

# 네트워크 카메라

## 제품 사용 설명서

XNV-6080RS/XNV-8080RS/XNV-6120RS

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# 네트워크 카메라

## 제품 사용 설명서

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제품을 올바르게 사용하여 위험이나 재산상의 피해를 미리 막기 위한 내용입니다 반드시 지켜 주시기 바랍니다.

|                                                                                                                                 |                                                                                                                                          |
|---------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
|  <b>경고</b> 지키지 않았을 경우 사용자가 사망하거나 중상을 입을 수 있습니다. |  <b>주의</b> 지키지 않았을 경우 사용자가 부상을 당하거나 재산상의 손해를 입을 수 있습니다. |
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### 전원 관련

|                                                                                                                                            |                                                                                                      |  |
|--------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|--|
|  <b>경고</b>                                                 |                                                                                                      |  |
| 전원 및 신호선 연결 시 외부 연결 단자를 확인하고 연결하세요.<br>알람 단자에는 알람 신호선을 연결하고, DC 전원 입력 단자는 극성을 확인하여 DC 어댑터를 올바르게 연결하세요.<br>전원을 잘못 연결하면 화재, 감전, 고장의 원인이 됩니다. | 연기가 나거나 이상한 냄새가 날 때는 사용을 중단하세요.<br>이때는 곧바로 전원을 분리 후 서비스 센터에 연락 해주세요.<br>그대로 계속 사용하면 화재, 감전의 원인이 됩니다. |  |

|                                                                                            |                                                                   |  |
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|  <b>주의</b> |                                                                   |  |
| 전원 연결단자에 전원을 확실하게 고정 후 사용하세요.<br>접촉이 불완전한 경우는 화재의 원인이 됩니다.                                 | 어댑터 출력 케이블을 연장하여 사용하지 마세요.<br>전원 케이블 연장 설치가 필요한 경우 서비스 센터에 문의하세요. |  |

### 설치 관련

|                                                                                            |                                                                          |  |
|--------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|--|
|  <b>경고</b> |                                                                          |  |
| 반드시 본 제품 구입 시 제공된 어댑터를 사용하세요.<br>화재, 감전, 고장의 원인이 됩니다.                                      | 천동, 번개가 치면 카메라에 문제가 생길 수 있습니다.<br>설치 시 접지 등 낙뢰에 의한 파손을 최소화할 수 있도록 주의하세요. |  |

|                                                                                            |                                                                                      |                                                                   |
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|  <b>주의</b> |                                                                                      |                                                                   |
| 카메라를 벽이나 천장 등에 설치 시 안전하고 확실하게 고정하세요.<br>낙하로 인한 부상의 원인이 됩니다.                                | 카메라 위에 전도성 물질(드라이버, 동전, 쇠붙이 등) 및 물이 차있는 용기 등을 놓지 마세요.<br>화재, 감전, 낙하로 인한 상해의 원인이 됩니다. | 하나의 어댑터에 여러대의 카메라를 연결해서 사용하지 마세요.<br>용량 초과 시 이상 발열 및 화재의 원인이 됩니다. |

|                                                         |                                                                                                        |                                                                                                                                                         |
|---------------------------------------------------------|--------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| 카메라 설치/분리시 보호용 장갑을 착용하세요.<br>제품 표면의 고온에 의한 화상의 원인이 됩니다. | 무리한 힘을 가하여 억지로 제품을 설치할 경우 오동작으로 인해 카메라에 손상을 줄 수 있습니다.<br>규격에 맞지 않는 도구를 사용하여 강제로 조립할 경우 제품이 파손될 수 있습니다. | 제품이 설치되는 장소에 화학 물질 또는 유증기가 있거나 발생될 수 있을 경우 제품을 설치하지 마세요.<br>풍기름과 같은 식용 기름 성분도 제품의 파손 및 변형을 유발할 수 있으므로, 주방 또는 조리대 근처에는 설치하지 마세요.<br>제품 손상의 원인이 될 수 있습니다. |
|---------------------------------------------------------|--------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                          |                                                                                              |                                                |
|------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|------------------------------------------------|
| 제품 설치시 화학 물질이 제품 표면에 묻지 않도록 주의하세요.<br>일부 세척제나 접착 성분과 같은 화학 용제는 제품 표면에 치명적인 손상을 줄 수 있습니다. | 당사에서 권장하지 않는 방법으로 제품을 설치/분해하는 경우 제품의 기능/성능을 보장할 수 없습니다.<br>제품 사용 설명서의 “설치 및 연결”을 참조하여 설치하세요. | 제품을 물 속에서 설치 또는 사용할 경우 제품의 심각한 고장을 일으킬 수 있습니다. |
|------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|------------------------------------------------|

|                                                           |                                                                  |                                                                      |
|-----------------------------------------------------------|------------------------------------------------------------------|----------------------------------------------------------------------|
| <b>참 고</b>                                                |                                                                  |                                                                      |
| 습기 먼지나 그을음 등이 많은 장소에 설치하지 마세요.<br>화재, 감전의 원인이 됩니다.        | 제품에 물건을 떨어뜨리거나 충격을 주지 마세요. 진동이 심한 곳이나 자석종류가 있는 곳으로부터 멀리해 주세요.    | 온도가 너무 높은 곳(55°C 이상)이나 낮은 곳, 습도가 높은 곳에 설치하지 마세요.<br>화재, 감전의 원인이 됩니다. |
| 직사광선이 들어오는 곳이나 난방기구 등 열이 나는 곳을 피해주세요.<br>화재, 감전의 원인이 됩니다. | 설치된 제품을 이동하고자 할 때에는 반드시 전원을 끄고 옮기거나 재설치 하세요.<br>화재, 감전의 원인이 됩니다. | 바람이 잘 통하는 곳에 설치하세요.<br>화재 및 고장의 원인이 될 수 있습니다.                        |

### 청소 관련

|                                                   |                                                                                                                                                                        |  |
|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <b>참 고</b>                                        |                                                                                                                                                                        |  |
| 청소 시 제품의 각 부분에 직접 물을 뿌리지 마세요.<br>화재, 감전의 원인이 됩니다. | 제품 표면은 깨끗하고 부드러운 마른 헝겊으로 오염 부위를 닦거나 부드러운 마른 헝겊에 물을 적셔 물이 흐르지 않도록 꼭 짰 후에 오염 부분을 닦으세요.<br>알코올, 솔벤트가 함유되거나, 계면활성제가 함유된 세제, 화장품류, 기름 성분등은 제품의 파손 및 변형을 유발할 수 있으니 사용하지 마세요. |  |

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## 설치 및 사용상의 주의

- 어댑터 출력 케이블을 연장하여 사용하지 마세요.  
전원 케이블 연장 설치가 필요한 경우 서비스 센터에 문의하세요.
- 사용자 임의로 카메라를 분해하지 마세요.
- 카메라 취급 시 항상 주의하세요.
- 카메라를 주먹으로 치거나 흔들지 않도록 하고 부주의한 보관이나 오동작으로 카메라에 손상을 입히지 않도록 주의하세요.
- 카메라를 비가 오는 장소나 습기가 많은 장소에 설치하지 않도록 주의하고 젖은 장소에 두고 동작하지 마세요.
- 제품 표면은 깨끗하고 부드러운 마른 헝겊으로 오염 부위를 닦거나 부드러운 마른 헝겊에 물을 적셔 물이 흐르지 않도록 꼭 짰 후에 오염 부분을 닦으세요.  
(알코올, 솔벤트가 함유되거나, 계면활성제가 함유된 세제, 화장품류, 기름 성분등은 제품의 파손 및 변형을 유발할 수 있으니 사용하지 마세요.)
- 카메라를 직사광선이 비치지 않는 서늘한 곳에 설치하세요.
- 무리한 힘을 가하여 역지로 제품을 설치 할 경우 오동작으로 인해 카메라에 손상을 줄 수 있습니다.  
규격에 맞지 않는 도구를 사용하여 강제로 조립할 경우 제품이 파손될 수 있습니다.
- 제품이 설치되는 장소에 화학 물질 또는 유증기가 있거나 발생될 수 있을 경우 제품을 설치하지 마세요.  
공기름과 같은 식용 기름 성분도 제품의 파손 및 변형을 유발할 수 있으므로, 주방 또는 조리대 근처에는 설치하지 마세요. 제품 손상의 원인이 될 수 있습니다.
- 제품 설치시 화학 물질이 제품 표면에 묻지 않도록 주의하세요.  
일부 세척제나 접착 성분과 같은 화학 용제는 제품 표면에 치명적인 손상을 줄 수 있습니다.
- 제품을 물 속에서 설치 또는 사용할 경우 제품의 심각한 고장을 일으킬 수 있습니다.
- 직사광선이 비치는 곳에 두면 제품에 좋지 않은 영향을 줄 수 있습니다.
- Micro SD 메모리 카드를 구부리거나 던지지 마세요.
- 온도가 높은 곳, 습기가 많은 곳, 먼지가 많은 곳에 Micro SD 메모리 카드를 보관하거나 사용하지 마세요.
- Micro SD 메모리 카드 단자에 이물질이 묻지 않도록 주의하세요.  
이물질이 묻은 경우에는 부드러운 헝겊으로 닦아주세요.
- Micro SD 메모리 카드를 빼기 전 카메라 전원을 끄거나 <저장>에서 장치를 <사용 안함> 으로 설정하고 [적용] 버튼을 누르세요.
- Micro SD 메모리 카드의 수명이 다하면 데이터가 저장되지 않습니다.  
이러한 경우에는 Micro SD 메모리 카드를 새로 구입하세요.
- 본 제품을 설치하기 전 또는 사용 중에 한화테크원 웹 사이트 <http://www.hanwha-security.com> 을 방문하셔서 최신 S/W 버전을 확인하시고 다운로드하여 업데이트하세요.
- 제품 CVBS 출력단자는 카메라 설치 편의성을 위한 단자이며 감시용으로 부적합합니다.
- 제품 Micro USB 출력단자는 카메라 설치 편의성을 위한 단자이며 감시용으로 부적합합니다.
- 보안강화를 위하여 특수문자, 숫자, 영문 대문자, 소문자 중 다양한 조합으로 비밀번호를 설정하여 사용하시기를 권장합니다.
- 당사에서 권장하지 않는 방법으로 제품을 설치/분해하는 경우 제품의 기능/성능을 보장할 수 없습니다.  
제품 사용 설명서의 "설치 및 연결"을 참조하여 설치하세요.

## 특징

- 스테인레스 소재  
카메라의 외관이 스테인레스 재질을 사용해 부식 방지 및 관리가 용이해 다양한 특수 환경에서 설치가 가능합니다.
- 방진 / 방수  
방진/방수 설계로 실외 설치시 비와 먼지로부터 제품을 보호합니다.
- IR 모드 기능  
IR LED가 켜질 경우 IR 모드 기능 설정으로 사물이 너무 밝게 비치는 현상을 막아 근거리에서도 사물의 식별이 가능하게 합니다.
- 2Mega pixel급 영상 지원 (XNV-6080RS/XNV-6120RS)
- 5Mega pixel급 영상 지원 (XNV-8080RS)
- 멀티 스트림 지원  
본 네트워크 카메라는 서로 다른 해상도 및 품질의 영상을 서로 다른 코덱으로 동시에 출력할 수 있습니다.
- 웹 브라우저를 통한 모니터링  
인터넷 웹 브라우저를 통해, 로컬 네트워크 환경에서 뿐만 아니라 외부 인터넷에서도 영상을 볼 수 있습니다.
- 알람 기능  
이벤트가 발생하면, 관련된 영상을 사용자가 등록한 이메일 및 FTP 서버로 전송하거나 Micro SD 메모리 카드 또는 NAS에 저장하거나 알람 출력 단자로 신호를 내보냅니다.
- 탭퍼링 감지 기능  
영상 감시를 방해하는 상황을 감지합니다.
- 디포커스(초점흐림) 감지 기능  
카메라 렌즈의 초점이 흐려지는 것을 감지합니다.
- 움직임 감지 기능  
카메라 입력 영상에서 움직임을 감지합니다.
- 오디오 감지 기능  
지정된 레벨 이상의 오디오 발생을 감지합니다.
- 스마트 코덱 기능  
사용자가 설정한 영역을 보다 선명하게 전송합니다.
- 네트워크 단절 자동 감지  
네트워크 단절을 감지하여 이벤트를 발생시킵니다.
- 안개 감지 기능  
감지 레벨 이상의 안개 발생을 감지합니다.
- 얼굴 감지 기능  
카메라 입력 영상에서 지정한 영역에 대한 얼굴을 감지합니다.
- IVA (지능형 영상 분석) 기능  
설정한 이벤트 규칙 조건을 만족하는 행동이나 상황을 감지합니다.
- 음원 분류 기능  
사용자가 지정한 음원을 감지합니다.
- ONVIF 지원  
본 장비는 ONVIF Profile S&G를 지원합니다.  
자세한 내용은 [www.onvif.org](http://www.onvif.org) 를 참고하세요.



한화테크원은 지구환경보전을 위하여 제품과 관련된 전 과정에서 환경을 고려하고 있으며, 고객에게 보다 친환경적인 제품을 제공하기 위하여 다양한 활동을 추진하고 있습니다.  
에코(Eco)마크는 친환경제품을 만들기 위한 한화테크원의 의지이며, 유럽의 환경규제(RoHS)에 만족하는 제품임을 의미합니다.

## PC 시스템 권장 사양

- CPU : Intel(R) Core(TM) i7 3.4 GHz 이상
  - RAM : 8G 이상
  - 지원 OS : MS Windows, Mac OS X
  - **플러그인 프리 웹뷰어**  
지원 브라우저 : Google Chrome, MS Edge, Mozilla Firefox(Windows 64bit only), Apple Safari (Mac OS X only)
  - **플러그인 웹뷰어**  
지원 브라우저 : MS Explore, Apple Safari (Mac OS X only)
- 검증된 OS 및 브라우저 상세 버전 정보는 부록을 참고하세요.

