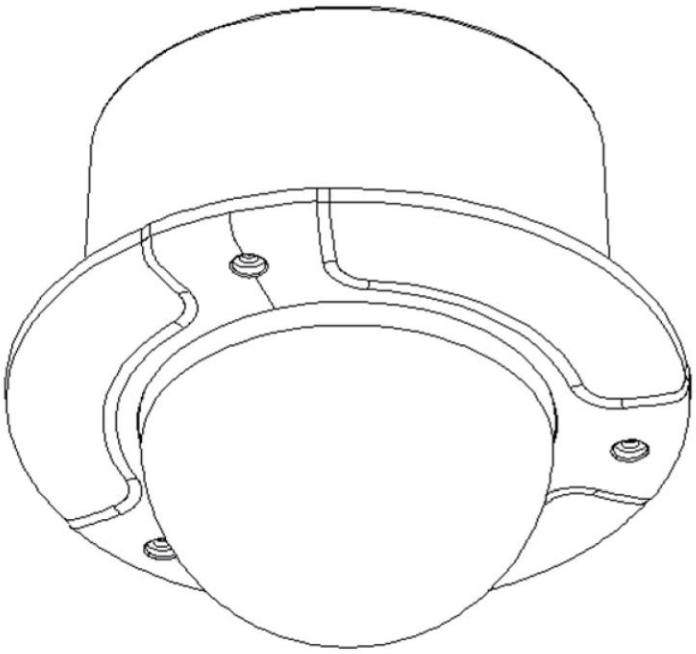
# H.264 NETWORK CAMERA

GANZ PixelPro WITH GXi TECHNOLOGY SERIES

## ZN-DN332XE-MPD

## Installation Guide

Before connecting, operating or adjusting this product,
read this instruction booklet carefully and completely



GANZ®

# Precaution

- Please read this manual carefully before installing the unit.
- Never disassemble the camera. Unauthorized disassembly may cause equipment failure or damage to the unit.
- Please do not install the camera in a place exposed to direct sunlight.
- Do not operate the camera in environments beyond the specified temperature.
  Refer to "**Environment Condition**" on "***APPENDIX (A) : SPECIFICATIONS***" in this manual.
- Before applying power to the camera, check the power source to ensure that it is within the specifications. Refer to "**Electrical Characteristics**" on "***APPENDIX (A) : SPECIFICATIONS***"

# Table of Contents

# 1. FEATURES

**Camera**

- 1/2.7” 1080p CMOS Image Sensor
- True Day/Night
- DC Auto Iris Lens
- WDR
- Remote Zoom/Focus Control (One Click Focus)
- Remote Pan/Tilt Control (Repositionable dome camera)

**Video**

- H.264 Baseline, Main, High profile (MPEG-4 Part 10/ AVC), MJPEG(Motion JPEG)
- Max 30 fps in 1080p
- Text Overlay
- Analog Video Output for 3 minutes (Only for installation purpose)

**Audio**

- Two-way Audio Streaming
- G.711 µLaw

**Network**

- 10/100 Base-T Ethernet

**Integration**

- Software Development Kit (SDK) available
- ONVIF Compliant (Profile S)

**General**

- microSD slot
- Power Over Ethernet (PoE)

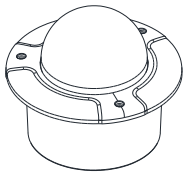
**Video Contents Analytics (VCA)**

- VCA Presence (Standard)
- VCA Surveillance (Optional)

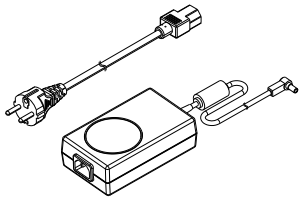
# 2. PACKAGE CONTENTS

Unpack carefully and handle the equipment with care. The packaging contains:

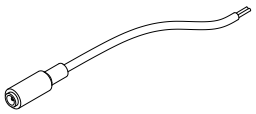
**Camera**



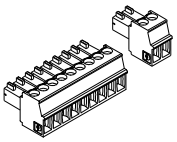
**DC power adaptor**



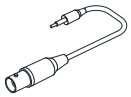
**DC power Jack Cable**



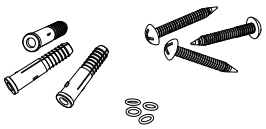
**Terminal blocks**



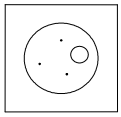
**Video output cable**



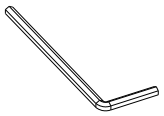
**Screws and anchors**



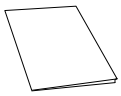
**Installation template**



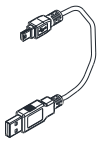
**Hex wrench driver**



**Quick installation guide**

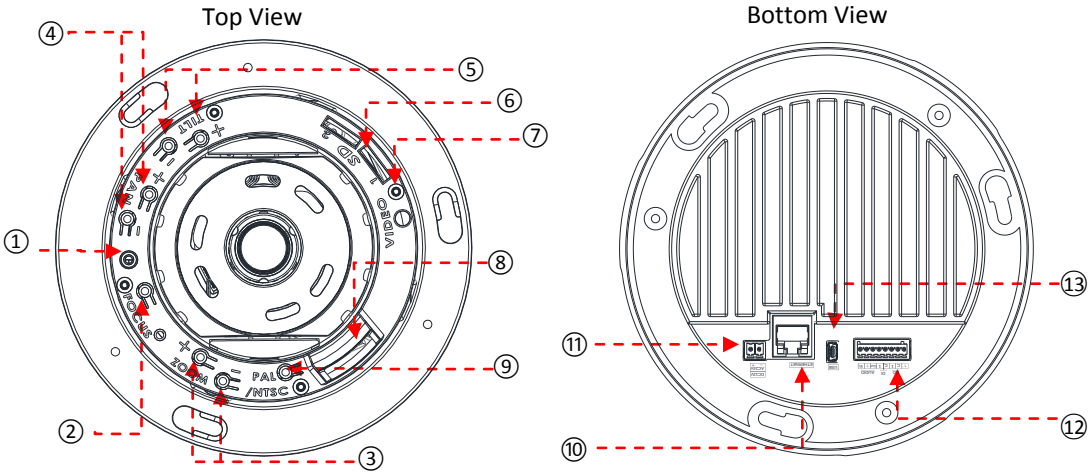


**USB cable**



**Note** The above contents are subject to change without prior notice.

# 3. PART NAMES




**① Rest button**
Use the button to restart the device or to reset it to Factory Default. Refer to "***6.3. Reset***" and "***6.4. Factory Default***" for more details.

**② Focus buttons**
Use the buttons to automatically correct focus [One Push Focus].

**③ Zoom In/Out buttons**
Use the buttons for camera to cover the wide field of view or to concentrate narrow field of view.

**④ Pan buttons**
Use the buttons to control rotation of the lens in horizontal.

**⑤ Tilt buttons**
Use the buttons to control rotation of the lens in vertical.

**⑥ microSD slot**
Supports up to 64GB. Recommend Class 4 and higher for HD recordings.

**⑦ Video output connector**
Connector for video output. (CVBS : 1.0 Vp-p / 75Ω BNC)
Once the PAL/NTSC button is pressed, the video displays for 3 minutes before returns back to 'no video output' status.

