Network Camera

Network Camera

NK2100 Series
NK5100 Series
NK2200 Series

설치 / 사용설명서

(KR REV 1.0.4)

Network Camera

설치 및 사용 설명서

Network Camera을 구입해 주셔서 감사합니다.
본 설명서는 Network Camera에 대한 사용법을 설명합니다.
본 설명서를 숙지 후 제품을 올바르게 사용하여 주시기 바랍니다.
본 설명서와 여기에서 설명하고 있는 소프트웨어, 하드웨어는 저작권법에 의해 보호를 받습니다. 그러므로 저작권법 내에서 일반적인 사용을 위해 복사하는 행위 외에, 본사의 허가를 받지 않고 본 사용자 설명서 내용의 일부 또는 전체를 복사, 재인쇄할 수 없으며 다른 언어로 번역할 수 없습니다.

제품의 보증 및 책임 제한

본 제품 판매와 관련하여 제조사는 다른 어떤 책임도 지지 않으며 제조사를 대신하여 책임을 지도록 제 3 자에게 권한을 위임하지도 않습니다. 사고, 태만, 변경, 남용 또는 오용에 의한 경우에는 제품 보증이 적용되지 않으며, 본 제품의 제조사가 공급하지 않은 부속이나 부품에 대해서는 어떠한 보증도 하지 않습니다.

다음의 경우에는 보증에서 제외되고 본사는 책임을 지지 않습니다.

- ✓ 사용자의 취급 부주의에 의한 고장인 경우
- ✓ 사용자가 임의로 분해, 교체한 경우
- ✓ 정격 전원이외의 전원을 연결한 경우
- ✓ 자연재해에 의한 고장인 경우(화재, 홍수, 해일 등)

본 제품은 화재나 도난 등의 완벽한 예방수단이 되지 못하며, 이로 인해 발생하는 사고나 손해에 대하여 본사는 책임을 지지 않습니다.

개요

경고 및 주의

경 고



설치 장소가 불충분한 곳에 설치하지 마십시오.
젖은 손으로 전원 플러그를 잡지 마십시오.
전력선과 근접하게 설치하지 마십시오.
떨어뜨리거나 강한 충격, 진동을 피해 주십시오.



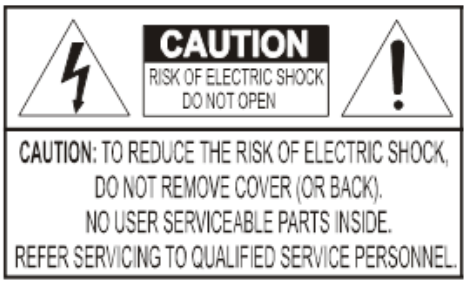
시공은 화재 및 감전의 위험이 있으므로 전문 대리점에 문의하여 주십시오.
조명의 떨림이 많은 곳에 설치하지 마십시오.
제품에 연기나 비정상적인 발열 시 사용을 중지하여 주십시오.
분해하거나 이물질을 넣지 마십시오.

A급 기기 (업무용 방송통신기자재)

이 기기는 업무용(A급) 전자파적합기기로서 판매자 또는 사용자는 이점을 주의하시기 바라며, 가정외의 지역에서 사용하는 것을 목적으로 합니다.