## Micro SD/SDHC/SDXC 메모리 카드 권장 사양

- 권장 용량 : 16GB ~ 256GB (MLC타입)
- 본 카메라는 다음과 같은 제조사 제품군의 메모리 카드 사용을 권장합니다.
  - 제조사 : Sandisk, Transcend
  - 제품군 : High endurance

## NAS 권장 사양

- 권장 용량 : 200GB 이상을 권장합니다.
- 동시접속 : NAS 1대당 최대 16대의 카메라 접속이 가능합니다.
- 본 카메라는 다음과 같은 제조사의 NAS 사용을 권장합니다.

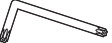
| 권장 제품        | 가능 크기            |
|--------------|------------------|
| QNAP NAS     | 최대 16대 카메라 접속 가능 |
| Synology NAS | 최대 16대 카메라 접속 가능 |



- NAS 장비를 영상 저장 이외의 용도로 사용할 경우 접속 가능한 카메라 최대 대수가 줄어들 수 있습니다.

## 구성품 확인하기

다음의 구성품이 모두 포함되어 있는지 확인하세요.  
(부속 엑세서리는 판매국에 따라 다를 수 있습니다.)

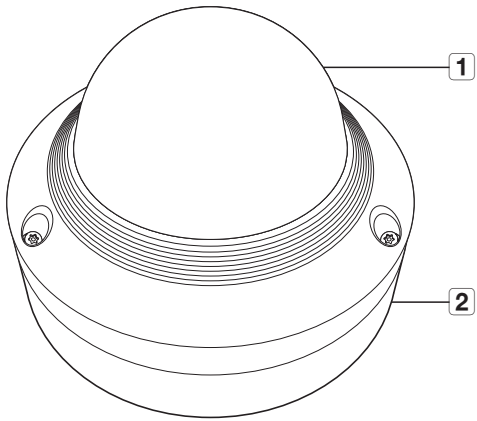
| 외관                                                                                  | 품명                       | 수량 | 용도                      |
|-------------------------------------------------------------------------------------|--------------------------|----|-------------------------|
|    | 카메라                      | 1  |                         |
|    | 퀵가이드                     | 1  |                         |
|    | 테스트 모니터용 케이블             | 1  | 휴대용 디스플레이에 연결하여 카메라 테스트 |
|    | 전원 어댑터<br>(DC12V / 1.8A) | 1  | 전원 연결시 사용               |
|    | 전원코드                     | 1  | 전원 어댑터에 연결              |
|    | 마운트 플레이트                 | 1  | 설치 작업시 가이드              |
|    | 전원 터미널 블록                | 1  | 전원 단자에 꽂아 사용            |
|    | 태핑 나사                    | 4  | 천장, 벽면 등 설치에 사용         |
|  | 별 렌치                     | 1  | 돌 커버 분해, 조립시 사용         |

| 외관                                                                                  | 품명            | 수량 | 용도                                              |
|-------------------------------------------------------------------------------------|---------------|----|-------------------------------------------------|
|  | 전원 케이블        | 1  | 전원 단자에 연결시 사용                                   |
|  | 오디오/알람 케이블    | 1  | 오디오 및 알람 연결시 사용                                 |
|  | 케이블 부시        | 1  | 케이블 전체 공용 부쉬                                    |
|  | 플라스틱 앵커       | 4  | 설치 장소 나사 체결용, 구멍에 삽입 (설치 강도 보강용)                |
|  | 머신 나사         | 3  | PIPE, WALL MOUNT 등에 설치시 케이스의 천장 조립용, 구멍을 막는데 사용 |
|  | 카드형 흡습제       | 1  | 설치시 부착                                          |
|  | Cap Installer | 1  | RJ45 케이블 연결시 사용                                 |

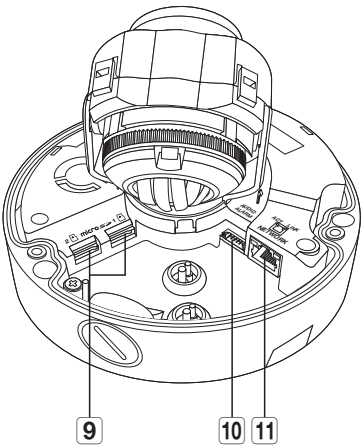
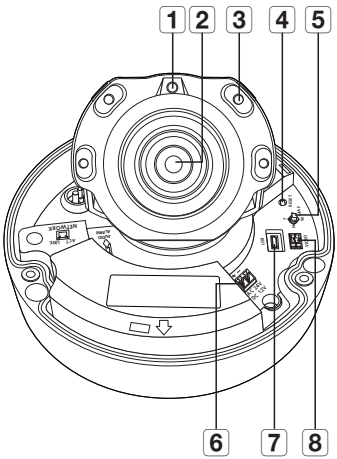
각 부분의 명칭 및 기능 (XNV-6080RS/XNV-8080RS)

내부 구성

외부



| 명칭        | 기능설명                            |
|-----------|---------------------------------|
| 1 돔 커버    | 렌즈 및 내부 본체를 보호하기 위해 씌우는 커버입니다.  |
| 2 카메라 케이스 | 카메라 본체 및 카메라 바디를 포함하고 있는 부위입니다. |





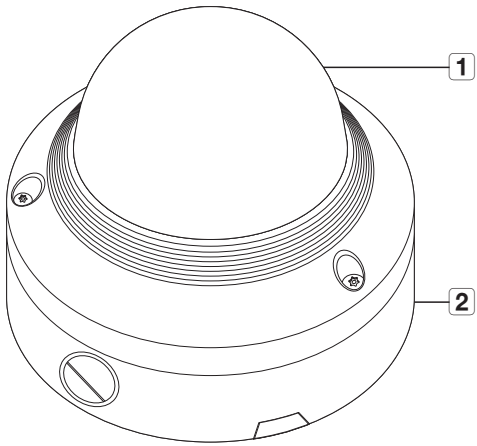
| 명칭                           | 기능설명                                                                                                                                                                                                                              |                           |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| <b>1</b> 조도 센서               | 수신되는 빛을 감지하여 IR LED를 제어합니다.                                                                                                                                                                                                       |                           |
| <b>2</b> 렌즈                  | 카메라 렌즈입니다.                                                                                                                                                                                                                        |                           |
| <b>3</b> IR LED              | 조도 센서에 의해 제어되는 적외선 LED입니다.                                                                                                                                                                                                        |                           |
| <b>4</b> 초기화 버튼              | <p>카메라의 설정을 공장 값으로 초기화하는 버튼입니다.<br/>         약 5초간 누르면 재부팅됩니다.</p> <p>■ 카메라를 초기화하면 네트워크 설정은 DHCP를 사용하도록 변경됩니다. 네트워크 내에 DHCP 서버가 없는 경우는, 디바이스 매니저 프로그램을 이용해 기본적인 네트워크 설정(IP Address, Subnet Mask, Gateway 등)을 다시 해야 접속이 가능합니다.</p> |                           |
| <b>5</b> 줌/초점 조정 버튼          | T                                                                                                                                                                                                                                 | 줌 인합니다. (Tele)            |
|                              | W                                                                                                                                                                                                                                 | 줌 아웃합니다. (Wide)           |
|                              | N                                                                                                                                                                                                                                 | 가까운 물체에 초점을 맞춥니다. (Near)  |
|                              | F                                                                                                                                                                                                                                 | 멀리 있는 물체에 초점을 맞춥니다. (Far) |
|                              | 초점 조정                                                                                                                                                                                                                             | 버튼을 누르면 자동으로 초점 조정을 합니다.  |
| <b>6</b> 전원 연결 단자            | 전원 터미널 블록과 연결하는 단자입니다.                                                                                                                                                                                                            |                           |
| <b>7</b> MICRO USB 단자        | <p>WiFi 동글을 연결하는 단자입니다.<br/>         스마트폰에 설치한 어플리케이션을 통해 설치 영상을 확인할 수 있습니다.<br/>         16쪽의 "WiFi 연결하기"를 참고하세요.<br/>         ■ WiFi 동글과 OTG 어댑터는 별매입니다.</p>                                                                    |                           |
| <b>8</b> 설치용 모니터 출력 단자       | 테스트 영상을 확인하는 단자입니다. 테스트 모니터 케이블을 이용하여 휴대용 디스플레이에 연결하면 테스트 영상을 확인할 수 있습니다.                                                                                                                                                         |                           |
| <b>9</b> Micro SD 메모리 카드 삽입구 | Micro SD 메모리 카드를 삽입하는 단자입니다.                                                                                                                                                                                                      |                           |

| 명칭                           | 기능설명                                |                                    |
|------------------------------|-------------------------------------|------------------------------------|
| <b>10</b> 오디오 및 알람 케이블 연결 단자 | 오디오 및 알람 케이블을 연결하는 단자입니다.           |                                    |
|                              | ALARM IN                            | 알람 입력 센서 혹은 외부 주야간 센서를 연결하는 단자입니다. |
|                              | ALARM OUT                           | 알람 출력신호를 연결하는 단자입니다.               |
|                              | GND                                 | 알람 입/출력신호를 연결하는 공통 단자입니다.          |
|                              | MIC                                 | 마이크와 연결하는 단자입니다.                   |
| <b>11</b> 네트워크 연결 단자         | SPEAKER                             | 스피커와 연결하는 단자입니다.                   |
|                              | PoE나 이더넷 케이블을 통하여 네트워크와 연결하는 단자입니다. |                                    |

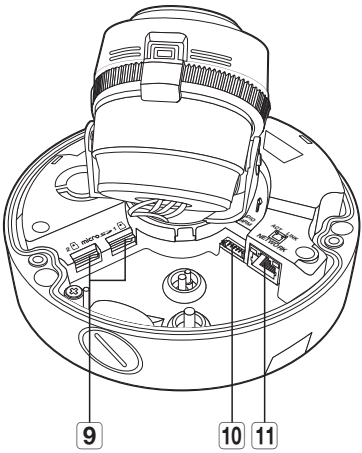
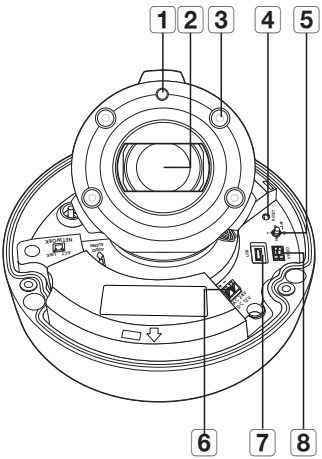
각 부분의 명칭 및 기능 (XNV-6120RS)

내부 구성

외부



| 명칭        | 기능설명                            |
|-----------|---------------------------------|
| 1 돔 커버    | 렌즈 및 내부 본체를 보호하기 위해 씌우는 커버입니다.  |
| 2 카메라 케이스 | 카메라 본체 및 카메라 바디를 포함하고 있는 부위입니다. |



| 명칭                           | 기능설명                                                                                                                                                                                                                                |                           |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| <b>1</b> 조도 센서               | 수신되는 빛을 감지하여 IR LED를 제어합니다.                                                                                                                                                                                                         |                           |
| <b>2</b> 렌즈                  | 카메라 렌즈입니다.                                                                                                                                                                                                                          |                           |
| <b>3</b> IR LED              | 조도 센서에 의해 제어되는 적외선 LED입니다.                                                                                                                                                                                                          |                           |
| <b>4</b> 초기화 버튼              | <p>카메라의 설정을 공장 값으로 초기화하는 버튼입니다.<br/>           약 5초간 누르면 재부팅됩니다.</p> <p>■ 카메라를 초기화하면 네트워크 설정은 DHCP를 사용하도록 변경됩니다. 네트워크 내에 DHCP 서버가 없는 경우는, 디바이스 매니저 프로그램을 이용해 기본적인 네트워크 설정(IP Address, Subnet Mask, Gateway 등)을 다시 해야 접속이 가능합니다.</p> |                           |
| <b>5</b> 줌/초점 조정 버튼          | T                                                                                                                                                                                                                                   | 줌 인합니다. (Tele)            |
|                              | W                                                                                                                                                                                                                                   | 줌 아웃합니다. (Wide)           |
|                              | N                                                                                                                                                                                                                                   | 가까운 물체에 초점을 맞춥니다. (Near)  |
|                              | F                                                                                                                                                                                                                                   | 멀리 있는 물체에 초점을 맞춥니다. (Far) |
|                              | 초점 조정                                                                                                                                                                                                                               | 버튼을 누르면 자동으로 초점 조정을 합니다.  |
| <b>6</b> 전원 연결 단자            | 전원 터미널 블록과 연결하는 단자입니다.                                                                                                                                                                                                              |                           |
| <b>7</b> MICRO USB 단자        | <p>WiFi 동글을 연결하는 단자입니다.<br/>           스마트폰에 설치한 어플리케이션을 통해 설치 영상을 확인할 수 있습니다.<br/>           16쪽의 "WiFi 연결하기"를 참고하세요.<br/>           ■ WiFi 동글과 OTG 어댑터는 별매입니다.</p>                                                                |                           |
| <b>8</b> 설치용 모니터 출력 단자       | 테스트 영상을 확인하는 단자입니다. 테스트 모니터 케이블을 이용하여 휴대용 디스플레이에 연결하면 테스트 영상을 확인할 수 있습니다.                                                                                                                                                           |                           |
| <b>9</b> Micro SD 메모리 카드 삽입구 | Micro SD 메모리 카드를 삽입하는 단자입니다.                                                                                                                                                                                                        |                           |

| 명칭                           | 기능설명                                |                                    |
|------------------------------|-------------------------------------|------------------------------------|
| <b>10</b> 오디오 및 알람 케이블 연결 단자 | 오디오 및 알람 케이블을 연결하는 단자입니다.           |                                    |
|                              | ALARM IN                            | 알람 입력 센서 혹은 외부 주야간 센서를 연결하는 단자입니다. |
|                              | ALARM OUT                           | 알람 출력신호를 연결하는 단자입니다.               |
|                              | GND                                 | 알람 입/출력신호를 연결하는 공통 단자입니다.          |
|                              | MIC                                 | 마이크와 연결하는 단자입니다.                   |
| <b>11</b> 네트워크 연결 단자         | SPEAKER                             | 스피커와 연결하는 단자입니다.                   |
|                              | PoE나 이더넷 케이블을 통하여 네트워크와 연결하는 단자입니다. |                                    |

# 설치 및 연결

## 설치하기

- 본 카메라는 P66 규격으로 방수제품이지만, 외부 케이블에 연결되는 적 부분은 방수가 되지 않습니다. 본 제품 설치 시 케이블 외부 노출 방지를 위하여 지붕 처마 밑 설치를 권장합니다.