**⑧ Fan**
Cooling off the device.

**⑨ PAL/NTSC button**
Pressing the button cycles through PAL, NTSC, and no video output mode: *No video output -> PAL->NTSC*

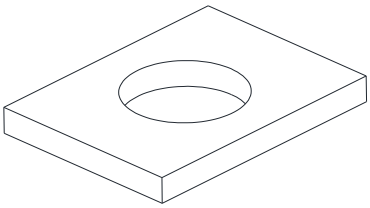
**⑩ LAN connector**
RJ45 LAN connector for 10/100 Base-T Ethernet.

**⑪ Power Adaptor Connector (12VDC or 24VAC)**
12VDC or 24VAC adapter for power supply.

**⑫ Terminal connector**
Connector for cable connection of audio input/output and digital input/output .

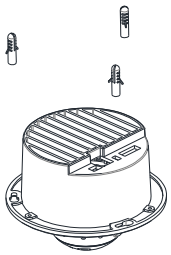
**⑬ USB 2.0**
USB 2.0 storage connect.

# 4. INSTALLATION



**1)** Place the installation template (paper) that is included in the package on the desired installation surface.

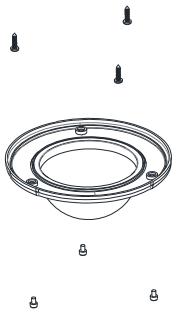
**2)** Drill three holes in correct positions based on the template paper, and insert anchor blocks into the holes.



**3)** Insert the camera body to the installation surface and match three alignment holes with three anchor blocks.

**4)** Tighten the surface anchor studs.

**5)** Connect all the required cables to the camera.



**6)** Adjust the lens position. Detailed information can be found in **4.2. Adjusting the angle of the camera /zoom and focus**.

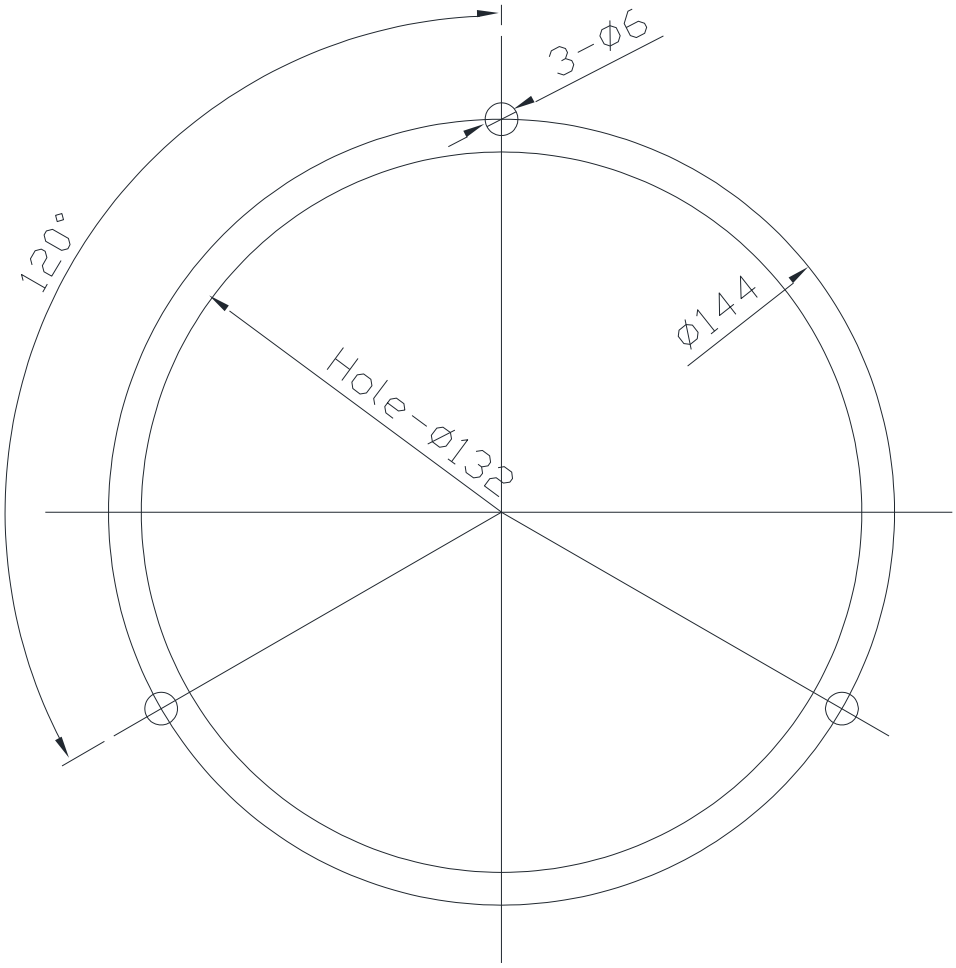
**7)** Place the dome cover on the main body of the camera. Dome cover has three alignment holes that match camera body's alignment holes.

**8)** Once properly placed, insert hex screws into the three holes of the body and tighten them up with hex wrench driver.

**Caution**

To prevent products from damaging, place the camera on stable and non-vibrating surfaces. If the stability is in doubt, consult with safety personnel for reinforcements, and then proceed with the installation.

# 4.1. Installation Template




| | |
|---|---|
| **Caution** | Installation template image's size scale in this installation guide is not 1:1. The correct-size template design paper can be found inside the package separ ately. |

## 4.2. Adjusting the angle of the camera / zoom and focus

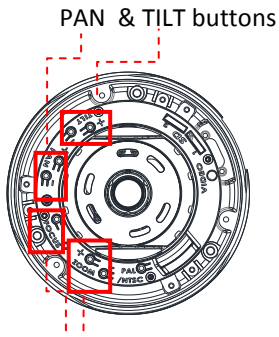
1) Remove the dome cover.

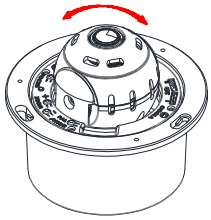
2) Use PAN buttons(+, -) to control rotation of the lens in horizontal.
   Use TILT buttons(+, -) to control rotation of the lens in vertical.

3) Use ZOOM buttons(+, -) to adjust the camera's angle of view.

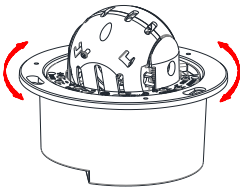
4) Use FUCUS button to automatically determine correct focus [One Push Focus].

The camera provides full functionality of Pan/Tilt/Zoom/Focus facility via web user interface. Refer to the provided "**PixelPro GXi series Web Page User's Manual**" for details.



