolerance (%) or absolute mains supply values : No direct connection
- Tested for IT power systems : No
- IT testing, phase-phase voltage (V) : N/A
- Class of equipment : Class III (supplied by SELV)
- Considered current rating of protective device as part of the building installation (A) : N/A
- Pollution degree (PD) : PD 2
- IP protection class : IP X0
- Altitude of operation (m) : Up to 2000
- Altitude of test laboratory (m) : Below 2000
- Mass of equipment (kg) : 0.118
- The product was submitted and evaluated for use at the maximum ambient temperature (T<sub>ma</sub>) permitted by the manufacturer's specification of: 50°C
- The following circuit locations (with circuit/schematic designation) were investigated as a limited power source (LPS): All output ports
- The following are available from the Applicant upon request: Installation (Safety) Instructions / Manual

- LEDs provided in the product are considered low power devices: Yes
- Based upon the product specification provided by the manufacturer, this unit is intended to be supplied by an UL Listed power supply suitable for use at Tma 50 degree C whose output meets SELV, and is rated PoE 36~57V, 0.15~0.1A ; DC 8~36V, 0.6~0.14A.
- This equipment is to be connected only to PoE networks without routing to the outside plant.

**Additional Information**

Indoor use only

**Markings and instructions**

Clause Title	Marking or Instruction Details
Inter-connecting cables - External detachable	Listee's Name and Part number (Marking or Instruction)
Power rating - Company identification	Listee's or Recognized company's name, Trade Name, Trademark or File Number
Power rating - Model	Model Number
Instruction/Installation/Safety	Instruction/Installation/Safety Manual shall be shipped with unit  If the power adapter doesn't ship with the unit, the user manual shall have the description as below or equivalent: "This product is intended to be supplied by a Listed Power Adapter with LPS, rated PoE 36~57V, 0.15~0.1A ; DC 8~36V, 0.6~0.14A min.
Manual	See enclosure 6-01.
Power rating - Ratings (Optional)	Ratings (voltage, frequency/dc, current)

**Special Instructions to UL Representative**

(1) If the Power Adapter doesn't mark with "LPS" or "Limited Power source", please check the UL report for Power Adapter and confirm whether it complies with Limited Power source in Technical Consideration.

(2) The Field Representative should verify the Tma (maximum ambient temperature) is minimum 50 degree C from the updated version of UL reports for power adapter which was/were certified by UL 60950-1, 2nd edition, 2014-10-14 (provided from customer).

**Production-Line Testing Requirements**

**Electric Strength Test Special Constructions - Refer to Generic Inspection Instructions, Part AC for further information.**

Model	Component	Removable Parts	Test probe location	V rms	V dc	Test Time, s
N/A	-	-	-	-	-	-

**Earthing Continuity Test Exemptions - This test is not required for the following models:**

All Models

**Electric Strength Test Exemptions - This test is not required for the following models:**

All Models

**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:**

-

**Sample and Test Specifics for Follow-Up Tests at UL**

Model	Component	Material	Test	Sample(s)	Test Specifics
-	-	-	-	-	-

1.5.1	TABLE: list of critical components					Pass
Object/part or Description	Manufacturer/ trademark	type/model	technical data	Product Category CCN(s)	Required Marks of Conformity	Supplement ID
01. Power Adapter (optional)	Various	Various	O/P: 12Vdc, 2.5A minimum, Marked with "LPS" or "Limited Power Source" or complied with "Limited Power Source" checked by inspection. Tma: 50 degree C	QQGQ	UL	
02. Label	Various	Various	65 degree C if max. Surface temperature is not specified.	PGDQ2, PGJ12	UL	
03. Enclosure	Various	Various	HB minimum, measured 2 mm thickness minimum, overall see Enclosure /Diagrams for details	QMFZ2	UL	4-01
04. PWB	--	--	V-1 minimum, 105 degree C minimum	ZPMV2	UL	
05. Electric Double Layer Capacitor (BT1)	ELNA CO., LTD	DSK Series	Rated 3.3Vdc, 0.2F.	--	--	
06. Connectors and Receptacles (secondary SELV circuits)	Various	Various	Metal/plastics, Copper alloy pins housed in bodies of plastic rated HB min.	DUXR2, ECBT2, QMFZ2	UL	
07. Interconnecting Cable (Optional)	Various	Various	Maximum length 3.05 m. FEP, PTFE, PVC, TFE, neoprene, polyimide or rated VW-1 or FT- 1. Minimum 80 degree C. Minimum 30 V.	AVLV2 or ZPFW2	UL	
07a. Interconnecting Cable (Optional) (alternate)	Various	Various	Maximum 3.05 m long, type CMP, CMR, CMG, CM, CMX, CMUC, or CMH.	DUZX or ZPFW2 or DUXR/2	UL	