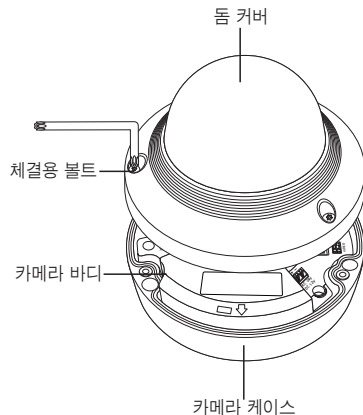
### 설치 전 유의사항

카메라를 설치하기 전, 아래의 주의 사항들을 반드시 숙지하세요.

- 설치 브라켓을 포함한 카메라 무게의 5배를 견딜 수 있는 장소(천장이나 벽)에 설치하셔야 합니다.
- 케이블이 부적절한 곳에 끼이거나 전선의 피복이 손상될 경우 제품의 손상이나 화재로 이어질 수 있으므로 주의하세요.
- 카메라를 설치할 때, 다른 사람이 설치 장소에 접근하는 일이 없도록 해야 합니다.  
그리고 귀중품이 아래에 놓여 있다면 즉시 치우세요.
- 무리한 힘을 가하여 억지로 제품을 설치할 경우 오동작으로 인해 카메라에 손상을 줄 수 있습니다. 규격에 맞지 않는 도구를 사용하여 강제로 조립할 경우 제품이 파손될 수 있습니다.

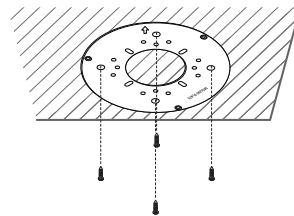
### 분리하기

1. 부속으로 제공된 별 렌치를 이용하여 돔 커버의 체결용 볼트를 반시계 방향으로 풀어 돔 커버를 분리하세요.

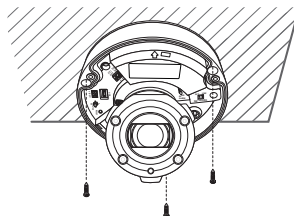


## 설치하기

1. 부속으로 제공된 마운트 플레이트의 4개 D 지점에 맞게 홀을 뚫으세요.
  - [↑] 표시가 모니터링하고자 하는 방향이 되도록 설치하세요.
2. 플라스틱 앵커를 끝까지 삽입하세요.
3. 플라스틱 앵커가 삽입된 구멍에 카메라의 설치용 구멍을 맞춘 후, 태핑 나사를 체결하세요.

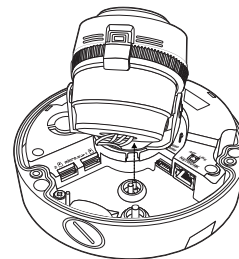


4. 그림과 같이 마운트 플레이트와 카메라 케이스를 체결하세요.
  - [↑] 표시가 모니터링하고자 하는 방향이 되도록 설치하세요.
5. 케이블을 연결하고, 카메라 설치 시 케이블에 손상이 가거나 끼이지 않도록 케이블을 정돈하세요.
6. "카메라의 감시방향 조정하기"를 참고하여 렌즈를 원하는 방향으로 조정하세요. (15쪽)
7. 돔 커버를 조립하세요.
  - 체결용 볼트는 방수에 문제가 없도록 별 렌치를 이용하여 단단히 체결하세요.

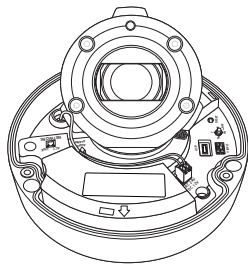


### 방수용 전원 케이블 및 LAN 케이블 연결하기

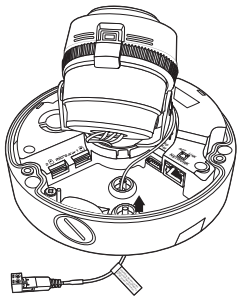
1. 돔 커버와 케이스를 분리하세요.
2. 그림과 같이 바닥에 있는 고무 마개의 길게 돌출된 부분을 당겨서 뜯어 내세요.



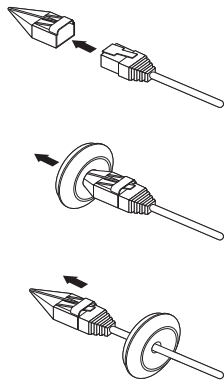
3. 2번에서 돌출된 부분을 뜯어내어 생긴 작은 홈을 통해 전원 케이블을 집어넣고, 길게 파인 홈을 따라 전원 케이블을 넣으세요.
4. 전원 케이블을 전원 터미널 블록과 연결하세요.



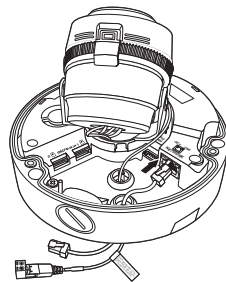
5. 그림과 같이 바닥에 있는 고무 마개를 당겨서 빼세요.



6. Cap Installer를 사용하여 RJ45 케이블을 통과시키세요.

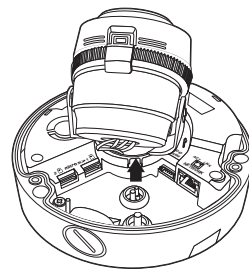


7. 고무 마개를 다시 끼우고, LAN 케이블을 이더넷 단자와 연결하세요.

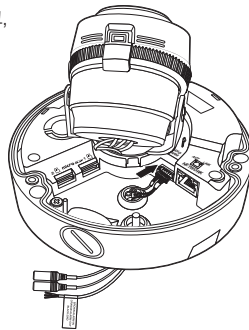


### 알람 및 오디오 케이블 연결하기

1. 돔 커버와 케이스를 분리하세요.
2. 그림과 같이 바닥에 있는 고무 마개를 당겨서 제거하세요.



3. 2번에서 고무 마개를 제거하여 생긴 홈을 통해 알람/오디오 케이블을 집어넣고, PCB의 알람 터미널에 연결하세요.
4. 카메라 설치 시 케이블에 손상이 가거나 끼이지 않도록 케이블을 정돈하세요.
5. 알람/오디오 케이블에 있는 고무 마개를 홈에 끼우세요.
6. “카메라의 감시방향 조정하기”를 참고하여 렌즈를 원하는 방향으로 조정하세요. (15쪽)
7. 돔 커버를 조립하세요.



## 별매 어댑터에 설치하기

설치의 편리성 및 설치 장소에 따라 다음의 별매 제품을 구입하여 설치하면 편리합니다.

1. “**분리하기**”를 참고하여 돔 커버와 케이스를 분리하세요. (12쪽)
2. 카메라 케이스를 부속으로 제공된 머신 나사를 이용하여 별매 어댑터에 고정하세요.
3. 케이블을 연결하고, 카메라 설치 시 케이블에 손상이 가거나 끼이지 않도록 케이블을 정돈하세요.
4. 카메라 바디를 “**분리하기**”의 반대 순서로 조립하세요.
5. “**카메라의 감시방향 조정하기**”를 참고하여 렌즈를 원하는 방향으로 조정하세요. (15쪽)
6. 돔 커버를 조립하세요.
  - 체결용 볼트는 방수에 문제가 없도록 별 렌치를 이용하여 단단히 체결하세요.

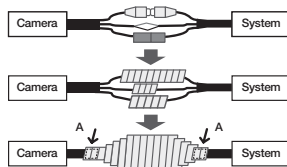
## 옥외 설치하기

건물 외부 설치시 외부에서 연결된 케이블의 틈으로 누수될 우려가 있으므로 다음과 같이 시중에 판매하는 방수 부틸 고무 테이프로 방수처리 바랍니다.

1. 전원, I/O, BNC, LAN 등의 케이블을 연결하세요.

2. 검은색 케이블 자켓 (A부분)을 포함하여 케이블 연결부까지 부틸 고무 테이프의 반 이상이 겹치도록 하여 방수 테이프를 감아주세요.

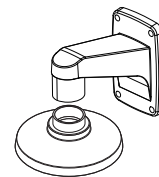
- !**
- 연결된 케이블 자켓 부분의 방수처리가 미흡하면 직접적인 누수 원인이 되므로 특히 촘촘하게 테이핑하여 주시기 바랍니다.
  - 방수용 부틸 고무 테이프는 원래 길이의 2배 이상 늘어나는 부틸 고무 소재입니다.



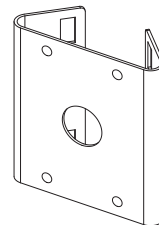
## 설치 관련 별매 제품

설치의 편리성 및 설치 장소에 따라 다음의 별매 제품을 구입하여 설치하면 편리합니다.

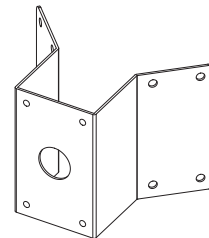
1. FRAME MOUNT(SBP-300WMS)/HANGING MOUNT(SBP-HMS6)  
돔 카메라를 벽에 설치할 경우에 사용되는 어댑터입니다.



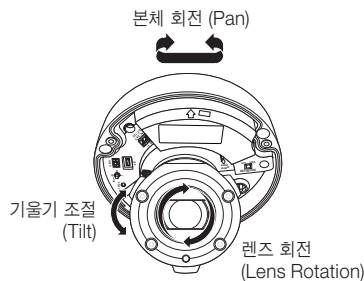
2. POLE MOUNT ADAPTOR(SBP-300PMS)  
80mm이상의 원기둥에 WALL MOUNT ADAPTOR(SBP-300WMS 또는 SBP-300WMS1)를 설치할 때 사용되는 어댑터입니다.



3. CORNER MOUNT ADAPTOR (SBP-300KMS)  
벽의 모서리부에 WALL MOUNT ADAPTOR (SBP-300WMS 또는 SBP-300WMS1)를 설치할 때 사용되는 어댑터입니다.



## 카메라의 감시방향 조정하기



### ■ 감시 방향 조정

카메라가 천장에 고정된 상태에서 카메라의 방향을 조절할 수 있습니다. 이때 카메라의 본체를 좌우로 회전시키는 것을 Pan, 기울기를 조절하는 것을 Tilt, 렌즈를 축으로 회전시키는 것을 Rotation이라고 합니다.

- Pan 회전 각도는 총 354° 입니다.
- Rotation 회전 각도는 총 355° 입니다.
- Tilt 회전 각도는 XNV-6080RS/8080RS : 67°, XNV-6120RS : 75° 입니다.

- ! 일부 각도에서 카메라 케이스에 의해 상가림이 발생할 수 있습니다.
- 돔 케이스 분해 후 포커스/줌 렌즈를 강제로 회전시키지 마세요. 모터 고장으로 포커스 불량 발생할 수 있습니다.

### ■ 조정방법

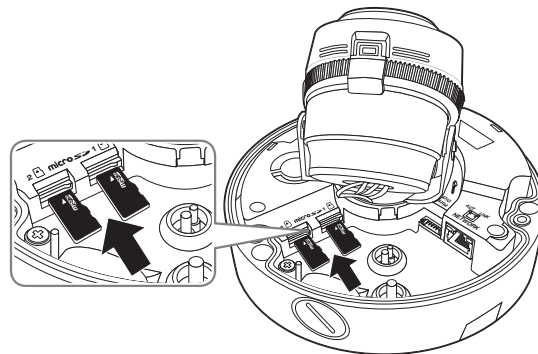
1. 모니터링할 방향을 고려하여 카메라를 설치한 후 Pan 각도를 조정하세요.
2. Rotation 시 영상이 반전되어 나타나지 않도록 수평 각도를 맞추세요.
3. Tilt 각도를 조정하여 모니터링 할 방향으로 향하게 하세요.

## Micro SD 메모리 카드 넣기/빼기

- ! ■ 카메라를 설치하기 전에 전원과 본체를 분리한 후 Micro SD 메모리 카드를 넣으세요.
- 역방향으로 무리하게 삽입하지 마세요. Micro SD 메모리 카드가 파손될 수 있습니다.
- 비가 오거나 습도가 높은 날씨에는 Micro SD 카드 탈착을 권장하지 않습니다.
- 제품 외관 커버의 분해는 5분 이내에 완료해주세요. 그렇지 않으면 내부 결로의 원인이 될 수 있습니다.

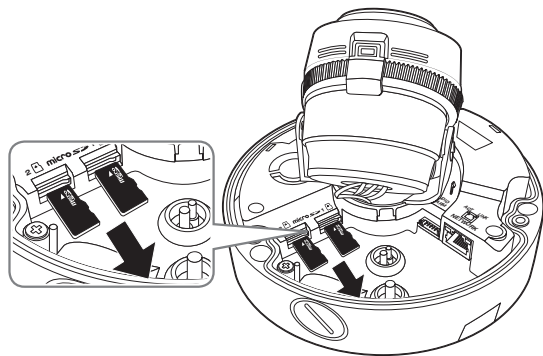
### Micro SD 카드를 넣으려면

1. 카메라의 돔 커버를 분리하세요.
2. 그림과 같이 Micro SD 카드를 화살표 방향으로 밀어 넣으세요.



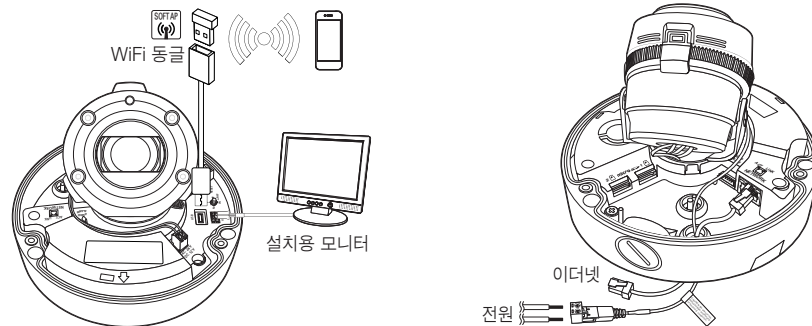
## Micro SD 카드를 빼려면

그림과 같이 화살표 방향으로 끼워진 Micro SD 카드의 끝을 살짝 누르면 자동으로 나옵니다.