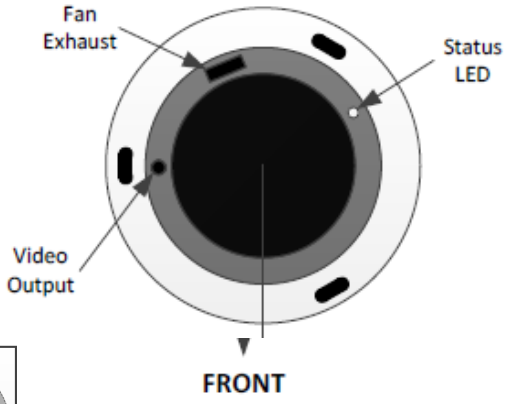
A. Tilt the lens with tilt **'+'** and **'-'** buttons

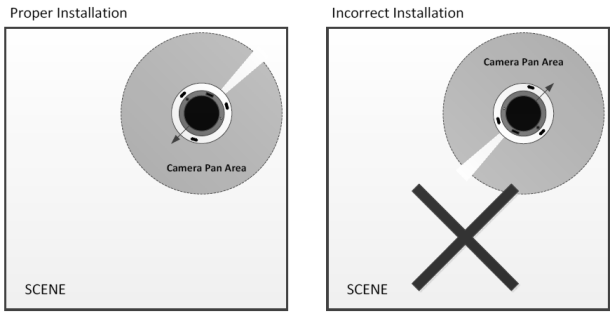


B. Pan the lens with pan **'+'** and **'-'** buttons

The Pan and Tilt ranges are as described below.
Pan range: 0° to 359°
Tilt range: 0° to 90°

The recommended **"default"** front of the camera housing is described on a right figure and refer to the diagram below for the proper camera housing position and the camera lens:



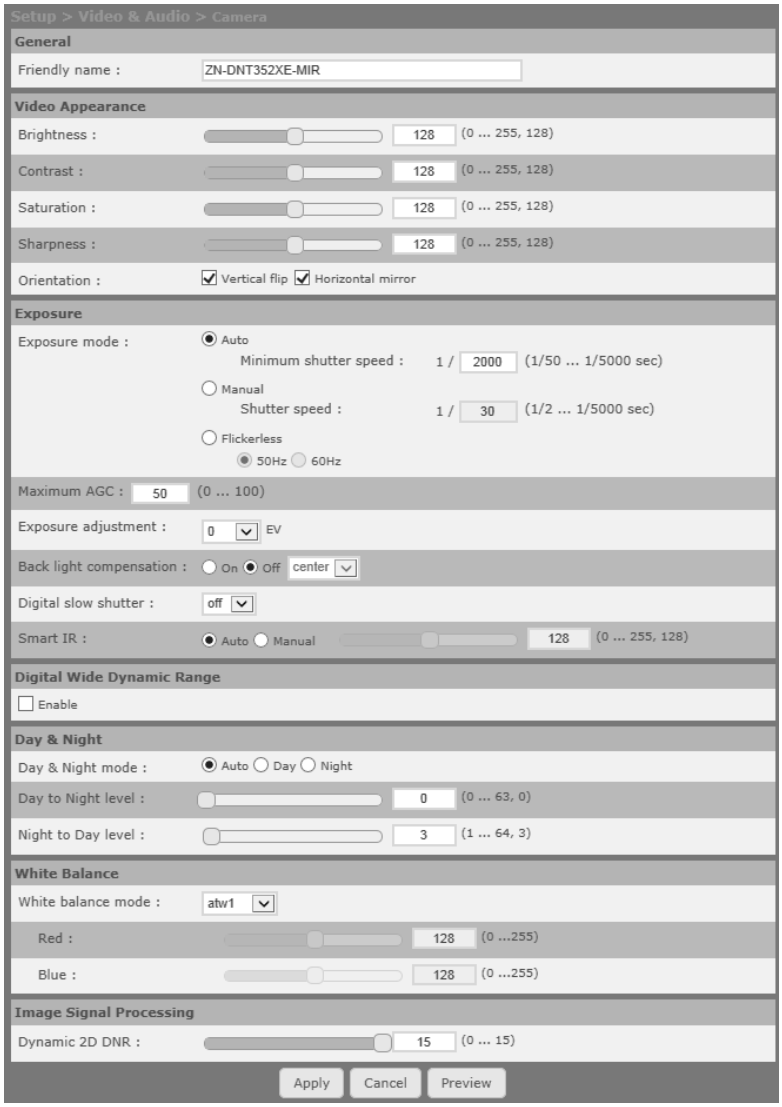




| | |
|---|---|
| **Caution** | Life span of PAN and TILT are approximately good up to **5,000** counts each. |

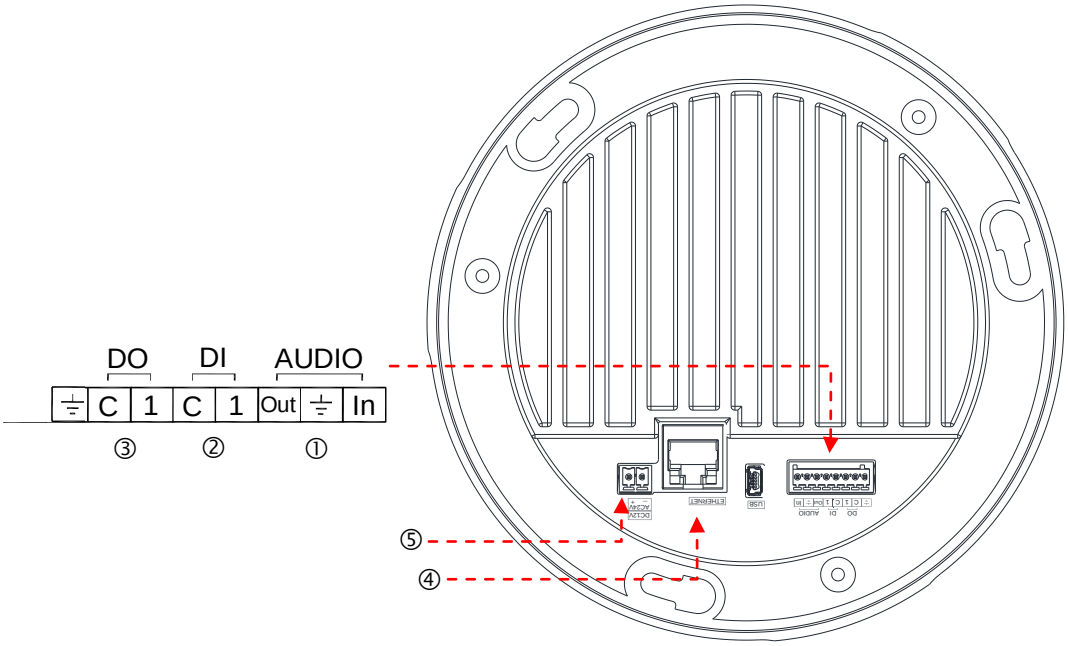
# 4.3. Setting the Image Attribute

Through the camera's webpage, users can configure image settings. The menu of image attribute is available under Video Appearance menu in Setup > Video & Audio > Camera. The following features can be adjusted: Brightness, Contrast, Saturation, Sharpness and Orientation

For more detailed information, refer to the provided "**PixelPro GXi series Web Page User's Manual".**

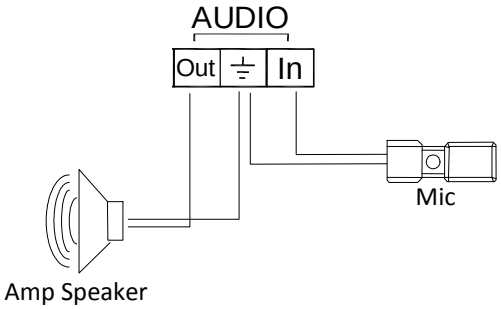


# 5. CONNECTIONS




**① Audio input/output**

The camera provides a mono audio input and output. Due to low audio output power, an amplified speaker is recommended for enhanced sound (Refrain from connecting a headphone or an earphone directly to the camera).