## Enclosures

<u>Type</u>	<u>Supplement Id</u>	<u>Description</u>
Photographs	3-01	Overall views-1
Photographs	3-02	Overall views-2
Photographs	3-03	Overall views-3
Photographs	3-04	Overall views-4
Photographs	3-05	Overall views-5
Photographs	3-06	Internal views-1
Photographs	3-07	Internal views-2
Photographs	3-08	Mainboard views-1
Photographs	3-09	Mainboard views-2
Diagrams	4-01	Enclosure dimension drawing
Manuals	6-01	Safety Information

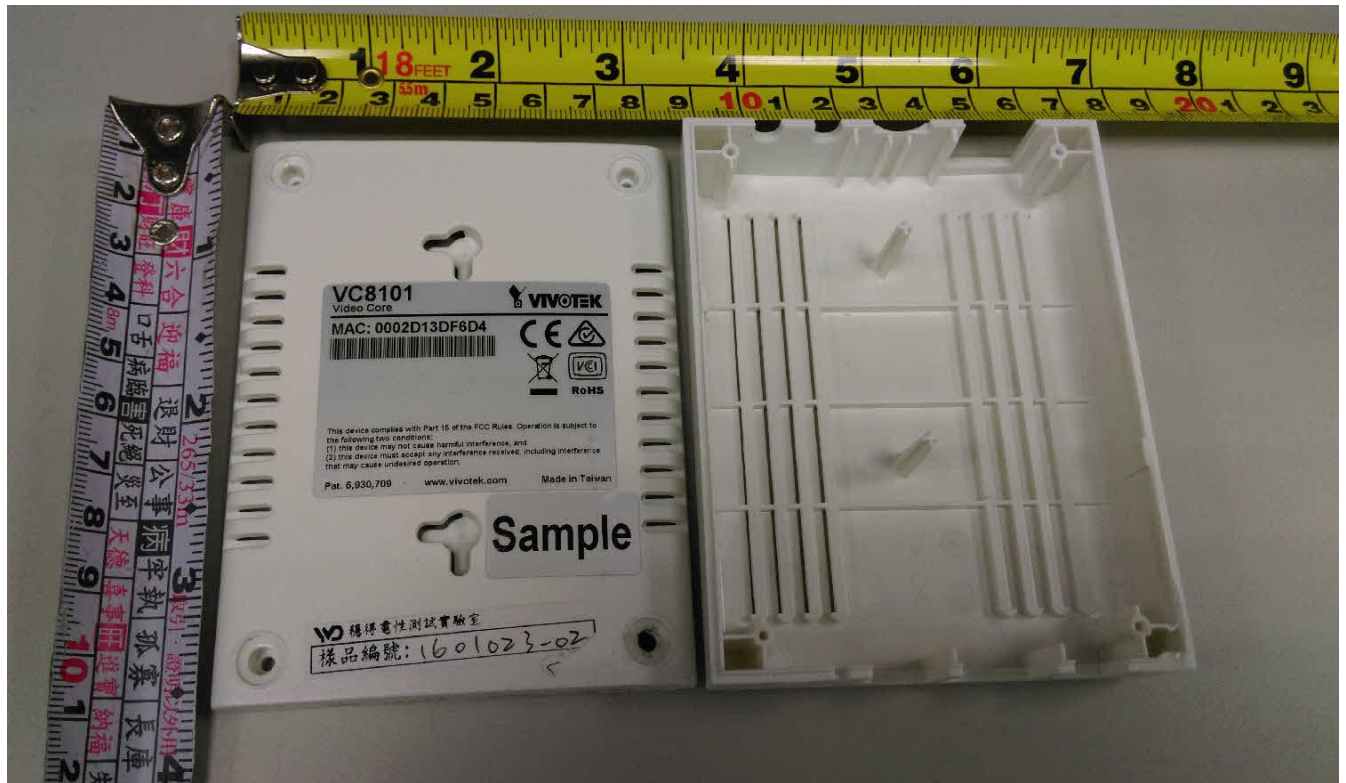


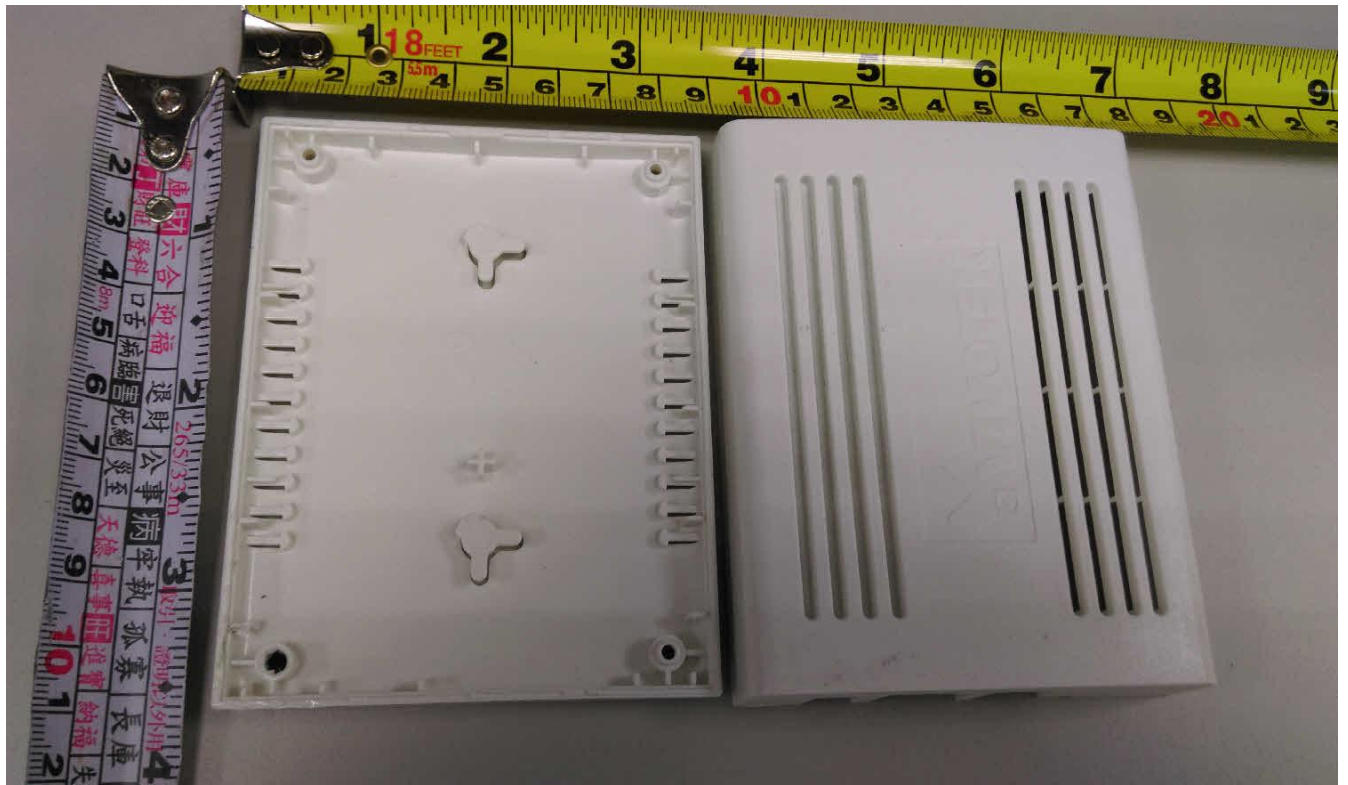


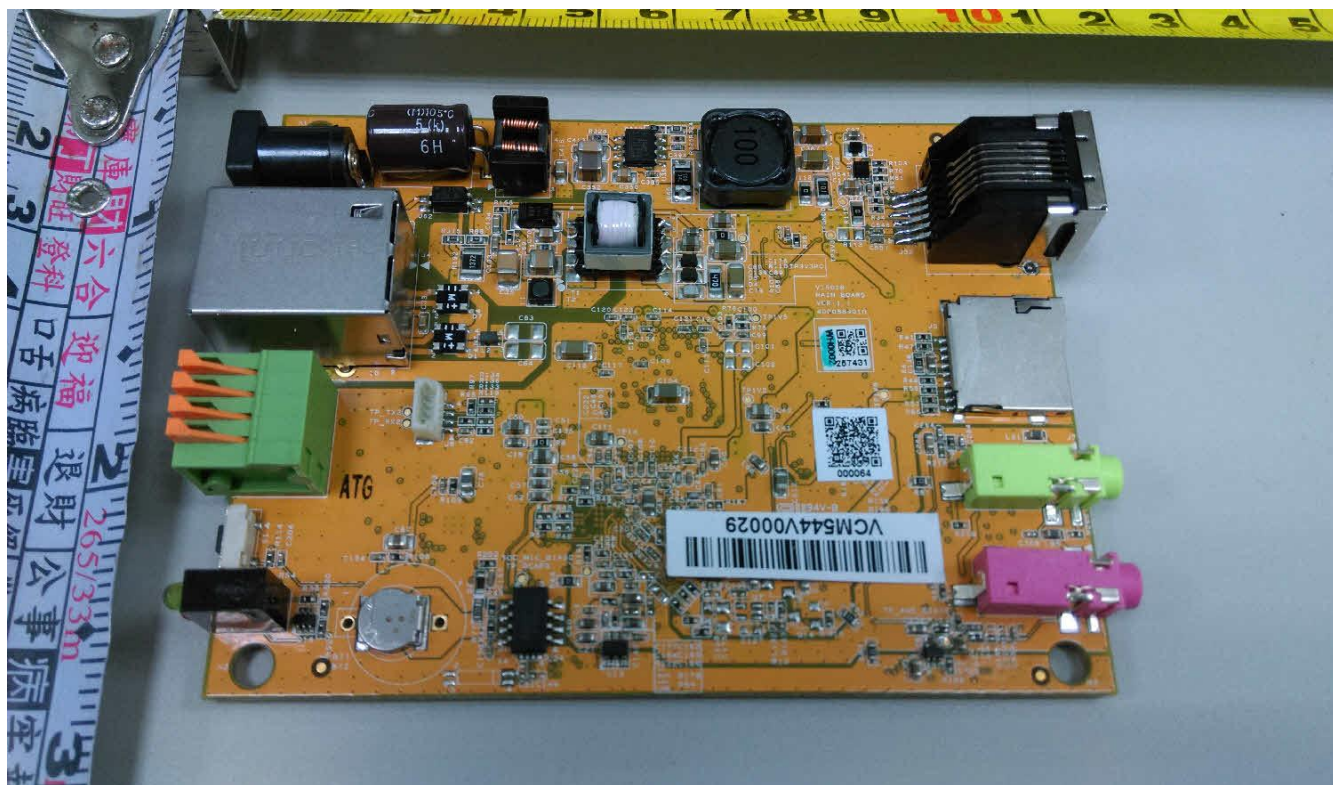


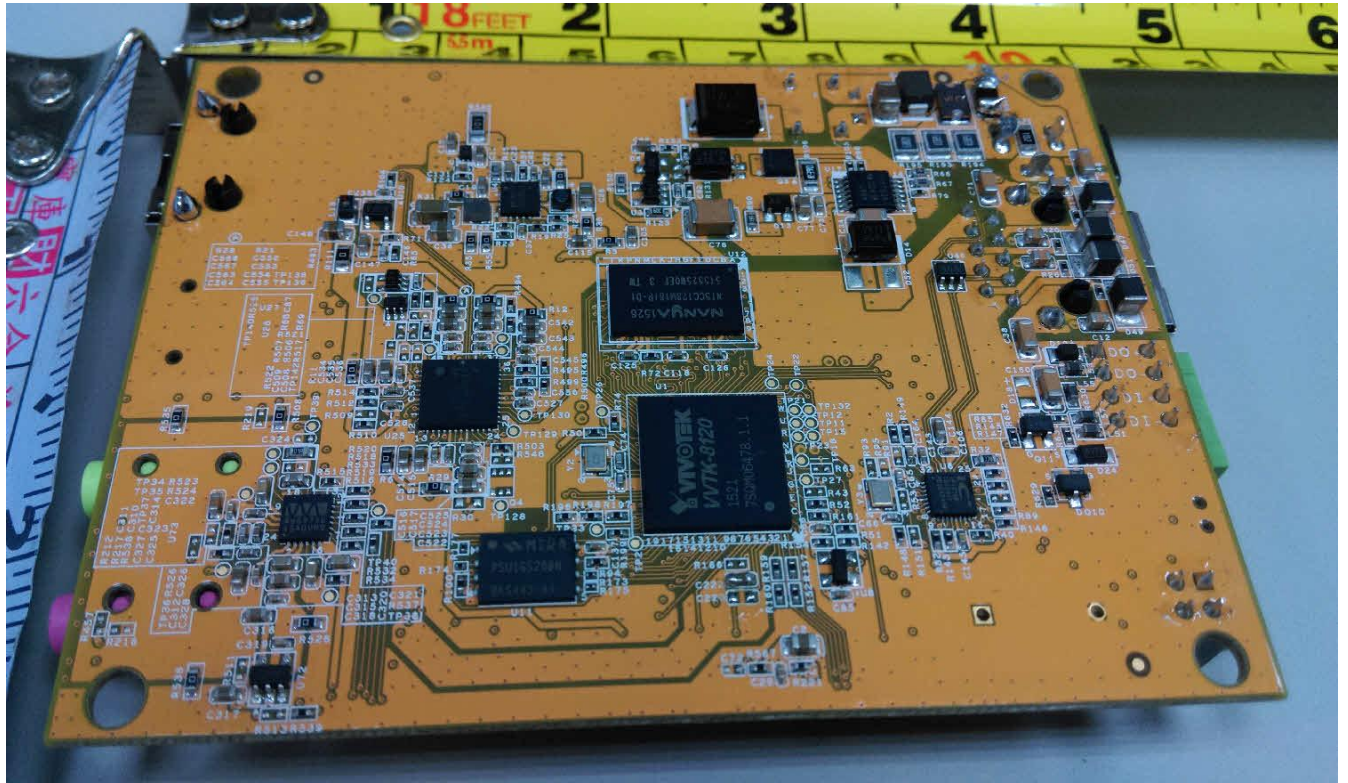