- ❗
  - Micro SD 메모리 카드를 뺄 때 세게 눌렀다가 놓을 경우 Micro SD 메모리 카드가 튀어 나올 수 있으므로 주의하세요.
  - Micro SD 메모리 카드를 빼기 전 <저장>에서 장치를 <사용 안함>으로 설정하고 [적용] 버튼을 누른 후 카메라 전원을 끄세요.
  - Micro SD 메모리 카드에 데이터를 저장하고 있을 때 Micro SD 메모리 카드를 빼거나, 전원을 끄면 Micro SD 카드에 저장된 데이터가 손상될 수 있습니다.

## 다른 기기와 연결하기



- ❗
  - 제품 CVBS 출력단자는 카메라 설치 편의성을 위한 단자이며 감시용으로 부적합합니다.
  - 제품 Micro USB 출력단자는 카메라 설치 편의성을 위한 단자이며 감시용으로 부적합합니다.

## 이더넷 연결하기

이더넷 케이블을 연결하여 로컬 네트워크나 인터넷에 연결하세요.

## WiFi 연결하기

### 카메라 설정

1. Micro USB 단자에 OTG 어댑터(5핀)와 WiFi 동글을 연결하세요.

### 스마트폰 설정

1. Wisenet Installation 어플리케이션을 설치하세요.
2. WiFi를 켜 후 카메라의 SSID를 선택하세요.
3. Wisenet Installation 어플리케이션을 실행하세요.
4. 카메라에 로그인 하면 영상이 연결됩니다. (초기 비밀번호: 4321)
  - 최초 접속시 로그인 없이 영상이 실행됩니다.
5. 스마트폰으로 영상을 보며 카메라의 화각을 조정 할 수 있습니다



## WiFi 동글 추천업체

| Manufacturer | Model        |
|--------------|--------------|
| NETIS        | WF2123 n300  |
| EDIMAX       | EW-7811Un    |
| IP Time      | N100mini     |
| TP-LINK      | TL-WN823N V1 |
| ASUS         | USB-N13      |
| NETGEAR      | WNA3100M     |

## 전원 연결하기

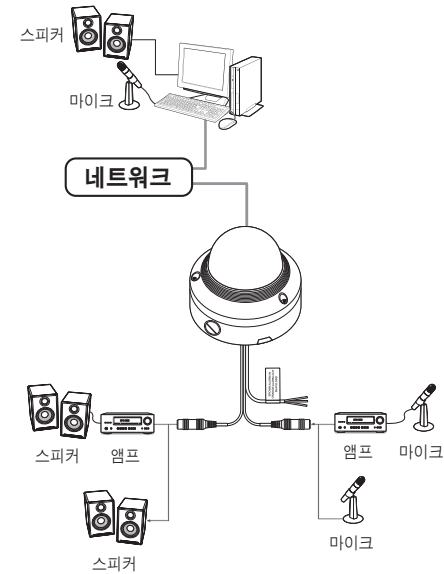
전원 어댑터의 +, - 선을 드라이버를 사용하여 카메라의 전원 입력 단자에 연결하세요.

- ❗
  - PoE, DC 12V 또는 PoE, AC 24V 전원을 동시 투입 시 기기전원은 외부전원(AC 24V, DC 12V)으로 동작합니다.
    - PoE 기능이 가능한 라우터를 사용하여 연결하면, 별도의 전원을 연결하지 않아도 사용 가능합니다.
    - PoE는 IEEE 802.3af 규격이 지원되는 장비를 사용하세요.
    - 기기의 전원은 PoE, DC 12V, AC 24V 중 단일 전원 사용을 권장합니다.
  - DC 12V는 극성이 있으므로 주의하여 연결하세요.
  - AC 24V는 무극성으로 연결 가능합니다.
  - 외부기기 연결시에는 반드시 연결되는 장치의 전원을 끈 상태에서 연결하세요.
  - 세트와 어댑터 전원선을 먼저 연결한 후 벽전원 220V를 켜줍니다.
  - 어댑터 출력 케이블을 연장하여 사용하지 마세요.  
전원 케이블 연장 설치가 필요한 경우 서비스 센터에 문의하세요.

## 네트워크 케이블 규격

| 항목           | 내용              | 비고               |
|--------------|-----------------|------------------|
| Connector    | RJ45            |                  |
| Ethernet     | 10/100BASE-T    |                  |
| Cable        | UTP Category 5e |                  |
| Max Distance | 100M            | DC저항 ≤ 0.188 Ω/m |
| PoE Support  | IEEE 802.3af    |                  |

## 오디오 입력/출력 연결하기



1. 카메라의 AUDIO IN 단자에 마이크가 연결된 앰프의 LINE OUT 단자 또는 마이크를 연결하세요.
2. 카메라의 AUDIO OUT 단자에 스피커가 연결된 앰프의 LINE IN 단자 또는 스피커를 연결하세요.
3. 오디오 입력 사양을 확인하세요.

### • 오디오 코덱

- 오디오 입력 : G.711 PCM (Bit Rate: 64kbps / Sampling Frequency: 8kHz), G.726 ADPCM (Bit Rate: 16Kbps, 24Kbps, 32Kbps, 40Kbps / Sampling Frequency: 8kHz), AAC (Bit Rate: 48Kbps / Sampling Frequency: 16kHz)
- 오디오 출력 : G.711 PCM (Bit Rate: 64kbps / Sampling Frequency: 8kHz)

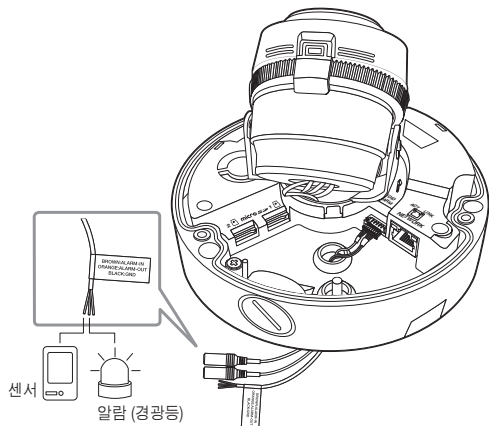
### • Full duplex 오디오

- 오디오 입력 : 선택가능 (마이크/라인입력), 지원 전압 : 2.5VDC(4mA) 입력 임피던스 : 2K Ohm
- 오디오 출력 : 라인 출력 (3.5mm mono jack), 최대출력 : 1Vrms
- 임피던스 : 600Ω

# 설치 및 연결

## 알람 입출력 단자 연결하기

입출력 단자를 통해 알람 입출력을 연결하세요.



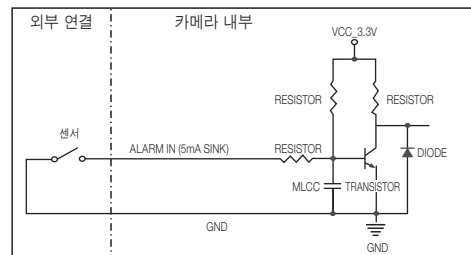
- ALARM-IN : 알람 입력 센서 혹은 외부 주야간 센서를 연결하는 단자입니다.
- ALARM-OUT : 알람 출력신호를 연결하는 단자입니다.
- GND : 알람 입/출력 신호를 연결하는 공통 단자입니다.

**!** Open Collector 방식으로 전압 및 전류 사양을 초과하는 장치(경광등, 사이렌 등)를 연결할 경우 제품이 고장날 수 있습니다.  
전압 및 전류 사양 초과하는 장치를 연결할 경우 "알람 출력 연결도"를 참고하세요. (18쪽)

## 외부 센서와 연결하기

각종 센서의 신호선(2선) 중 한 선은 [ALARM IN] 단자에 연결하고, 다른 한 선은 [GND] 단자에 연결하세요.

## 알람 입력 연결도

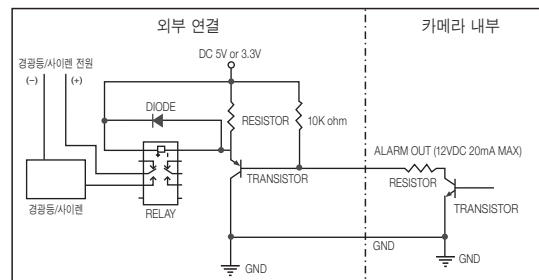


## 알람 출력 연결하기

Open Collector 방식으로 전압 및 전류 사양을 초과하는 장치(경광등, 사이렌 등)를 연결할 경우 제품이 고장날 수 있습니다.

전압 및 전류 사양 초과하는 장치를 연결할 경우 다음의 알람 출력 연결도를 참고하세요.

## 알람 출력 연결도



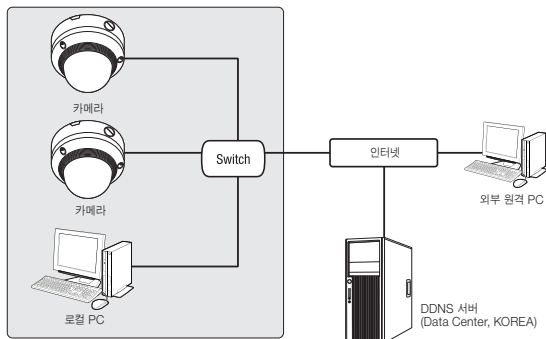
# 네트워크 연결 및 설정

사용자의 네트워크 연결 구성에 따라 카메라의 네트워크 환경을 설정할 수 있습니다.

## LAN 환경에서 직접 카메라 설치하기

### LAN 환경에 있는 로컬 PC에서 카메라 접속하기

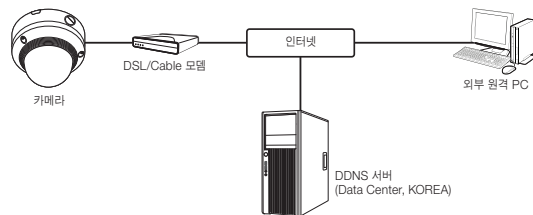
1. 로컬 PC의 인터넷 브라우저를 실행하세요.
2. 브라우저의 주소창에 접속하려는 카메라의 IP 주소를 입력하세요.



<로컬 네트워크>

- LAN 환경의 외부 인터넷에 있는 원격 PC에서 LAN 환경 안에 설치되어 있는 카메라에 접속할 경우 포트 포워딩이 되어 있지 않거나 방화벽이 설치되어 있으면 접속이 되지 않을 수 있습니다.  
이때는 네트워크 관리자에게 문의하세요.
- 디바이스 매니저에서 초기 비밀번호인 "4321"로 IP Address, Subnet Mask, Gateway, HTTP Port, VNP Port, IP type이 설정 가능합니다. 네트워크 인터페이스 변경 후 보안강화를 위하여 웹뷰어에 접속하여 비밀번호를 반드시 변경하세요.
- 제품 출하 시 IP 주소는 DHCP 서버로부터 자동으로 할당받도록 설정되어 있습니다.  
DHCP 서버가 없는 경우, IP 주소는 192.168.1.100으로 설정됩니다.  
IP 주소를 변경하려면, 디바이스 매니저를 이용하세요.  
디바이스 매니저 사용방법은 "디바이스 매니저 사용하기"를 참고하세요. (21쪽)

## DHCP 방식의 DSL/Cable 모뎀에 직접 카메라 설치하기

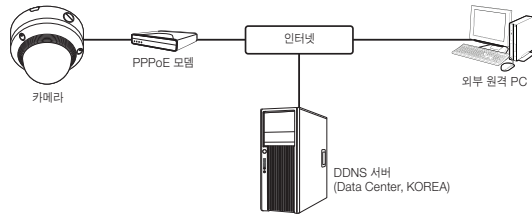


1. 사용자 컴퓨터와 네트워크 카메라를 직접 연결하세요.
2. 디바이스 매니저를 사용하여 해당 카메라의 IP 주소를 사용자 컴퓨터에서 인터넷 브라우저를 통하여 접속할 수 있는 IP 주소로 변경하세요.
3. 인터넷 브라우저를 이용하여 웹뷰어에 접속하세요.
4. **[설정]** 페이지로 이동하세요.
5. **[네트워크]** - **[DDNS]** 설정 페이지로 이동하여, DDNS를 설정하세요.
6. **[Basic]** - **[IP 및 포트]** 설정 페이지로 이동하여, IP 형식을 **[DHCP]**로 설정하세요.
7. 카메라를 사용자 컴퓨터에서 분리하여, 모뎀에 직접 연결하세요.
8. 카메라를 재부팅하세요.

- DDNS 설정 방법은 웹뷰어의 온라인 도움말을 참고하세요.
- IP 형식의 설정 방법은 웹뷰어의 온라인 도움말을 참고하세요.

# 네트워크 연결 및 설정

## PPPoE 모뎀에 직접 카메라 설치하기

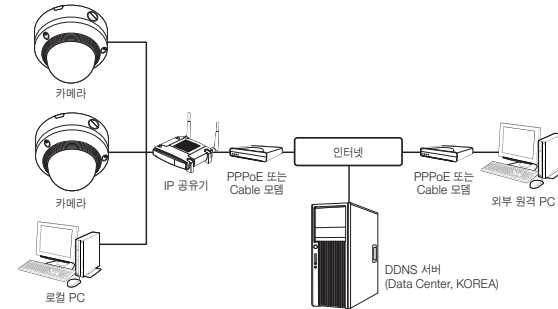


1. 사용자 컴퓨터와 네트워크 카메라를 직접 연결하세요.
2. 디바이스 매니저를 사용하여 해당 카메라의 IP 주소를 사용자 컴퓨터에서 인터넷 브라우저를 통하여 접속할 수 있는 IP 주소로 변경하세요.
3. 인터넷 브라우저를 이용하여 웹뷰어에 접속하세요.
4. **[설정]** 페이지로 이동하세요.
5. **[네트워크]** - **[DDNS]** 설정 페이지로 이동하여, DDNS를 설정하세요.
6. **[Basic]** - **[IP 및 포트]** 설정 페이지로 이동하여, IP 형식을 **[PPPoE]**로 설정한 후 네트워크 서비스의 ID와 암호를 입력하세요.
7. 카메라를 사용자 컴퓨터에서 분리하여, 모뎀에 직접 연결하세요.
8. 카메라를 재부팅하세요.