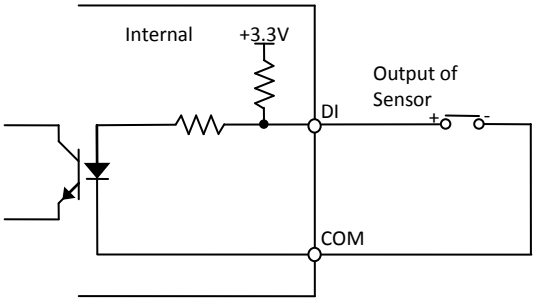
**② Sensor (DI) connection**

Sensor (DI) can be connected to either a voltage type sensor or a relay type sensor like the following figures. The interface type can be controlled by web user interface.
Refer to the provided "**PixelPro GXi series Web Page User's Manual"** for more details.

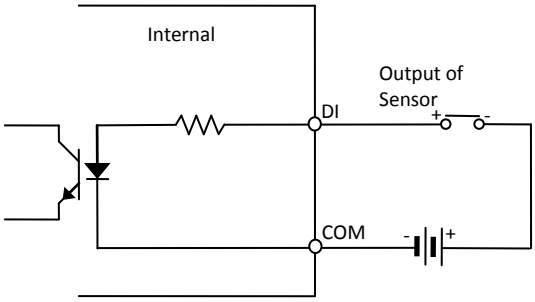
Input voltage range: 0VDC minimum to 5VDC maximum, Max 50mA

**Caution**

Before connecting sensors, check driving voltage and output signal type of the sensor. Since the connection is different according to sensor type, be careful to connect the sensor. Do not exceed the maximum input voltage or relay rate.




Relay Type



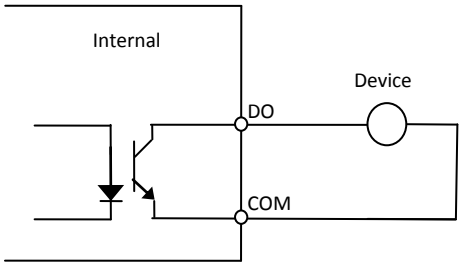

Voltage Type

**③ Alarm (DO) connection**

Only the relay type is supported.
Relay Rating: Max 24VDC 50mA

**Caution**

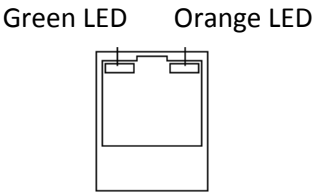
Do not exceed the maximum relay rating.




Relay Type

**④ LAN connection**

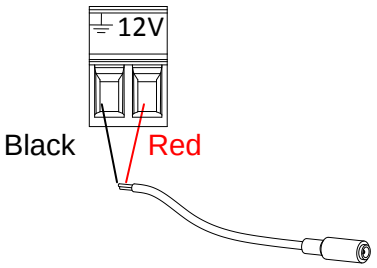
This is a RJ45 LAN connector for 10/100 Base-T Ethernet. Use the Ethernet cable (RJ45) to connect the device to a hub or a router in the network. When the LAN cable is connected, the orange LED light will become solid and green LED will blink every 250 millisecond. Refer to "***Appendix (B). Power over Ethernet***" for more details.




When the device is connected, the orange LED stays on while green LED continues to blink.

**⑤ Power**

The camera can be powered from either 12VDC or PoE. If the camera is powered via PoE, refer to "***Appendix (B). Power over Ethernet"*** for more details. To operate your camera using 12VDC, make sure the polarity is correct before connecting the power cable. Incorrect connection may cause damages to the device.

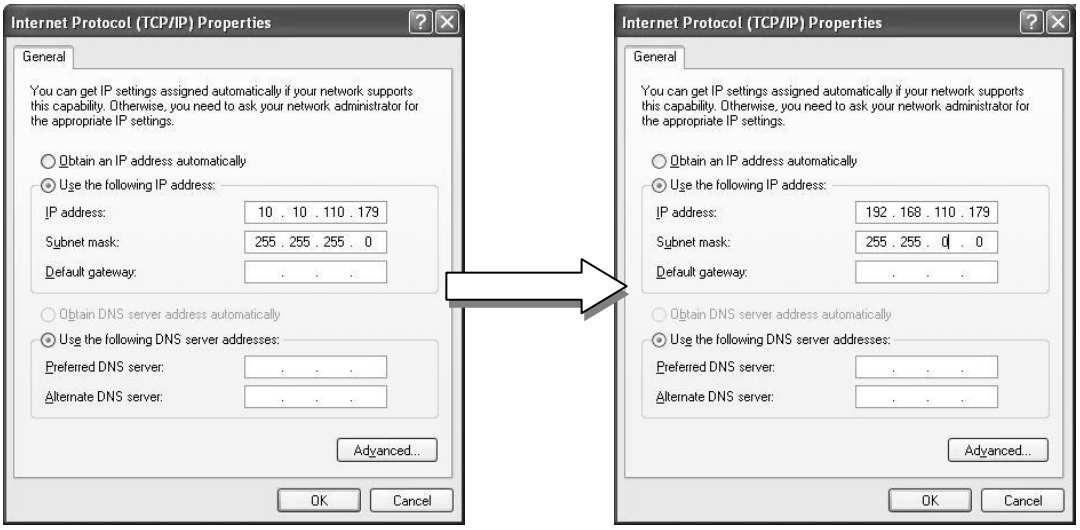


# 6. CONFIGURATION

## 6.1.Set up network environment

The default IP address of the device is 192.168.XXX.XXX. Users can identify the IP address of the device from converting the MAC address's hexadecimal numbers, which is attached to the device. Be sure that the device and PC are on a same area network before running the installation.