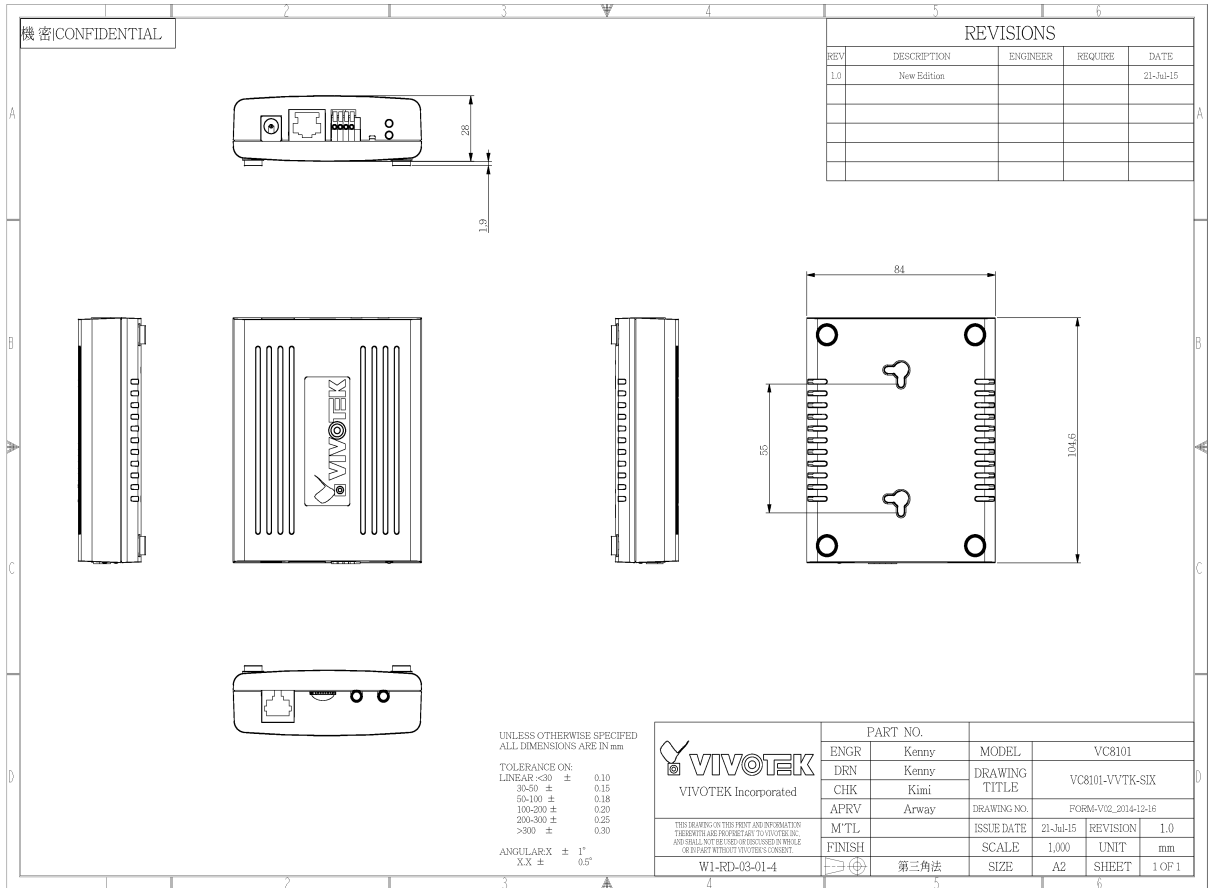












### Internet connection with static IP

Choose this connection type if you are required to use a static IP for the Network Camera. Please refer to LAN configuration on page 68 for details.

### Internet connection via PPPoE (Point-to-Point over Ethernet)

Choose this connection type if you are connected to the Internet via a DSL Line. Please refer to PPPoE on page 89 for details.