- DDNS 설정 방법은 웹뷰어의 온라인 도움말을 참고하세요.
- IP 형식의 설정 방법은 웹뷰어의 온라인 도움말을 참고하세요.

## PPPoE/Cable 모뎀을 연결한 IP 공유기에 카메라 설치하기

일반 가정집, 소규모 사무실, 상점 등 간단한 네트워크 환경에서 사용 가능한 구성입니다.



### IP 공유기에 연결된 로컬 PC의 네트워크 설정하기

IP 공유기에 설치된 로컬 PC의 네트워크 설정을 다음과 같이 맞춰 주세요.

- 로컬 PC의 <네트워크> → <속성> → <로컬 영역 연결> → <일반> → <속성> → <인터넷 프로토콜(TCP/IP) 선택> → <속성> → <자동으로 IP 주소 받기> 또는 <다음 IP 주소 사용>을 선택하세요.
- <다음 IP 주소 사용> 선택 시 다음과 같이 설정하세요.

예1) IP 공유기의 접속주소 (LAN IP)가 192.168.1.1 인 경우  
IP 주소 : 192.168.1.100  
서브넷 마스크 : 255.255.255.0  
기본 게이트웨이 : 192.168.1.1

예2) IP 공유기의 접속주소 (LAN IP)가 192.168.0.1 인 경우  
IP 주소 : 192.168.0.100  
서브넷 마스크 : 255.255.255.0  
기본 게이트웨이 : 192.168.0.1

예3) IP 공유기의 접속주소 (LAN IP)가 192.168.xxx.1 인 경우  
IP 주소 : 192.168.xxx.100  
서브넷 마스크 : 255.255.255.0  
기본 게이트웨이 : 192.168.xxx.1

- IP 공유기의 접속주소는 각 IP 공유기의 사용설명서를 참고하세요.
- IP 공유기의 포트 포워딩 설정 방법은 “**포트 포워딩 (포트 맵핑) 설정하기**”를 참고하세요. (23쪽)

## 디바이스 매니저 사용하기

- 디바이스 매니저 프로그램은 한화테크원 웹 사이트(<http://www.hanwha-security.com>)로 접속하여 <기술가이드> - <Online Tool>에서 다운로드 받을 수 있습니다.
- 디바이스 매니저의 자세한 사용 방법은 메인화면의 <도움말> 메뉴에서 확인할 수 있습니다.

## 자동으로 카메라 검색하기

디바이스 매니저가 설치된 PC와 동일한 네트워크에 카메라가 연결된 경우 검색 기능을 이용해 네트워크 카메라를 찾을 수 있습니다.

1. 디바이스 매니저의 메인화면에서 <검색>을 클릭하세요.
2. 검색목록에서 원하는 카메라가 검색되었는지 확인하세요.
  - 카메라에 부착된 스티커에서 MAC 주소를 확인하세요.

## IP주소 설정하기

카메라의 네트워크 설정을 변경하려면 <상태> 항목에 <Login OK>로 표시되어 있어야 합니다. 디바이스 매니저의 메인화면에서 <인증>을 클릭하면 로그인 할 수 있습니다.

### Static IP 설정하기

IP 주소 및 포트정보를 수동으로 입력하여 설정합니다.

1. 검색목록에서 IP 설정을 변경하려는 카메라를 클릭하세요.
2. 디바이스 매니저의 메인화면에서 <IP 할당>을 클릭하세요.
3. <해당 IP 주소 적용>을 선택하세요.
  - 카메라의 IP 정보가 기존에 설정되어 있는 값으로 표시됩니다.
4. IP 관련 항목 및 Port 관련 항목을 입력하세요.

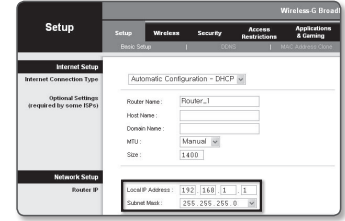
### IP 공유기를 사용하지 않는 경우

네트워크 관리자에게 <IP주소>, <서브넷 마스크>, <게이트웨이> 설정값을 문의하세요.

- HTTP Port : 인터넷 브라우저를 사용하여 카메라에 접속할 때 사용되는 HTTP 포트이며, 초기값은 80입니다.
- VNP Port : 영상전송을 제어하는 포트이며, 초기값은 4520입니다.
- RTSP Port : 실시간 스트리밍을 제어하는 포트이며, 초기값은 554입니다.

### IP 공유기를 사용하는 경우

- IP Address : IP 공유기가 제공하는 사설 IP 범위에 맞게 설정하세요.  
예) 192.168.1.2~254, 192.168.0.2~254, 192.168.XXX.2~254
- Subnet Mask : IP 공유기의 <Subnet Mask>가 카메라의 <서브넷 마스크> 값이 됩니다.
- Gateway : IP 공유기의 <Local IP Address>가 카메라의 <게이트웨이> 값이 됩니다.



- 연결된 IP 공유기 모델에 따라 설정 방법이 다를 수 있습니다. 해당 공유기의 사용설명서를 참고하세요.
- IP 공유기의 포트 포워딩 설정 방법은 “포트 포워딩 (포트 맵핑) 설정하기”를 참고하세요. (23쪽)

### IP 공유기에 카메라가 2대 이상 연결되어 있는 경우

카메라의 IP 관련 항목, Port 관련 항목을 각각 다르게 설정해 주세요.

예)

| 구분         |         | 1번 카메라        | 2번 카메라        |
|------------|---------|---------------|---------------|
| IP 관련 항목   | IP 주소   | 192.168.1.100 | 192.168.1.101 |
|            | 서브넷 마스크 | 255.255.255.0 | 255.255.255.0 |
|            | 게이트웨이   | 192.168.1.1   | 192.168.1.1   |
|            |         |               |               |
| Port 관련 항목 | HTTP 포트 | 8080          | 8081          |
|            | VNP 포트  | 4520          | 4521          |
|            | RTSP 포트 | 554           | 555           |

- <HTTP 포트>가 80 이외의 번호로 설정되어 있는 경우 인터넷 브라우저의 주소 입력란에 <Port> 번호도 함께 입력을 해야 카메라에 접속이 가능합니다.  
예) http://IP주소 : HTTP Port  
http://192.168.1.100:8080

5. [적용] 버튼을 클릭하세요.
6. 성공 확인 메시지가 표시되면 [확인] 버튼을 클릭하세요.

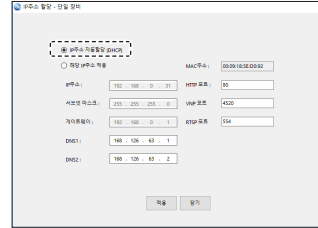
# 네트워크 연결 및 설정

## Dynamic IP 설정하기

IP 주소를 DHCP를 통해 자동으로 할당받습니다

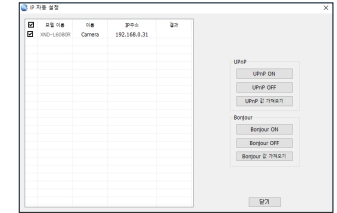
- Dynamic IP 사용 환경 예
  - IP 공유기에 카메라를 설치한 경우, DHCP를 이용하여 IP를 할당 받는 경우
  - DHCP 방식을 사용하는 모뎀에 카메라를 직접 설치한 경우
  - LAN 환경에서 내부 DHCP 서버로부터 IP를 할당 받는 경우

- 검색목록에서 IP 설정을 변경하려는 카메라를 클릭하세요.
- 디바이스 매니저의 메인화면에서 <IP 할당>을 클릭하세요.
- <IP주소 자동할당 (DHCP)>를 선택하세요.
- [적용] 버튼을 클릭하세요.
- 성공 확인 메시지가 표시되면 [확인] 버튼을 클릭하세요.



## 자동으로 IP 설정하기

- 검색목록에서 IP를 자동으로 설정하려는 카메라를 클릭하세요.
- 디바이스 매니저의 메인화면에서 <+>를 클릭하세요.
  - 장비 설정 메뉴가 나타납니다.
- 장비 설정 메뉴에서 <IP 자동 설정>을 클릭하세요.
- [닫기] 버튼을 클릭하세요.



## 수동으로 카메라 등록하기

검색 기능으로 카메라를 찾지 못하거나, 외부 네트워크에 카메라가 연결된 경우 IP 정보를 수동으로 입력하여 원격으로 카메라를 찾아 등록할 수 있습니다.

- 디바이스 매니저의 메인화면에서 <장비 추가> - <장비 수동 등록>을 클릭하세요.
- 검색할 IP 주소의 범위를 입력하세요.
- 등록할 카메라의 <모델 이름>을 선택하고 HTTP 포트, VNP 포트, 아이디, 비밀번호를 입력하세요.
- [등록] 버튼을 클릭하세요.
- 목록에서 원하는 카메라가 등록되었는지 확인하세요.
  - 카메라에 부착된 스티커에서 MAC 주소를 확인하세요.

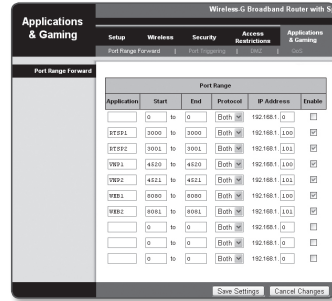


## 포트 포워딩 (포트 맵핑) 설정하기

IP 공유기에 카메라가 설치된 경우, IP 공유기 외부 원격 PC에서 IP 공유기 내부의 카메라에 접속하기 위해서는 IP 공유기에 포트 포워딩을 설정해 주어야 합니다.

### 수동으로 포트 포워딩 설정하기

1. IP 공유기에 연결되어 있는 각 카메라에 대해 <TCP>와 <UDP Port>를 선택하세요.  
IP 공유기에 설정할 각 포트 번호는 카메라 웹뷰어의 <설정> - <Basic> - <IP 및 포트>에서 지정한 포트 번호에 맞게 설정해야 합니다.
2. 설정이 완료되면 [Save Settings] 버튼을 클릭하세요.  
설정이 저장됩니다.
3. IP 공유기의 설정 메뉴에서 <Applications & Gaming> - <Port Range Forward>를 클릭하세요.  
타사 IP 공유기의 포트 포워딩 메뉴 위치 및 설정 방법은 각 IP 공유기의 사용설명서를 참고하세요.

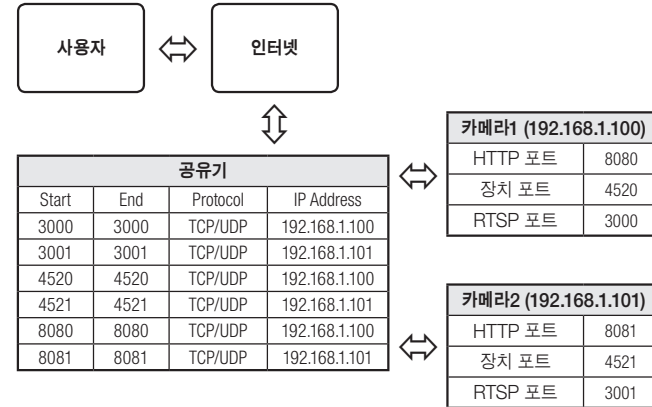


- 포트 포워딩 설정하기 설명은 CISCO IP 공유기로 설정한 예시입니다.
- 연결된 IP 공유기 모델에 따라 설정 방법이 다를 수 있습니다.  
해당 공유기의 사용설명서를 참고하세요.

## 여러대의 카메라를 포트 포워딩 설정하기

- 공유기의 포트 포워딩 설정은 공유기의 설정 페이지를 통해서 변경할 수 있습니다.
- 각 포트는 사용자가 카메라의 설정 페이지에서 변경할 수 있습니다.

예) 공유기에 카메라1과 카메라2가 연결되어 있는 경우 :



- UPnP(Universal Plug and Play) 기능을 지원하는 공유기를 사용하면 공유기 설정 없이 포트 포워딩을 할 수 있습니다.  
네트워크 카메라 접속 후 “설정 → 네트워크 → DDNS” 메뉴에서 <와이즈넷 DDNS>의 <클릭 커넥트>의 체크박스를 선택하세요.

# 네트워크 연결 및 설정

## 공유된 로컬 PC에서 카메라 접속하기

1. 디바이스 매니저를 실행하세요.  
연결된 카메라를 검색하여 리스트에 표시합니다.
2. 연결할 카메라를 더블 클릭하세요.  
인터넷 브라우저가 시작되면서 카메라에 접속합니다.



■ 사용자가 직접 인터넷 브라우저를 실행시켜, 주소 창에 검색된 카메라의 IP 주소를 입력하여 접속할 수도 있습니다.

## 외부의 원격 PC에서 인터넷으로 카메라에 접속하기

IP 공유기 외부의 원격 PC에서 사용자는 카메라의 DDNS URL을 이용하여 IP 공유기 내부의 카메라에 접속할 수 있습니다.

1. IP 공유기 내부에 설치되어 있는 카메라를 외부에서 접속하기 위해서는 반드시 IP 공유기에 포트 포워딩 설정을 하세요.
2. 외부 원격 PC에서 인터넷 브라우저를 실행하여 주소창에 카메라에 접속하기 위한 DDNS URL 주소, 또는 IP 공유기의 인터넷 IP 주소를 입력하세요.  
예) <http://ddns.hanwha-security.com/ID>



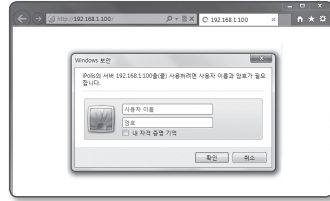
■ 와이즈넷 DDNS를 사용하려면 와이즈넷 DDNS 홈페이지(<http://ddns.hanwha-security.com>)에서 회원가입을 한 후, [My DDNS]>[제품등록]에서 제품을 먼저 등록해야 합니다.