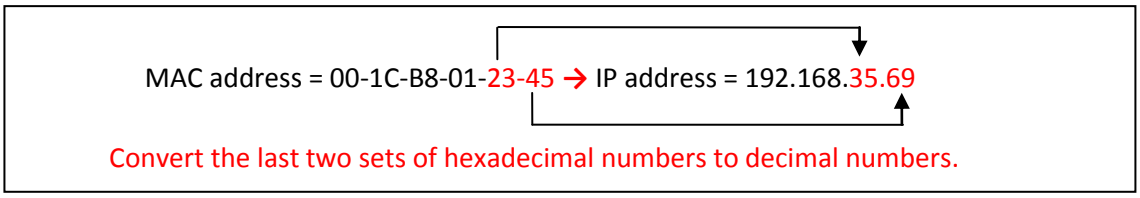
IP address : **192.168.xxx.xxx**
Subnet mask: **255.255.0.0**




### 6.1.1. Generic IP Environment

In case of generic private network environment where IP address 192.168.XXX.XXX are used, users may view the live streaming images on a web page using the device's default IP address:

1. Convert the device's MAC address to the IP address. Refer to the Hexadecimal-Decimal Conversion Chart at the end of the manual.
   (The MAC address of the device is attached on the side or bottom of the device.)

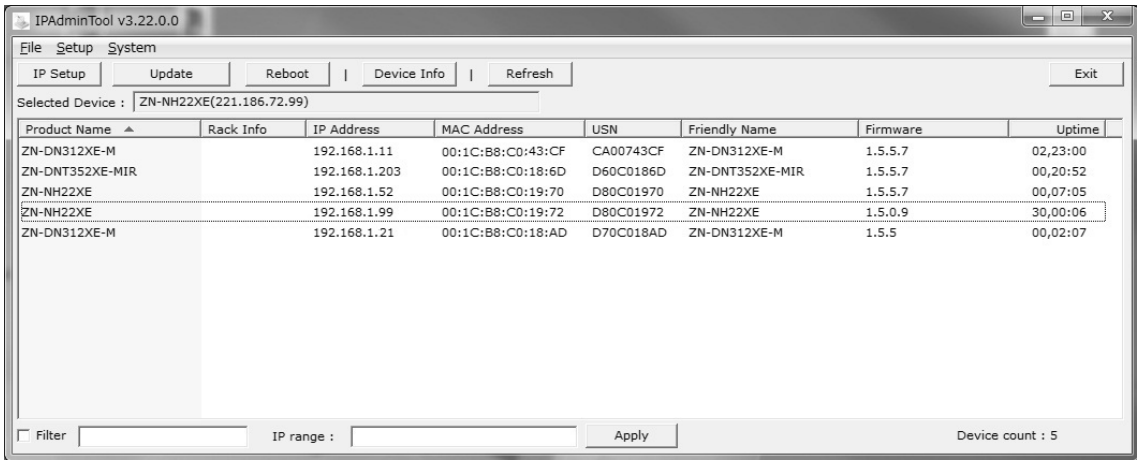



2. Start the Microsoft® Internet Explorer web browser and enter the address of the device.

3. Web streaming and device configurations are supported through ActiveX program. When the ActiveX installation window appears, authorize and install the ActiveX.

## 6.1.2. Custom IP Environment

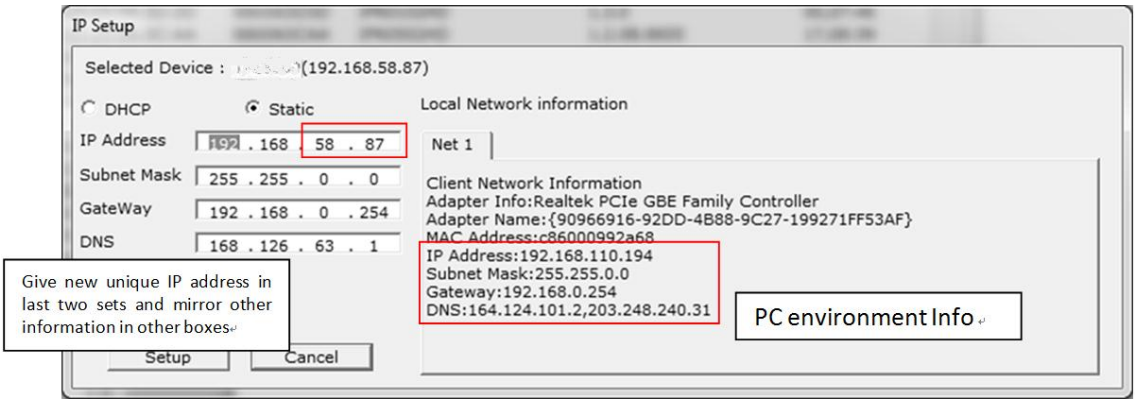
IPAdminTool is a management tool, which automatically scans all of the network products for users to perform administrative tasks, which includes network configurations, firmware update, device reboot, and device organizations.




To modify the device's default IP address for customized network area;

1. Find the device from the IPAdminTool's list and highlight the device's name.

2. Right-click the mouse and select **"IP Address"**; IP Setup window appears.



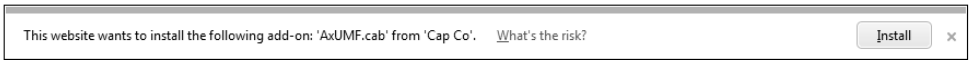

3. In the IP Setup's window, information under **'Local Network information'** displays the user/PC's network area information. Those information need to be incorporated to the IP Address, Subnet Mask, Gateway, and DNS boxes, except the last 2 sets of IP Address, which are to be the unique numbers for the device. Refer to the image above for the setting

4. Click **'Setup'** to complete the modification.

# 6.2. View video on web page

Type the proper IP address to view the live streaming images through a web browser.
The default username and password is **root / pass**.

## 6.2.1. ActiveX Installation




1. When the browser asks to install the AxUMF software, click "**Install**" to proceed.


2. When Setup installation pop-up window appears, click "**Install**" to proceed with rest of installations.

**Note**

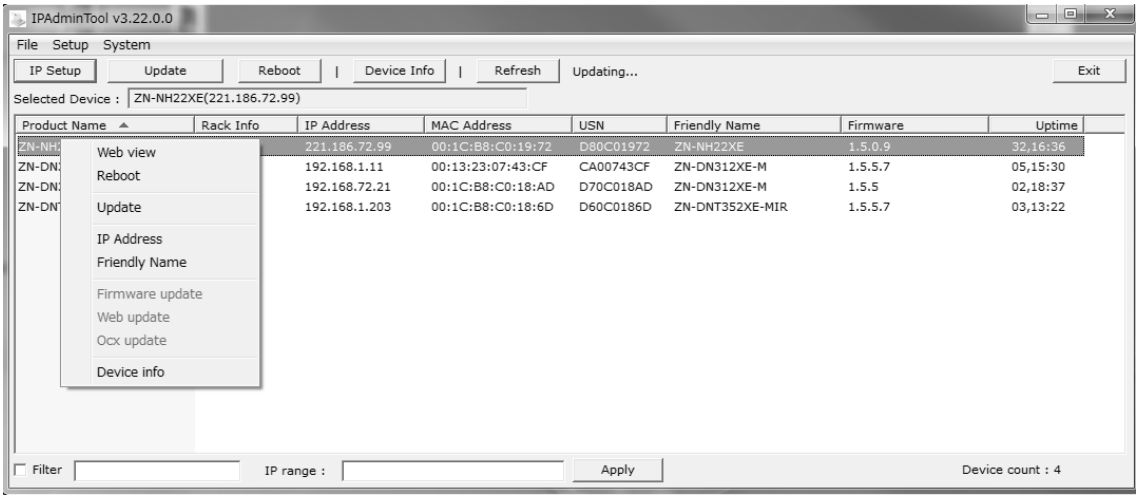
Depending on system OS and Internet Explorer version, installation experience may differ from one another. Figures described above are from Windows 7, Internet Explorer 9 environment.