주 의

- 고온, 고습의 환경에서 장시간 연속적으로 사용을 피해 주십시오. 부품의 열화에 의해 수명이 단축될 수 있습니다.
- 설치 장소의 방열 및 난방의 열의 제품에 직접 닿지 않도록 주의해 주십시오.
- 커버에 강한 충격을 가할 경우, 카메라 파손 또는 우천시 침수의 원인이 될 수 있습니다.
- 강한 빛이 카메라를 향하지 않게 하여 주십시오. 화면에 스팟광처럼 강한 빛이 입사되면, 블루밍, 스미어가 발생할 수 있고, 센서의 색필터가 열화되어 변색이 생길 수 있으며, 커버의 내부 반사에 의한 이상신호가 발생할 수 있습니다.
- 제품을 떨어뜨리거나 강한 충격 또는 진동을 피하여 주십시오. 고장의 직접적인 원인이 됩니다.
- 전력선과 근접되어 있는 경우에는 제품과 거리를 1m 이상 분리하거나 별도의 금속관으로 배관공사를 한 후에 설치하여 주십시오. (금속관은 반드시 접지하여 주십시오.)
- 바닥 또는 경사면에 설치하면 정상적으로 동작하지 않거나 수명이 단축됩니다.
- 다음과 같은 장소의 설치 및 사용을 피하여 주십시오.
  - 에어컨 주위 등 급격한 온도변화가 발생하는 장소
  - 주방 등 증기나 기름기가 많은 장소 및 가연성 물질이 있는 장소
  - 방사선, X선, 강한 전파나 자기가 발생하는 장소
  - 대기 중 먼지, 자동차의 배기가스 등이 많이 발생하는 장소
  - 습기가 많은 장소
  - 해안 등 부식성 가스가 많이 발생하는 장소



- 커버 내외부가 이물로 인해 오염된 경우에는 화상 및 화질에 영향을 미치므로 정기적으로 청소를 하여 주십시오.
- 불꽃감지 카메라 주의사항
  야외에 설치 시 태양의 영향을 받지 않도록 카메라 화각이 지평선 아래를 보도록 설치되어야 합니다.
  (카메라 화각이 지평선 위를 보도록 설치할 시 태양의 위치에 따라 오동작 가능성이 있습니다.)
  불꽃감지 센서 앞에 장애물 (유리, 투명 아크릴 등)이 있으면 센서가 불꽃을 감지하지 못할 수 있습니다.

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제품 소개

주요 기능

◈ *불꽃감지*

(* 불꽃감지 카메라만 해당합니다.)

적외선 (Infrared)의 광학 Sensor와 Microprocessor 제어기술을 통해 화원에서 발생하는 고유의 적외선 파장을 감지하여 DVR, CMS, 스마트폰을 통해 관리자에게 화재 경보를 신속하게 알려줄 수 있습니다.

- *2 개의 광학센서감지 (일부 모델 1 개)*
- *유효감지거리 : 30m*
- *시야각 : 80°*
- *방폭등급 (* 방폭 카메라만 해당 합니다.)*
  - *Ex d IIC T6(IP67)(내압방폭형)*
  - *Ex tD A21 T85℃ IP67(분진방폭형)*

◈ ***AI (인공지능)*** *AI 딥러닝 엔진 탑재로 AI 이벤트 지원*

- *라인크로싱*
- *침입감지*
- *쓰러짐감지*
- *배회감지*
- *불/연기감지 (지원예정)*

일반 기능

- ◈ ***CMOS 이미지 센서 채용***
- ◈ ***최대 2592x1944 & 1920x1080 30fps 포함 3개의 H.265, H.264 스트림 및 1개의 JPEG 스트림 지원***
  - *모델마다 최대 지원 해상도가 다릅니다.*
- ◈ ***웹페이지 최대 7개 스트림 동시 접속 가능 (NVR 기준 2대)***
- ◈ ***3DNR 적용(노이즈 제거)***
- ◈ ***디지털 손떨림 보정(DIS) 기능***
- ◈ ***True Day&Night***
- ◈ ***안개제거(De-Fog) 기능***
- ◈ ***One-push 자동초점, 줌/포커스 제어 기능*** *(* AF모델만 해당 합니다.)*
- ◈ ***Onvif / PoE 지원***
- ◈ ***IPv4 지원***

설치 전 주의사항

1. 최초 관리자 ID 는 "admin" 입니다.
2. 암호는 주기적으로 변경할 것을 권장합니다. 쉬운 암호 사용으로 인한 보안 및 기타 문제의 책임은 사용자에게 있으므로 주의하여 주시기 바랍니다.
3. "IP 필터링"을 통해 허용되지 않은 IP 의 접근을 차단하거나 허용된 IP 만 녹화기에 접근하도록 설정할 수 있습니다. 모든 IP 허용으로 인한 보안 및 기타 문제의 책임은 사용자에게 있으므로 주의하여 주시기 바랍니다.
4. 공유기의 "포트 포워드" 를 통해 외부 네트워크에서 IP 카메라로 접근하거나 차단하도록 설정할 수 있습니다. 외부 네트워크 접속 허용으로 인한 보안 및 기타 문제의 책임은 사용자에게 있으므로 주의하여 주시기 바랍니다.
5. 항상 최신 펌웨어 버전으로 업데이트하여 사용하는 것을 권장합니다.