## 카메라에 접속하기

### 일반적인 방법인 경우

1. 인터넷 브라우저를 실행하세요.
2. 주소 입력란에 카메라의 IP주소를 입력 하세요.  
예) • IP주소 (IPv4) : 192.168.1.100인 경우 → http://192.168.1.100  
- 로그인 창이 나타납니다.  
• IP주소 (IPv6) : 2001:230:abcd:ffff:0000:0000:ffff:1111인 경우  
→ http://[2001:230:abcd:ffff:0000:0000:ffff:1111]  
- 로그인 창이 나타납니다.



### HTTP Port가 80이 아닌 경우

1. 인터넷 브라우저를 실행하세요.
2. 주소 입력란에 카메라의 IP주소와 HTTP 포트번호를 입력하세요.  
예) IP 주소 : 192.168.1.100:HTTP 포트번호(8080)인 경우  
→ http://192.168.1.100:8080 - 로그인 창이 나타납니다.

### URL로 접속하기

1. 인터넷 브라우저를 실행하세요.
2. 주소 입력란에 카메라의 DDNS URL을 입력하세요.  
예) URL 주소 : http://ddns.hanwha-security.com/ID  
- 로그인 창이 나타납니다.

! Local 망으로만 구성된 환경에서는 접속할 수 없습니다.

### UPnP를 이용하여 접속하기

1. UPnP 프로토콜을 지원하는 클라이언트나 운영체제를 실행하세요.
2. 검색되는 카메라의 이름을 클릭하세요.  
Windows 운영체제 컴퓨터에서는 네트워크 메뉴에 검색되는 카메라 이름을 클릭하세요.  
- 로그인 창이 나타납니다.

## Bonjour를 이용하여 접속하기

1. Bonjour 프로토콜을 지원하는 클라이언트나 운영체제를 실행하세요.
2. 검색되는 카메라의 이름을 클릭하세요.  
Mac 운영체제 컴퓨터에서는 Safari의 Bonjour 탭에 검색되는 카메라의 이름을 클릭하세요.  
- 로그인 창이 나타납니다

### DDNS 주소를 확인하려면

카메라가 DHCP 방식의 케이블 모뎀이나 DSL 모뎀 혹은 PPPoE 모뎀에 직접 연결되어 있는 경우, ISP(사용자가 가입한 통신회사 서버)에 연결을 시도할 때마다 IP 주소가 변경됩니다.  
이 경우 사용자는 변경된 IP 주소를 알 수 없습니다.

유동 IP를 사용하는 제품을 DDNS 서버에 등록해 놓으면 제품에 접속하고자 할 때 변경된 IP 주소를 쉽게 알 수 있습니다.

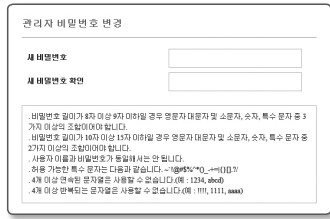
IP 주소를 <DDNS> 서버에 등록하기 위해서는 먼저 http://ddns.hanwha-security.com 페이지에서 제품을 등록한 후 카메라 웹뷰어의 <네트워크> - <DDNS> 항목을 <와이즈넷 DDNS>로 설정하고, <제품 ID>에 DDNS 서버에서 등록된 제품 아이디를 입력하세요.

## 비밀번호 설정하기

최초 제품 접속 시 반드시 로그인 비밀번호를 등록해야합니다.  
**“비밀번호 변경”** 창이 나타나면 새로운 암호를 입력하세요.



- 새로운 비밀번호는 8자 이상 9자리 이하는 영 대/소문자, 숫자, 특수 문자 중 3종류 이상을 사용해야 하며, 10자 이상 15자리 이하는 2종류 이상을 사용해야 합니다.
  - 사용 가능한 특수문자 : ~!@#\$%^&\*()\_+=[]{};?/
- 보안강화를 위하여 동일한 문자 반복 사용이나 연속된 키보드 배열을 비밀번호로 사용하지 않는 것을 권장합니다.
- 비밀번호 분실 시 카메라에 있는 **[RESET]** 버튼을 눌러 제품 초기화를 해야 하므로 반드시 메모 또는 기억하시길 바랍니다.



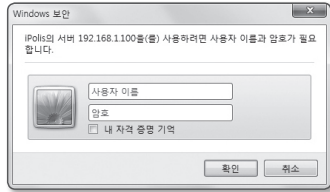
## 로그인하기

카메라에 접속할때마다 로그인 창이 뜹니다.  
 설정된 사용자 이름과 암호를 입력해야 카메라에 접속할 수 있습니다.

1. <사용자 이름> 입력란에 **“admin”**을 입력하세요.  
 관리자의 아이디 **“admin”**은 고정이며 변경할 수 없습니다.
2. <암호> 입력란에 설정한 암호를 입력하세요.
3. **[확인]** 버튼을 클릭하세요.  
 로그인이 완료되면 카메라 라이브 뷰어 화면이 나타납니다.



- 카메라 웹뷰어 접속시 영상정보가 암호화 되어있지 않으니 보안에 각별히 주의하시길 바랍니다.



- 사용자 이름과 암호를 입력한 후 **“내 자격 증명 기억”**에 체크표시를 할 경우 다음 접속 시 사용자 이름과 암호가 자동으로 설정됩니다.
- 화면비율이 100% 일 때 가장 좋은 화면을 볼 수 있습니다. 화면비율을 줄일 경우 화면이 잘려져서 보일 수 있습니다.

## 브라우저별 플러그인 지원 사양

웹뷰어는 기존의 플러그인 웹뷰어와 새로운 플러그인 프리 웹뷰어가 함께 내장되어 있습니다.  
 이로 인하여 Chrome, EDGE, FireFox(Windows 64bit only) 등 플러그인을 지원하지 않는 최신 브라우저 환경에서도 웹뷰어 사용이 가능합니다. 플러그인이 설치 가능한 IE, Safari 브라우저에서는 플러그인 설치를 권장합니다.  
 브라우저 환경에 따라 다음과 같이 차이가 발생합니다.

- **Chrome, FireFox(Windows 64bit only), EDGE, Safari 브라우저** : 플러그인을 사용 할 수 없는 브라우저 환경이지만 플러그인 프리 웹뷰어가 탑재되어 웹뷰어 사용이 가능합니다.
  - 플러그인 프리 웹뷰어는 영상 코덱 및 해상도에 따라 플러그인 웹뷰어보다 성능이 낮을 수 있습니다.
    - 라이브 영상에 지연이 있을시 플러그인 프리 프로파일(H.264의 HD(1280x720) 20FPS)을 자동 생성합니다.
    - Playback 재생의 경우 코덱 및 해상도에 따라 지연이 발생할 수 있습니다.
  - 플러그인 프리 기능은 Chrome 브라우저에 최적화 되어 있습니다.
- **IE, Safari 브라우저** : 기존의 플러그인 웹뷰어에서 플러그인 설치를 완료하지 않아도 제한된 기능으로 웹뷰어 사용이 가능합니다.
- 모니터링/저장 영상 재생의 기능을 원활히 사용 하려면 플러그인 설치가 필요합니다.



## 웹뷰어 플러그인 설치하기

IE 브라우저에서 플러그인 프리 웹뷰어에 접속하여 현재 재생되고 있는 동영상 이외의 다른 코덱으로 라이브 요청하거나 녹화 영상 재생 등 기능을 사용하려 할 때 설치 메시지가 나타납니다. 이때 웹뷰어 플러그인을 설치해야 정상적으로 해당 기능들의 사용이 가능합니다.

1. 초기 모니터링 페이지 접근시 설치 페이지로 이동하고 [Download plugin]를 클릭하면 설치가 시작됩니다.



- Internet Explorer 브라우저에서 플러그인 설치 파일의 다운로드 상태가 99%에서 장시간 멈춰있는 경우 “도구 → SmartScreen 필터”에서 “SmartScreen 필터 해제”를 선택한 후 재시도하세요.

2. 메시지 창에서 [실행(R)]을 클릭하세요.
3. 모든 브라우저 창이 닫힌다는 알림창이 나타나면 [예(Y)] 버튼을 클릭하세요.



- 설치된 웹뷰어 플러그인이 없으면 4, 5번의 설치과정은 생략됩니다.

4. 웹뷰어 플러그인의 이전 버전이 설치되어있는 경우 이전버전을 삭제한다는 알림창이 발생합니다. 알림창이 나타나면 [예(Y)] 버튼을 클릭하세요.
5. [확인] 버튼을 클릭하세요.  
이전 버전의 웹뷰어 플러그인이 삭제됩니다.
6. [Install] 버튼을 클릭하여 웹뷰어 플러그인을 설치하세요.
7. [Finish] 버튼을 클릭하세요.  
웹뷰어 플러그인 설치가 완료됩니다.

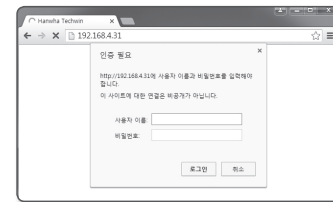


- Internet Explorer 브라우저에서 웹뷰어 플러그인 설치 후에도 설치 페이지로 이동하는 경우 “도구 → 추가 기능 관리”에서 “webviewer\_activeplugin.lib Control”의 상태가 “사용 함”으로 선택되어 있는지 확인하세요.  
“사용 함”으로 선택되어 있는데 문제가 해결되지 않을 경우 “도구 → 인터넷 옵션 → 보안 → 신뢰할 수 있는 사이트”에 카메라의 IP 혹은 도메인을 등록하여 주세요.

## 플러그인 프리(Plug-in Free) 웹뷰어 사용하기

Google Chrome이나 Mozilla Firefox, MS Edge 웹브라우저에서 카메라에 접속하면 별도 플러그인 설치가 불가능하지만, 플러그인 설치 없이 카메라 영상을 실시간으로 확인 및 제어할 수 있습니다.

1. 사용자 이름과 비밀번호 입력 후 로그인하세요.
2. 로그인이 완료되면 카메라 라이브 뷰어 화면이 나타납니다.



### 카메라를 설정하려면

1. [설정 (⚙)] 아이콘을 클릭하세요.
2. 설정 화면이 나타납니다.
3. 네트워크 상에서 카메라의 기본 정보, PTZ, 비디오&오디오, 네트워크, 이벤트, 분석, 시스템, 오픈 플랫폼 설정을 실행할 수 있습니다.
4. <도움말 (📖)> 을 클릭하면 각 기능에 대한 상세한 설명을 확인할 수 있습니다.

사양

| 항 목     |            | 내용                                                                                                     |                                                                           |                                                                                                                 |
|---------|------------|--------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
|         |            | XNV-6080RS                                                                                             | XNV-8080RS                                                                | XNV-6120RS                                                                                                      |
| 영상      | 촬상 소자      | 1/2.8" 2M CMOS                                                                                         | 1/1.8" 6M CMOS                                                            | 1/2.8" 2M CMOS                                                                                                  |
|         | 총 화소수      | 1945(H) x 1109(V) 2.16M                                                                                | 3096(H) x 2094(V)                                                         | 1945(H) x 1109(V) 2.16M                                                                                         |
|         | 유효 화소수     | 1945(H) x 1097(V) 2.13M                                                                                | 2616(H) x 1976(V)                                                         | 1945(H) x 1097(V) 2.13M                                                                                         |
|         | 주사 방식      | 프로그레시브 스캔                                                                                              |                                                                           |                                                                                                                 |
|         | 최저조도       | 컬러 : 0.015 lux(F1.4, 1/30sec)<br>흑백 : 0 lux (IR LED On)                                                | 컬러 : 0.07 lux(F1.3, 1/30sec)<br>흑백 : 0 lux(IR LED on)                     | 컬러 : 0.03 lux(F1.6, 1/30scc)<br>흑백 : 0 lux(IR LED on)                                                           |
|         | S / N 비    | 50dB                                                                                                   |                                                                           |                                                                                                                 |
|         | 영상 출력      | CVBS : 1.0 Vp-p / 75Ω composite, 720x480(N), 설치용<br>USB : Micro USB type B, 1280x720, for installation |                                                                           |                                                                                                                 |
|         |            |                                                                                                        |                                                                           |                                                                                                                 |
| 렌즈      | 초점거리       | 2.8~12mm(4.3x)<br>motorized varifocal                                                                  | 3.9~9.4mm(2.4x)<br>motorized varifocal                                    | 5.2~62.4mm(Optical<br>12X)                                                                                      |
|         | 최대 구경비     | 1.4(Wide) ~ 3.6(Tele)                                                                                  | F1.3                                                                      | 1.6(Wide) ~ 3.0(Tele)                                                                                           |
|         | 화각         | H : 119.5°, V: 62.8°,<br>D : 142.1°<br>H : 27.9°, V: 15.7°, D:<br>32.0°                                | H : 92.1°, V : 67.2°,<br>D : 119.9°<br>H : 38.7°, V : 29.0°,<br>D : 48.6° | H : 54.58°(Wide) ~<br>5.30°(Tele) /<br>V : 32.19°(Wide) ~<br>3.00°(Tele) /<br>D : 61.40°(Wide) ~<br>6.06°(Tele) |
|         | 최소 지근 거리   | 0.5m (1.64ft)                                                                                          |                                                                           | 2.1m (6.89ft)                                                                                                   |
|         | 포커스 제어     | Simple Focus (Motorized V/F) / Manual, 네트워크를<br>통한 원격제어 (Manual, Simple Focus)                         |                                                                           | Auto / Manual /<br>Oneshot AF                                                                                   |
|         | 렌즈 타입      | DC Auto Iris, P-iris                                                                                   |                                                                           | DC Auto Iris                                                                                                    |
|         | 마운트 타입     | Board-in type                                                                                          |                                                                           |                                                                                                                 |
|         |            |                                                                                                        |                                                                           |                                                                                                                 |
| 팬/틸트/회전 | 팬/틸트/회전 범위 | 0° ~ 354° / 0° ~ 67° / 0° ~ 355°                                                                       |                                                                           | 0° ~ 354° / 0° ~ 75° /<br>0° ~ 355°                                                                             |