## 6.2.2. View video using IPAdmin Tool

IPAdminTool automatically searches all activated network encoders and IP cameras and shows the product name, IP address, MAC address and etc..

1. From the IPAdminTool's product list, select the device by highlighting it.

2. Right-click the mouse and select **Web view**




3. The system's default web browser opens the device's address.

**Caution**

Whether directly accessing the streaming video through typing IP address on a web page or taking steps through IPAdminTool, the ActiveX is needed to be installed for the Microsoft® Internet Explorer to have the complete configuration privileges.

## 6.3. Reset

Perform the following procedures to reset your device:

1. Press the reset button for 2 seconds while the device is in use.
2. Wait for the system to reboot.


Please do not hold for more than 2 seconds. Otherwise, the camera may be switched to its Factory Default settings.

## 6.4. Factory Default

Resetting the device back to the factory default will initialize all parameters including the IP address back to the factory defaults. To reset back to the factory default:

1. Press the reset button and hold.
2. Release the button after 10 seconds.
3. Wait for the system to reboot.


The factory default settings can be inferred as follows:

| | |
|---|---|
| IP address: | 192.168.xx.yy |
| Network mask: | 255.255.0.0 |
| Gateway: | 192.168.0.1 |
| User ID: | root |
| Password: | pass |

# 6.5. Safe Mode

**What is Safe Mode?**

Your IP camera or encoder could encounter an unexpected occasion such as broken firmware file or uncompleted loading of firmware file during system booting. To restore the device from the occasions, the device provides the emergency firmware as a factory default. Your device will get restarted with safe mode when there is any error on your booting system files.

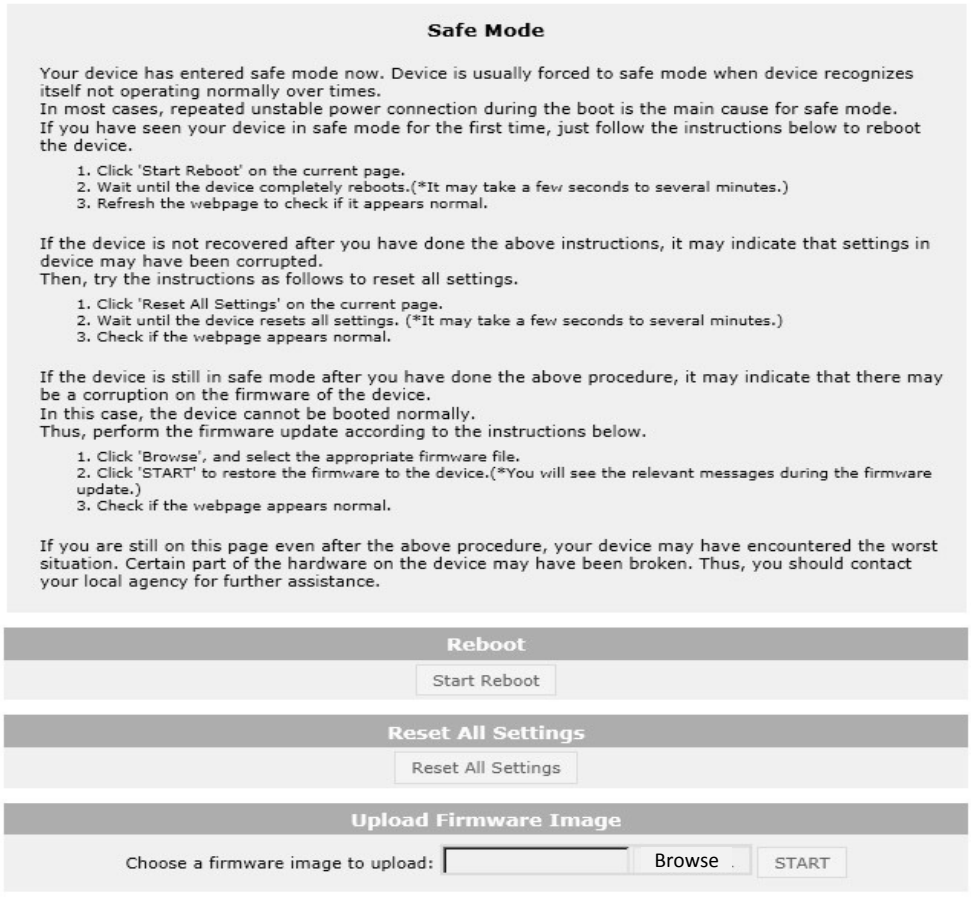
**Why does your IP camera or encoder boot in Safe Mode?**

Normally, the cause of 'safe mode' is classified into two types.

* When the power supply is unplugged in the middle of system booting.
* When the firmware files required for system booting are damaged.

**IMPORTANT:** Your device will turn into the safe mode when it fails to boot certain times.

**How to recover your system from Safe Mode**




The messages above will appear on the webpage when your device has been rebooted in **'safe mode'**. Then, you should follow the instructions on the webpage according to the steps in a row.

**Note**

There are two types of firmware files when you receive a firmware folder from your vendor. When you need to update the firmware as the final resolution in case your device is in safe mode like above, ensure that the firmware means the firmware file for the device with the file name as GXi-V.1.X.X.X-~~~.enc.

**Note**

There is another method to update firmware, which is using IPAdminTool.
Please refer to **'IPAdminTool User's Manual.pdf'** for the detailed procedure.

**Note**

If your device is still at safe mode after trying to update firmware, please contact your local agency to get further assistance.

* Firmware update for safe mode itself: If you want to update the firmware for safe mode, you should upload a firmware file with the following file name: GXi-SAFEMODE.~~~.enc.