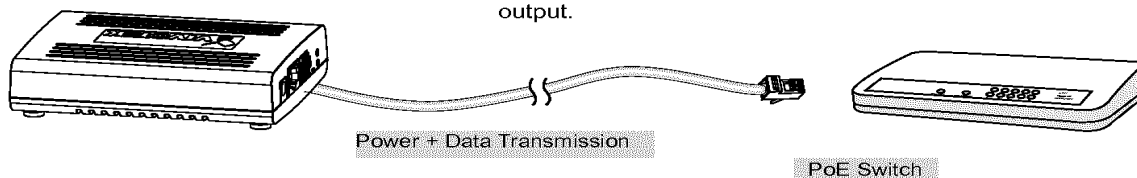
### Set up the Network Camera through Power over Ethernet (PoE)

#### When using a PoE-enabled switch

The Network Camera is PoE-compliant, allowing transmission of power and data via a single Ethernet cable. Follow the below illustration to connect the Network Camera to a PoE-enabled switch via an Ethernet cable.

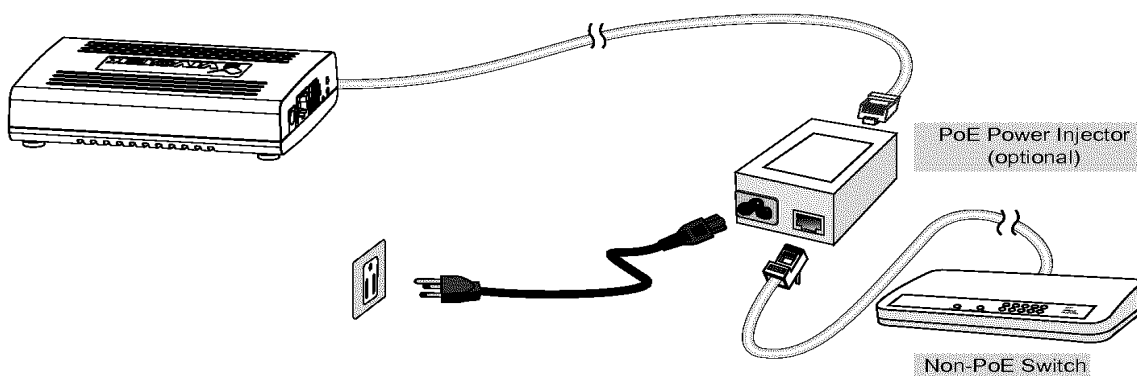
#### NOTE:

1. The camera is only to be connected to PoE networks without routing to outside plants.
2. For PoE connection, use only UL listed I.T.E. with PoE output.



#### When using a non-PoE switch

If your switch/router does not support PoE, use a PoE power injector (optional) to connect between the Network Camera and a non-PoE switch.



## Test Record

**Test Record No. 1**

-- The manufacturer submitted representative production samples of Network Camera, Model VC8101.

-- Tests were conducted by (co.name & location) Wendell Industrial Co., Ltd/5F., No.4, Ln. 7, Baogao Rd., Xindian Dist., New Taipei City 231, Taiwan (R.O.C.) and witnessed by UL staff member.

-- Test results reported relate only to the items tested.

The following tests were conducted:

Test	Testing Location/Comments
Input: Single-Phase (1.6.2)	
SELV Reliability Test Including Hazardous Voltage Measurements (2.2.2, 2.2.3, 2.2.4, Part 22 6.1)	
Steady Force (4.2.1 - 4.2.4)	
Impact (4.2.5, 4.2.1, Part 22 10.2)	
Stress Relief (4.2.7, 4.2.1)	
Loading - Wall and Ceiling Mounted Equipment (4.2.10)	
Heating (4.5.1, 1.4.12, 1.4.13)	
Overload of Operator Accessible Connector (5.3.7)	

Test results are valid only for the tested equipment. These tests are considered representative of the products covered by this Test Report. The test methods and results of the above tests have been reviewed and found to be in accordance with the requirements in the Standard(s) referenced at the beginning of this Test Report.

The following tests were waived:

Test	Rationale for Waiving
Limited Power Source Measurements (2.5)	Test can be waived, since Audio ports, CAM port, DI/DO ports are treated as data transmission.

The following supplements are provided as a part of this Test Record. NOTE: These supplements are only available to the Applicant via the CDA system.

Type	Supplement Id	Description
Attachment	2-01	CRD
Datasheet	2-02	Datasheet