| 항 목    |                    | 내용                                                                              |                                       |                                    |
|--------|--------------------|---------------------------------------------------------------------------------|---------------------------------------|------------------------------------|
|        |                    | XNV-6080RS                                                                      | XNV-8080RS                            | XNV-6120RS                         |
| 카메라 기능 | 야간 가시 거리           | 50m(164.04ft)                                                                   |                                       | 70m(229.66ft)                      |
|        | 카메라 타이틀            | Off / On (영/숫자/기호 최대 85자)<br>- 최대 5행, 색상 (회색/녹색/빨강/파랑/검정/흰색), 투명도, 해상도별 자동크기조정  |                                       |                                    |
| 카메라 기능 | Day & Night        | Auto (ICR) / Color / B/W / External / Schedule                                  |                                       |                                    |
|        | 역광보정               | Off / BLC / HLC(Masking/Dimming) / WDR                                          |                                       |                                    |
|        | Wide Dynamic Range | 150dB                                                                           | 120dB                                 | 150dB                              |
|        | 콘트라스트 개선           | SSDR (Off / On)                                                                 |                                       |                                    |
|        | 노이즈 제거             | SSNR5 (2D+3D Noise Filter) (Off / On)                                           |                                       |                                    |
|        | 영상 흔들림 보정          | Off / On                                                                        |                                       | Off / On (Built-in gyro<br>sensor) |
|        | 안개 제거              | Auto / Manual / Off                                                             |                                       |                                    |
|        | 동작탐지               | Off/ On(8ea, 8point Polygonal zones), Hand over                                 |                                       |                                    |
|        | 프라이버시 기능           | Off / On (32ea, polygonal zones)<br>- 색상 : 회색, 초록색, 빨간색, 파란색, 검정색, 흰색<br>- 모자이크 |                                       |                                    |
|        | Gain Control       | Off / Low / Middle /<br>High                                                    | Off / Low / Middle /<br>High / Manual | Off / Low / Middle / High          |
|        | 화이트밸런스             | ATW / AWC / Manual / Indoor / Outdoor (Mercury & Sodium 포함)                     |                                       |                                    |
|        | 콘트라스트              | level adjustment                                                                |                                       |                                    |
|        | LDC                | On/Off (5 levels with Min/Max)                                                  |                                       |                                    |
|        | 전자셔터               | Minimum / Maximum / Anti flicker (2 ~ 1/12,000sec)                              |                                       |                                    |
|        | Digital PTZ        | 24X, Digital PTZ(Preset, Group)                                                 |                                       | 24X                                |
|        | 프리셋                | -                                                                               |                                       | 300개                               |

| 항 목    |               | 내용                                                                                                                                                                                                                                                                                                                    |                                                                     |                                                                     |
|--------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|---------------------------------------------------------------------|
|        |               | XNV-6080RS                                                                                                                                                                                                                                                                                                            | XNV-8080RS                                                          | XNV-6120RS                                                          |
| 카메라 기능 | Flip / Mirror | 상하반전 : On/Off<br>좌우반전 : On/Off<br>복도뷰 : 90° /270°                                                                                                                                                                                                                                                                     |                                                                     |                                                                     |
|        | 비디오 & 오디오 분석  | Tampering, Loitering, Directional Detection, Defocus Detection, Fog Detection, Virtual Line, Enter/Exit, Appear / Disappear, Audio Detection, Face Detection, Motion Detection, Digital Auto Tracking, Sound Classification                                                                                           |                                                                     |                                                                     |
|        | 알람 입출력        | 입력 1개 / 출력 1개                                                                                                                                                                                                                                                                                                         |                                                                     |                                                                     |
|        | 알람 트리거        | 알람 입력, 동작 탐지, 비디오 & 오디오 분석, 네트워크 단절                                                                                                                                                                                                                                                                                   |                                                                     |                                                                     |
|        | 이벤트 대응 동작     | <ul style="list-style-type: none"> <li>FTP와 E-Mail을 통해서 파일 전송 및 업로드</li> <li>E-Mail을 통한 알림</li> <li>알람트리거 발생시 SD/SDHC/SDXC 메모리 또는 NAS에 녹화</li> <li>외부 알람 출력</li> <li>DPTZ 프리셋</li> </ul>                                                                                                                              |                                                                     |                                                                     |
|        | 픽셀 카운터        | 지원                                                                                                                                                                                                                                                                                                                    |                                                                     |                                                                     |
| 네트워크   | 이더넷           | RJ-45 (10/100BASE-T)                                                                                                                                                                                                                                                                                                  |                                                                     |                                                                     |
|        | 비디오 압축 방식     | H.265/H.264 (MPEG-4 Part 10/AVC) : Main/Baseline/High<br>Motion JPEG                                                                                                                                                                                                                                                  |                                                                     |                                                                     |
|        | 해상도           | XNV-6080RS/XNV-6120RS : 1920x1080, 1280x1024, 1280x960,<br>1280x720, 1024x768, 800x600, 800x448, 720x576, 720x480, 640x480, 640x360, 320x240<br>XNV-8080RS : 2560x1920, 2560x1440, 1920x1080, 1600x1200,<br>1280x1024, 1280x960, 1280x720, 1024x768, 800x600, 800x448,<br>720x576, 720x480, 640x480, 640x360, 320x240 |                                                                     |                                                                     |
|        | 최대 프레임레이트     | H.265/H.264 : 최대 60fps at all resolutions<br>Motion JPEG : 최대 30fps                                                                                                                                                                                                                                                   | H.265/H.264 : 최대 30fps at all resolutions<br>Motion JPEG : 최대 30fps | H.265/H.264 : 최대 60fps at all resolutions<br>Motion JPEG : 최대 30fps |
|        | 스마트압축         | 수동 모드 (영역 : 5개)                                                                                                                                                                                                                                                                                                       |                                                                     |                                                                     |
|        |               |                                                                                                                                                                                                                                                                                                                       |                                                                     |                                                                     |

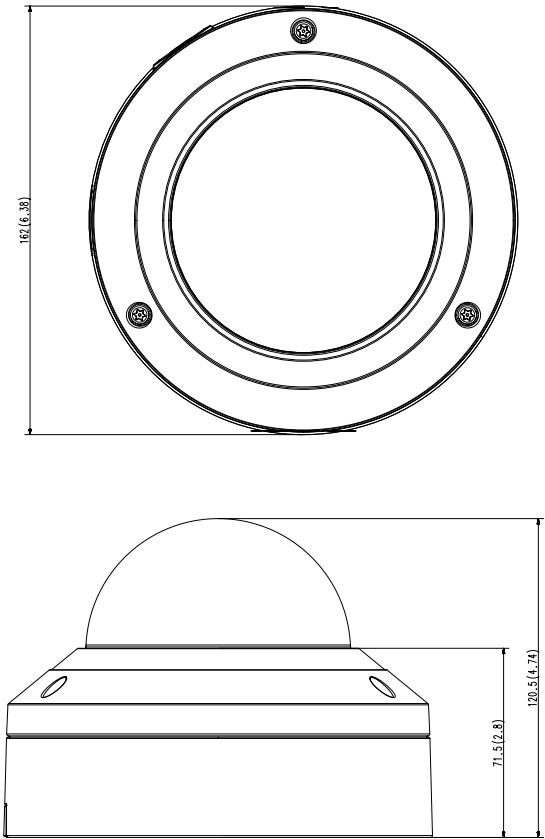
| 항 목  |               | 내용                                                                                                                                                                               |            |            |
|------|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------------|
|      |               | XNV-6080RS                                                                                                                                                                       | XNV-8080RS | XNV-6120RS |
| 네트워크 | WiseStream II | 지원                                                                                                                                                                               |            |            |
|      | 화질 제어         | H.264/H.265 : 비트레이트 레벨 제어<br>MJPEG : 비트레이트 레벨 제어                                                                                                                                 |            |            |
|      | 비트레이트 제어      | H.264/H.265 : CBR 또는 VBR<br>MJPEG : VBR                                                                                                                                          |            |            |
|      | 동시 전송 능력      | 멀티 스트리밍 (10개 프로파일)                                                                                                                                                               |            |            |
|      | 오디오 입력        | 선택가능 (마이크/라인 입력)<br>지원 전압 : 2.5VDC(4mA), 입력 임피던스 : 약 2K Ohm                                                                                                                      |            |            |
|      | 오디오 출력        | 라인 출력, 최대 출력 레벨 : 1Vrms                                                                                                                                                          |            |            |
|      | 오디오 압축 방식     | G.711 u-law /G.726 Selectable<br>G.726 (ADPCM) 8KHz, G.711 8KHz<br>G.726 : 16Kbps, 24Kbps, 32Kbps, 40Kbps<br>AAC-LC : 48Kbps at 8/16/32/48KHz                                    |            |            |
|      | 오디오 통신        | 양방향                                                                                                                                                                              |            |            |
|      | IP            | IPv4, IPv6                                                                                                                                                                       |            |            |
|      | 프로토콜          | TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, PPPoE, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3 (MIB-2), ARP, DNS, DDNS, QoS, PIM-SM, UPnP, Bonjour |            |            |
|      | 보안            | HTTPS(SSL) 인증 방식<br>다이제스트 인증 방식<br>IP 주소 필터링<br>사용자 접속 로그 기록<br>802.1X 인증 방식 (EAP-TLS, EAP-LEAP)                                                                                 |            |            |
|      | 전송 방식         | 유니캐스트 / 멀티캐스트                                                                                                                                                                    |            |            |
|      | 최대 동시접속자      | 20명 (유니캐스트 모드)                                                                                                                                                                   |            |            |

| 항 목   |              | 내용                                                                                                                                                                                                                                                                     |            |                                                                     |
|-------|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|---------------------------------------------------------------------|
|       |              | XNV-6080RS                                                                                                                                                                                                                                                             | XNV-8080RS | XNV-6120RS                                                          |
| 네트워크  | 메모리슬롯        | SD/SDHC/SDXC 2slot (최대 512 GB)<br>- Continuous recording(1'st slot to 2'nd slot)<br>- 저장된 영상/이미지 다운로드 가능<br>NAS(Network Attached Storage)<br>Local PC에 수동 영상 저장 지원                                                                                                     |            |                                                                     |
|       | S/W 응용 인터페이스 | ONVIF Profile S/G<br>SUNAPI(HTTP API)<br>Open Platform                                                                                                                                                                                                                 |            |                                                                     |
|       | 웹페이지 언어      | 한국어                                                                                                                                                                                                                                                                    |            |                                                                     |
|       | 웹뷰어          | 지원 OS : Windows 7 / 8.1 / 10, MAC OS X 10.10, 10.11, 10.12<br><b>플러그인 프리 웹뷰어</b><br>지원 브라우저 : Google Chrome, MS Edge, Mozilla Firefox (Window 64bit only), Apple Safari 10 (Mac OS X only)<br><b>플러그인 웹뷰어</b><br>지원 브라우저 : MS Explore 11, Apple Safari (Mac OS X only) |            |                                                                     |
|       | 통합 관리 소프트웨어  | SmartViewer, SSM                                                                                                                                                                                                                                                       |            |                                                                     |
| 동작 환경 | 동작 온/습도      | -40°C ~ +55°C / 90% RH 이하                                                                                                                                                                                                                                              |            | -40°C ~ +55°C / 90% RH 이하<br>* 전원 OFF → ON<br>시킬때는 반드시 -35°C 이상이어야함 |
|       | 보관 온/습도      | -50°C ~ +60°C / 90% RH 이하                                                                                                                                                                                                                                              |            |                                                                     |
|       | 방진/방수 대응     | IP66, NEMA 4X                                                                                                                                                                                                                                                          |            |                                                                     |
|       | 내충격 대응       | IK10+(50J)                                                                                                                                                                                                                                                             |            |                                                                     |

| 항 목 |             | 내용                                             |            |                                  |
|-----|-------------|------------------------------------------------|------------|----------------------------------|
|     |             | XNV-6080RS                                     | XNV-8080RS | XNV-6120RS                       |
| 전원  | 사용전원/소비전류   | 24VAC ± 10%, 12VDC ± 10%, PoE (IEEE802.3af)    |            |                                  |
|     | 소비 전력       | 최대 11.5W(12VDC), 최대 12.95W(PoE), 최대 14W(24VAC) |            |                                  |
| 외관  | 색상/재질       | 은색 / SUS316L                                   |            |                                  |
|     | 외형 치수 (ØxH) | Ø 162 X H120.5mm (Ø6.38" x 4.74")              |            | Ø 162 X H134.5mm (Ø6.38" x 5.3") |
|     | 무게          | 2.8kg                                          |            | 2.7kg                            |

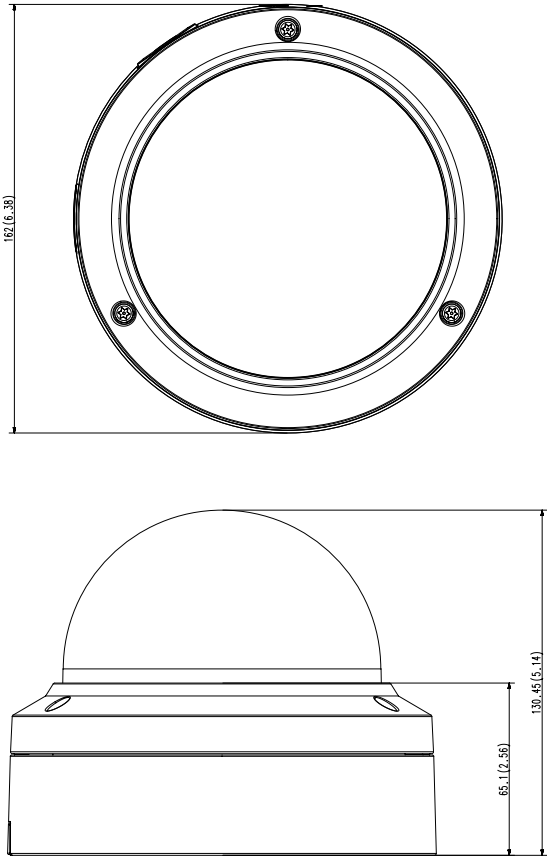
XNV-6080RS/XNV-8080RS

단위: mm (인치)



XNV-6120RS

단위: mm (인치)