# APPENDIX (A): SPECIFICATIONS

## Summary

| | | |
|---|---|---|
| Camera Module | | |
| CMOS | Image Sensor | 1/2.7” 1080p CMOS |
| | Effective Pixels | 1920x1080 |
| | Scanning system | Progressive scanning |
| ELECTRICAL | Resolution | 1920 x 1080 |
| | Min. Illumination | Color: 1.0 lux<br>BW: 0.001 lux (DSS ON) |
| | AGC Control | Auto |
| Lens | | 3.0(w) – 9.0mm(t), F1.2(w) – F2.1(t), Optical 3x<br>Remote Zoom/Focus Control |
| Day & Night | | Removal IR Cut Filter |
| Wide Dynamic Range | | Digital WDR |
| Video | | |
| Compression Format | | H.264, MJPEG Selectable per Stream |
| Number of Streams | | Dual Stream, Configurable |
| Resolution | | 1920x1080, 1280x720, 800x450, 480x270, 320x180 |
| Compression FPS | | Full-frame@1080p |
| Motion Detection | | Built-in |
| Burnt-in Text (Digital) | | Video stream overlay text |
| Output | | Analog video output for installation only |
| Audio | | |
| Input/output | | 1/1 channel |
| Compression Format | | G.711 |
| Function | | |
| Digital Input/output | | 1/1 channel |
| RS-485 | | Not supported |
| Network | | 10/100 Base-T |
| Power over Ethernet | | Supported |
| Protocol | | TCP/IP, UDP/IP, HTTP, RTSP, RTCP, RTP/UDP, RTP/TCP,<br>SNTP, mDNS, UPnP, SMTP, SOCK, IGMP, DHCP,<br>DDNS, SSL v2/v3, IEEE 802.1X, SSH, SNMP v2/v3 |
| SD Slot | | 1 microSD slot (up to 64GB)<br>※ microSD Card is not included<br>(Recommend Class 4 and higher for HD recordings) |

# Electrical Characteristics

| | |
|---|---|
| Power Source | 12VDC / PoE IEEE802.3af |
| Power Consumption | 8.64W@12VDC |
| Video Output | 1 Vp-p, 75Ω, Composite |
| Audio Input | MIC in, 0.178Vp-p, 10K Ω |
| Audio Output | Line out, 2.26Vp-p, 10K Ω |
| D/I | Max 50mA@5VDC, TTL level 1.5V threshold |
| D/O | Max 50mA@24VDC<br>On-state resistance: 50 Ω (max continuous) |

# Environment Condition

| | |
|---|---|
| Operating Temperature | Operating Range<br>0˚C ~ 50˚C (32˚F ~ 122˚F) |
| Operating Humidity | Up to 85% RH |

# Mechanical Condition

| | |
|---|---|
| Material | Aluminum Die Casting / Plastic (ABS) |
| Color | White |
| Dimension | Housing : 165.3 (Ø) x 134.7(H) mm<br>Dome : 100(Ø) mm |
| Weight (Approx.) | 1.2kg |
| Pan / Tilt Speed | (maximum) 7°/s |
| Pan / Tilt Range | Pan range: 0° to 359°<br>Tilt range: 0° to 90° |
| PAN/Tilt Life span | Approx. 5,000 counts each |

* The specifications above are subject to change without any prior notice.

# APPENDIX (B): POWER OVER ETHERNET

The Power over Ethernet (PoE) is designed to extract power from a conventional twisted pair Category 5 Ethernet cable, conforming to the IEEE 802.3af Power-over-Ethernet (PoE) standard. IEEE 802.3af allows for two power options for Category 5 cables.
The IEEE **802.3af-2003** standard allows up to 15.4 W of power the device. However, 12.95W is the available power, as some power gets lost in the cable. The updated IEEE **802.3at-2009 (PoE+)** standard allows up to 25.5 W (Max 34.2 W) of power the device.
PoE has advantages over conventional power in such places where AC powers cannot be reached or expensive to wire.

**Note**

For proper activation of PoE, the cable must be shorter than 100m and conform the PoE standard.

## PoE compatibility

**With non-Power over Ethernet (non-PoE)**
When it is connected with non-PoE, the power adaptor should be connected.

**With power adaptor**
Connecting both PoE and power adaptor does not do any harm to the product, but power adaptor will be the only power source for the device as it has priority over PoE. In this case, disconnecting power adaptor while it is operating will cause the device to reboot. And PoE will be the power source for the device after the reboot.

## Power Comparison

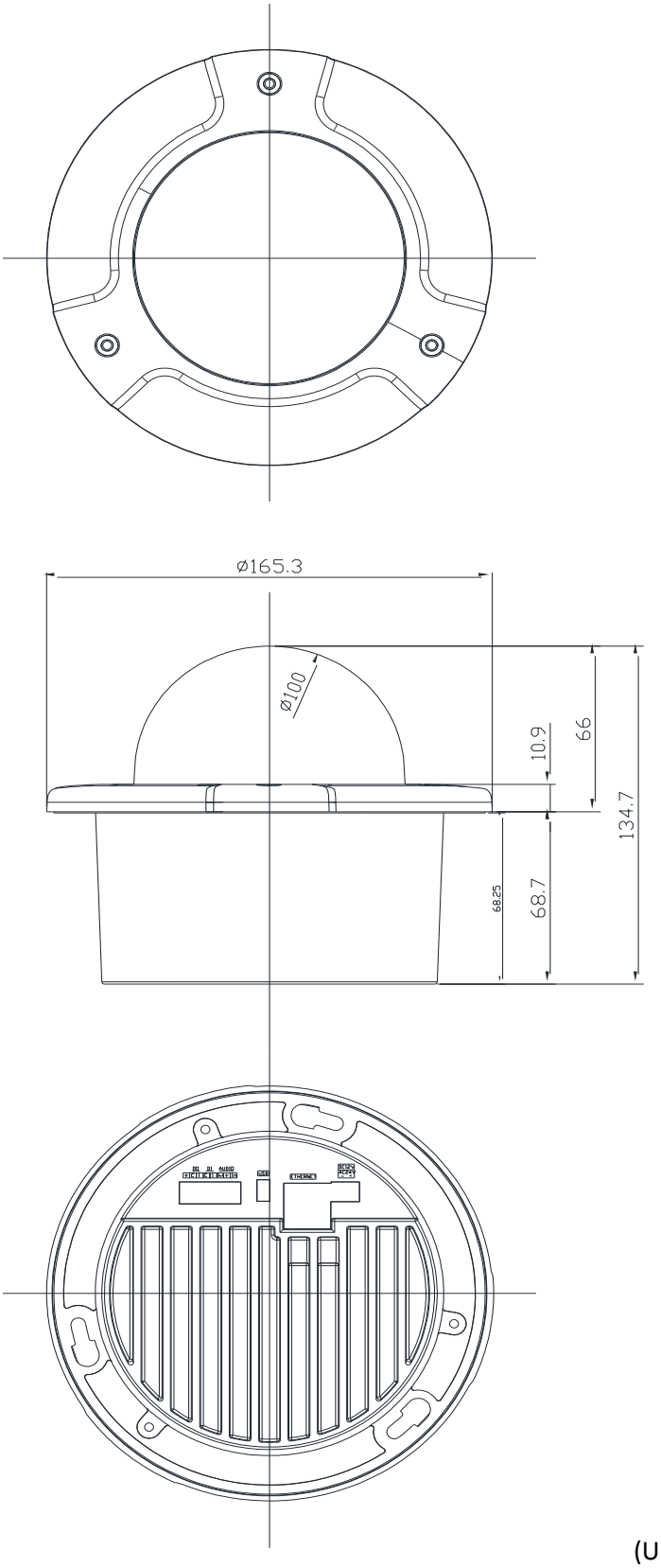
The PoE Property supported by the device is **802.3af**.

| Property | 802.3af | 802.3at |
|---|---|---|
| Available Power | 12.95 W | 25.50 W |
| Max. Power by PSE | 15.40 W | 34.20 W |
| Max. Current | 350 mA | 600 mA |
| Recommended Cable | Category 5 and above | Category 5e and above |

**Note**

Disconnecting PoE does not reboot the device as long as a power adaptor is connected.

# APPENDIX (C): DIMENSIONS




(Unit: mm)

# APPENDIX (D): HEXADECIMAL-DECIMAL CONVERSION TABLE

Refer to the following table when you convert the MAC address of your device to IP address.

| Hex | Dec | Hex | Dec | Hex | Dec | Hex | Dec | Hex | Dec | Hex | Dec | Hex | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 25 | 37 | 4A | 74 | 6F | 111 | 94 | 148 | B9 | 185 | DE | 222 |
| 1 | 1 | 26 | 38 | 4B | 75 | 70 | 112 | 95 | 149 | BA | 186 | DF | 223 |
| 2 | 2 | 27 | 39 | 4C | 76 | 71 | 113 | 96 | 150 | BB | 187 | E0 | 224 |
| 3 | 3 | 28 | 40 | 4D | 77 | 72 | 114 | 97 | 151 | BC | 188 | E1 | 225 |
| 4 | 4 | 29 | 41 | 4E | 78 | 73 | 115 | 98 | 152 | BD | 189 | E2 | 226 |
| 5 | 5 | 2A | 42 | 4F | 79 | 74 | 116 | 99 | 153 | BE | 190 | E3 | 227 |
| 6 | 6 | 2B | 43 | 50 | 80 | 75 | 117 | 9A | 154 | BF | 191 | E4 | 228 |
| 7 | 7 | 2C | 44 | 51 | 81 | 76 | 118 | 9B | 155 | C0 | 192 | E5 | 229 |
| 8 | 8 | 2D | 45 | 52 | 82 | 77 | 119 | 9C | 156 | C1 | 193 | E6 | 230 |
| 9 | 9 | 2E | 46 | 53 | 83 | 78 | 120 | 9D | 157 | C2 | 194 | E7 | 231 |
| 0A | 10 | 2F | 47 | 54 | 84 | 79 | 121 | 9E | 158 | C3 | 195 | E8 | 232 |
| 0B | 11 | 30 | 48 | 55 | 85 | 7A | 122 | 9F | 159 | C4 | 196 | E9 | 233 |
| 0C | 12 | 31 | 49 | 56 | 86 | 7B | 123 | A0 | 160 | C5 | 197 | EA | 234 |
| 0D | 13 | 32 | 50 | 57 | 87 | 7C | 124 | A1 | 161 | C6 | 198 | EB | 235 |
| 0E | 14 | 33 | 51 | 58 | 88 | 7D | 125 | A2 | 162 | C7 | 199 | EC | 236 |
| 0F | 15 | 34 | 52 | 59 | 89 | 7E | 126 | A3 | 163 | C8 | 200 | ED | 237 |
| 10 | 16 | 35 | 53 | 5A | 90 | 7F | 127 | A4 | 164 | C9 | 201 | EE | 238 |
| 11 | 17 | 36 | 54 | 5B | 91 | 80 | 128 | A5 | 165 | CA | 202 | EF | 239 |
| 12 | 18 | 37 | 55 | 5C | 92 | 81 | 129 | A6 | 166 | CB | 203 | F0 | 240 |
| 13 | 19 | 38 | 56 | 5D | 93 | 82 | 130 | A7 | 167 | CC | 204 | F1 | 241 |
| 14 | 20 | 39 | 57 | 5E | 94 | 83 | 131 | A8 | 168 | CD | 205 | F2 | 242 |
| 15 | 21 | 3A | 58 | 5F | 95 | 84 | 132 | A9 | 169 | CE | 206 | F3 | 243 |
| 16 | 22 | 3B | 59 | 60 | 96 | 85 | 133 | AA | 170 | CF | 207 | F4 | 244 |
| 17 | 23 | 3C | 60 | 61 | 97 | 86 | 134 | AB | 171 | D0 | 208 | F5 | 245 |
| 18 | 24 | 3D | 61 | 62 | 98 | 87 | 135 | AC | 172 | D1 | 209 | F6 | 246 |
| 19 | 25 | 3E | 62 | 63 | 99 | 88 | 136 | AD | 173 | D2 | 210 | F7 | 247 |
| 1A | 26 | 3F | 63 | 64 | 100 | 89 | 137 | AE | 174 | D3 | 211 | F8 | 248 |
| 1B | 27 | 40 | 64 | 65 | 101 | 8A | 138 | AF | 175 | D4 | 212 | F9 | 249 |
| 1C | 28 | 41 | 65 | 66 | 102 | 8B | 139 | B0 | 176 | D5 | 213 | FA | 250 |
| 1D | 29 | 42 | 66 | 67 | 103 | 8C | 140 | B1 | 177 | D6 | 214 | FB | 251 |
| 1E | 30 | 43 | 67 | 68 | 104 | 8D | 141 | B2 | 178 | D7 | 215 | FC | 252 |
| 1F | 31 | 44 | 68 | 69 | 105 | 8E | 142 | B3 | 179 | D8 | 216 | FD | 253 |
| 20 | 32 | 45 | 69 | 6A | 106 | 8F | 143 | B4 | 180 | D9 | 217 | FE | 254 |
| 21 | 33 | 46 | 70 | 6B | 107 | 90 | 144 | B5 | 181 | DA | 218 | FF | 255 |
| 22 | 34 | 47 | 71 | 6C | 108 | 91 | 145 | B6 | 182 | DB | 219 | | |
| 23 | 35 | 48 | 72 | 6D | 109 | 92 | 146 | B7 | 183 | DC | 220 | | |
| 24 | 36 | 49 | 73 | 6E | 110 | 93 | 147 | B8 | 184 | DD | 221 | | |

# REVISION HISTORY

| MAN# | DATE(M/D/Y) | Comments |
|---|---|---|
| D1A.01 | 07/06/2011 | Preliminary version for DP sample |
| D1A.02 | 07/20/2011 | Corrected DI voltage range specification |
| 01A.00 | 07/25/2011 | First release version |
| 01A.01 | 07/28/2011 | Added limitation on the heater usage |
| 01A.02 | 08/03/2011 | Added a note that MPEG4 and VCA will be supported from next release |
| 01A.03 | 11/18/2011 | Added clamping core |
| 01A.04 | 12/16/2011 | Added comment about MPEG4<br>Changed operating temperature |
| 01A.05 | 01/17/2012 | Corrected images |
| 01A.06 | 03/05/2012 | Modified installation image<br>Corrected min illumination |
| 01A.07 | 03/13/2012 | Modified PoE compatibility, with power adoptor<br>Modified reset and factory default |
| 01A.08 | 05/07/2012 | Overall revision and modification of contents<br>Area network description revision |
| 03-2014-A | 03/31/2014 | Correct explanation for PoE and installation |