### 문제 해결하기

| 문제                                                                  | 해결                                                                                                                                                                                                                                                |
|---------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Windows 10 사용자가 Chrome, Firefox에서 웹뷰어 접속 시 마이크의 볼륨 크기가 주기적으로 변동됩니다. | <ul style="list-style-type: none"> <li>마이크 드라이버가 Realtek 드라이버로 설정된 경우에 나타나는 현상입니다. 마이크 드라이버를 High Definition Audio 장치(Windows Default 드라이버) 또는 타사의 드라이버로 변경 설치하세요.</li> </ul>                                                                     |
| Safari에서 https로 플러그인 프리 웹뷰어 접속 시 영상이 나오지 않아요.                       | <ul style="list-style-type: none"> <li>https 처음 접속 시 발생하는 웹사이트 신원 팝업에서 "인증서 보기" 클릭 후 "웹뷰어 설정 IP에 연결할 때 항상 신뢰" 항목의 체크박스를 선택하세요.</li> <li>만일 아래 메시지에서 "계속" 선택 후 로그인하여 영상이 나오지 않는 경우, command+Q 를 눌러 Safari 브라우저 종료 후 재접속하여 위의 절차를 따르세요.</li> </ul>  |
| 브라우저로 카메라에 접속되지 않아요.                                                | <ul style="list-style-type: none"> <li>카메라의 네트워크 설정값들이 올바르게 되어 있는지 확인하세요.</li> <li>네트워크 케이블은 연결이 올바르게 되어 있는지 확인하세요.</li> <li>DHCP로 연결하는 경우 카메라가 정상적으로 유동 IP를 획득했는지 확인하세요.</li> <li>카메라가 공유기에 설치되어 있는 경우, 포트 포워딩 설정이 올바르게 되어 있는지 확인하세요.</li> </ul> |
| 영상을 모니터링 하고 있던 웹뷰어의 접속이 끊어졌어요.                                      | <ul style="list-style-type: none"> <li>다른 접속자가 카메라 설정값을 변경하거나, 네트워크 설정을 바꾸거나 하게 되면 접속되어 있던 웹뷰어는 접속이 끊어집니다.</li> <li>네트워크 연결이 잘 되어있는지 확인하세요.</li> <li>카메라가 PPPoE 네트워크에 연결된 경우, 네트워크 상황이 나빠지면 웹뷰어의 접속이 끊어질 수 있습니다.</li> </ul>                       |
| 디바이스 매니저 프로그램에서 네트워크에 연결된 카메라가 검색되지 않아요.                            | <ul style="list-style-type: none"> <li>PC의 방화벽 설정을 해제하신 후 다시 검색하시기 바랍니다.</li> </ul>                                                                                                                                                               |
| 영상이 겹쳐져 보여요.                                                        | <ul style="list-style-type: none"> <li>두 대 이상의 카메라가 동일한 멀티캐스트 주소를 사용하지 않고 서로 다른 주소로 설정되어 있는지 확인하시기 바랍니다. 동일한 주소를 사용하면 영상이 겹쳐져 보일 수 있습니다.</li> </ul>                                                                                               |
| 영상이 보이지 않아요.                                                        | <ul style="list-style-type: none"> <li>영상 전송방식이 멀티캐스트로 설정되어 있는 경우, 카메라가 접속한 로컬망에 멀티캐스트를 지원하는 라우터가 존재하는지 확인하세요.</li> </ul>                                                                                                                         |

| 문제                                                                      | 해결                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 오디오 입력 설정이 되어 있는데 음성 녹음이 되지 않아요.                                        | <ul style="list-style-type: none"> <li>&lt;Basic&gt;-&lt;비디오 프로파일&gt;에서 &lt;오디오 입력&gt; 체크박스를 선택하세요.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                     |
| <분석>에서 <움직임 감지>를 <사용>으로 설정한 후, 카메라에서 영상 분석 이벤트가 발생해도 이메일로 파일이 전달되지 않아요. | <ul style="list-style-type: none"> <li>다음과 같은 순서로 설정값을 확인하세요.<br/>가. &lt;날짜 및 시간&gt; 설정을 확인하세요.<br/>나. &lt;움직임 감지&gt;를 &lt;사용&gt;으로 설정해야 합니다.<br/>다. &lt;이벤트 설정&gt;에서 &lt;이메일&gt;을 사용한다고 체크해야 합니다.</li> </ul>                                                                                                                                                                                                                                                                      |
| 영상 분석 이벤트가 발생했는데 알람 출력으로 출력이 발생하지 않아요.                                  | <ul style="list-style-type: none"> <li>알람 출력 포트를 올바르게 설정했는지 확인하세요.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                      |
| Micro SD 메모리카드에 녹화가 되지 않아요.                                             | <ul style="list-style-type: none"> <li>메모리 카드가 불량인지 확인하세요.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                              |
| Micro SD 메모리카드를 삽입하였으나 메모리 카드를 인식하지 못해요.                                | <ul style="list-style-type: none"> <li>메모리 카드가 올바른 방향으로 정확히 삽입되어 있는지 확인하세요. 다른 기기에서 포맷한 메모리 카드는 본 카메라에서의 사용을 보증할 수 없습니다.</li> <li>&lt;설정&gt; → &lt;이벤트&gt; → &lt;저장&gt;에서 메모리카드를 다시 포맷하세요.</li> </ul>                                                                                                                                                                                                                                                                              |
| NAS에 녹화되지 않아요.                                                          | <ul style="list-style-type: none"> <li>NAS에 등록된 정보가 올바르게 확인하세요.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                         |
| NAS 설정이 실패라고 뜹니다.                                                       | <ul style="list-style-type: none"> <li>NAS IP주소가 유효한지 확인하세요.</li> <li>NAS의 ID/비밀번호가 유효한지 확인하세요.</li> <li>NAS의 ID에서 기본 폴더로 설정한 폴더에 접속할 수 있는지 확인하세요.</li> <li>NAS에서 SMB/CIFS항목의 체크가 해제되었는지 확인하세요.</li> <li>NAS IP 주소와 카메라 IP주소의 형식이 동일한지 확인하세요.<br/>예) NAS 및 카메라 서브넷마스크 초기값은 255.255.255.0 입니다.<br/>IP 주소가 192.168.20.32라면 NAS IP 주소는 192.168.20.1~192.168.20.255사이여야 합니다.</li> <li>이미 저장 중이거나 사용했던 기본 폴더를 포맷하지 않고 다른 사용자로 접속하려고 하는지 확인하세요.</li> <li>권장하는 NAS 장비인지 확인하세요.</li> </ul> |



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|--------------------|---------|-----------------------------------------------------------------------------------------------------|
| Base Kernel        | GPL 2.0 |                                                                                                     |
| Busybox            | GPL 2.0 | <a href="http://www.busybox.net/downloads/snapshots">http://www.busybox.net/downloads/snapshots</a> |
| iproute2-4.3.0     | GPL 2.0 |                                                                                                     |
| iptables-1.4.21    | GPL 2.0 | <a href="http://ftp.netfilter.org/pub/iptables">http://ftp.netfilter.org/pub/iptables</a>           |
| ethtool-4.2        | GPL 2.0 |                                                                                                     |
| mtdd-1.5.2         | GPL 2.0 | <a href="ftp://ftp.infradead.org/pub/mtdd-utils">ftp://ftp.infradead.org/pub/mtdd-utils</a>         |
| mi-diag-2.11       | GPL 2.0 |                                                                                                     |
| rp-pppoe-3.11      | GPL 2.0 | <a href="http://www.roaringpenguin.com/pppoe/">http://www.roaringpenguin.com/pppoe/</a>             |
| wpa_supplicant-2.5 | GPL 2.0 |                                                                                                     |
| bash-4.3.30        | GPL 3.0 |                                                                                                     |
| zeroconf           | GPL 2.0 |                                                                                                     |

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| Component Name | License  | URL                                                                   |
|----------------|----------|-----------------------------------------------------------------------|
| glibc          | LGPL 2.0 |                                                                       |
| inetutils      | LGPL 3.0 |                                                                       |
| neon-0.29.6    | LGPL 2.0 | <a href="http://www.webdav.org/neon/">http://www.webdav.org/neon/</a> |

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revised on June 17, 2004  
revised on December 21, 2006  
revised on March 24, 2009

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| Component Name | License  | URL                              |
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| php-5.2.17     | PHP 3.01 | http://www.php.net/distributions |

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| Component Name | License       | URL              |
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| zlib-1.2.8     | zlib / libpng | http://zlib.net/ |

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Jean-loup Gailly Mark Adler

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The data format used by the zlib library is described by RFCs (Request for Comments) 1950 to 1952 in the files http://www.ietf.org/rfc/rfc1950.txt (zlib format), rfc1951.txt (deflate format) and rfc1952.txt (gzip format).

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서비스 요청하시기 전에 꼭 알아 두세요

다음과 같은 사항에 대하여 서비스 요청시 유상서비스로 처리될 수 있습니다.

[1] 고객 주의사항

- 보안 시스템 및 제품의 이상 유무를 정기적으로(매일) 점검하여 사용하시기 바랍니다.
- 본 제품은 감시 보조장비로 도난(재산피해), 화재, 천재지변 등으로 인해 발생한 물적/인적 피해에 대해서는 제조사에서 책임지지 않습니다.
- A/S는 당사 해당 제품(단품)에 대해서만 가능합니다. 설치문제로 인한 불량은 설치 전문 업체 및 유지 보수업체를 통해 처리하여야 합니다.
- 제품 사용 설명서에 포함되지 않는 기능이나, 타사 소품물 등에서 잘못된 기능은 당사에서 책임을 질 수 없습니다.
- 제품에 저장된 중요한 데이터는 서비스를 받는 동안 손실 될 수 있습니다. 따라서, 서비스 요청 전 반드시 백업해 두시기 바랍니다. 수리과정에서 손실 될 경우 당사에서 책임지지 않습니다.

[2] 제품 사용설명서로 서비스 요청한 경우

- 사용환경에 따른 신호 점검, 전원 점검, 네트워크 환경 문제 등의 서비스 요청시
- 제품과 관련된 타기기의 설치, 설명 요청시

[3] 단순 분해조립, 간단조정, S/W 업그레이드 등으로 서비스 요청한 경우

- 제품 안에 이물이 투입되어 문제가 발생하는 경우
- 제품 간단조정이나 분해하지 않고 처리하는 경우
- 제품고장 요인이 아닌 S/W 업그레이드 요청시

[4] 그 밖의 경우

- 제품에서 사용되는 소모품(기록매체 등)의 관리 소홀로 인한 고장이나 사용설명 서비스 요청시 (소모품 문제에 대한 사용설명 및 서비스 요청은 해당업체에 문의하여 주십시오)
- 품질이 좋지 않은 기록매체 사용에 따른 고장이나 사용설명 서비스 요청시
- 제품이 비정상적인 환경에서 사용하거나 설치되어 문제가 발생한 경우

※ 상기와 같은 유형의 서비스를 받으실 경우에는 소정의 수수료가 부과될 수 있으므로, 서비스 신청전 전문상담원 ☎1588-5772)를 통하여 보다 양질의 서비스를 받으시길 권장 드립니다.

## 품 질 보증서

|         |                                  |                          |
|---------|----------------------------------|--------------------------|
| 제 품 명   | 네트워크 카메라                         | 보 증 기 간                  |
| 모 델 명   | XNV-6080RS/XNV-8080RS/XNV-6120RS | 구 입 후<br>3 년<br>(소모품 제외) |
| 구 입 일 자 | 년 월 일                            |                          |
| 보 증 기 간 | 년 월 일 까지                         |                          |

|           |     |  |
|-----------|-----|--|
| 고객주소      | 성 명 |  |
|           | 연락처 |  |
| 판매점주소(상호) | 성 명 |  |
|           | 연락처 |  |

※ 제품 판매시 공란의 내용을 필히 기입하여 주십시오.

### ◀ 서비스를 받으실 때 ▶

사용설명서를 한번 더 읽어주십시오.  
고장이라 생각되면 서비스를 요청하기 전에 반드시 사용설명서를 한번 더 읽어 주십시오.  
사용미숙 등으로 인한 고장현상이 있으므로 사용설명서의 취급법과 주의사항 등을 보시면 고객여러분의 손으로도 간단히 해결되는 경우가 있습니다.

서비스를 요청하시는 방법은?  
요청하실 때는 고장상태를 정확히 알려 주십시오.  
이때 보증서를 함께 제시하시면 보증서에 기재된 내용에 따라 유상, 무상수리의 구분이 됩니다.

### 한화테크윈(주)

경기도 성남시 분당구 판교로 319번길 6 (삼평동 701)  
영 업 TEL 070-7147-8771~9 A/S 및 기술 문의 1588-5772  
부산영업소 TEL 051-796-3216  
대구영업소 TEL 053-742-3098  
광주영업소 TEL 062-941-9559  
대전영업소 TEL 042-489-9840

아래 사항에 따른 고장은 유상 처리됩니다.  
1) 사용자 취급 부주의에 의한 고장  
2) 정격전원외의 전원 연결시  
3) 사용자 임의로 분해, 수리한 경우  
4) 자연재해에 의한 고장 (화재, 홍수, 해일 등)  
5) 소모품 교체시

한화테크윈(주)

## CCTV 설치 유의사항

공개된 장소에 CCTV 설치 운영시 이것만은 꼭 알아 두세요

[1] 범죄예방, 시설안전, 화재예방 목적으로만 설치 가능

- 목욕실, 화장실, 발한실(發汗室), 탈의실 등 사생활 침해 장소에는 설치 금지

[2] CCTV 안내판을 알아보기 쉬운 장소에 부착

- 설치목적, 촬영장소 · 범위 관리책임자 연락처 안내

[3] 녹음 금지 및 임의조작 금지

- 당초 설치 목적을 벗어나 함부로 조작하거나 다른 곳을 비추는 행위 금지

[4] CCTV 영상정보의 무단 유출 · 공개금지

- 개인영상정보를 제공하는 경우 본인 확인 후 필요 최소한으로 제공, 타인영상은 모자이크 처리

[5] CCTV 운영관리 방침수립 · 공개

- 개인 영상정보관리책임자 지정, CCTV 운영관리 방침을 홈페이지 등에 공개

[6] CCTV 영상정보의 안전성 확보조치

- 관리자 외 접근 통제, 관리자별 개별 ID 발급, 잠금장치 마련 등

※ 법 위반 내용과 정도에 따라 과태료 또는 벌금 등이 부과될 수 있습니다.



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