설치하기

본 카메라는 첨단 보안 장비로 내부에 중요한 회로를 탑재하고 있습니다.
제품의 내부 온도가 높을 경우, 수명이 단축되거나 고장이 발생할 수 있으므로 주의 바랍니다.

기본IP 및 계정

- ✓ IP : 192.168.0.2
- ✓ DHCP : Off

<주의>

1. 카메라 활성화 시 사용자 이름과 비밀번호를 설정해야 합니다.
2. 설정한 비밀번호는 주기적으로 변경 바라며, 부주의로 인한 보안 및 기타 문제의 책임은 사용자에게 있으므로 주의 하여 주시기 바랍니다.
3. 바이러스 및 악성 코드를 차단하기 위해, 카메라를 연결할 PC나 스마트 폰에 백신 프로그램을 설치하여 주십시오. 또한 Update를 통해 항상 최신 버전의 소프트웨어로 유지하시기 바랍니다.

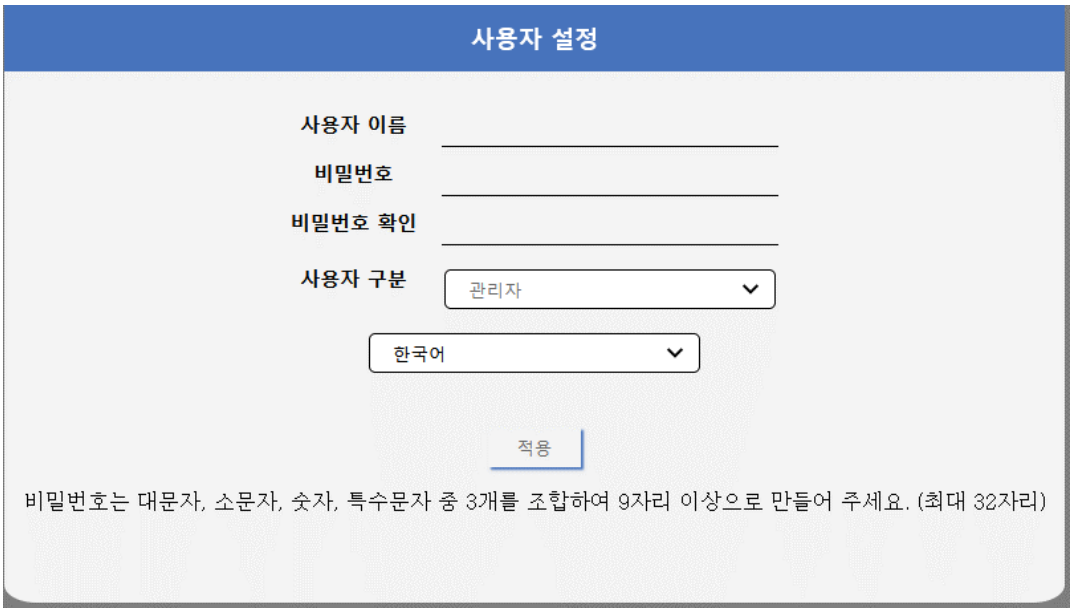
IP 카메라의 각종 기능/설정을 Webviewer 에서 변경할 수 있습니다.
IP 카메라 영상은 PC의 인터넷 브라우저로 카메라의 IP 주소에 접속(Webviewer) 하여 보거나, NVR에 IP카메라를 추가하여 볼 수 있습니다.

WebViewer 접속

인터넷 브라우저로 카메라의 IP 주소에 접속하면 카메라 홈페이지인 WebViewer 가 나타납니다. 라이브 영상과 시스템, 카메라 네트워크 등 IP카메라의 모든 기능과 설정을 변경할 수 있습니다.

로그인

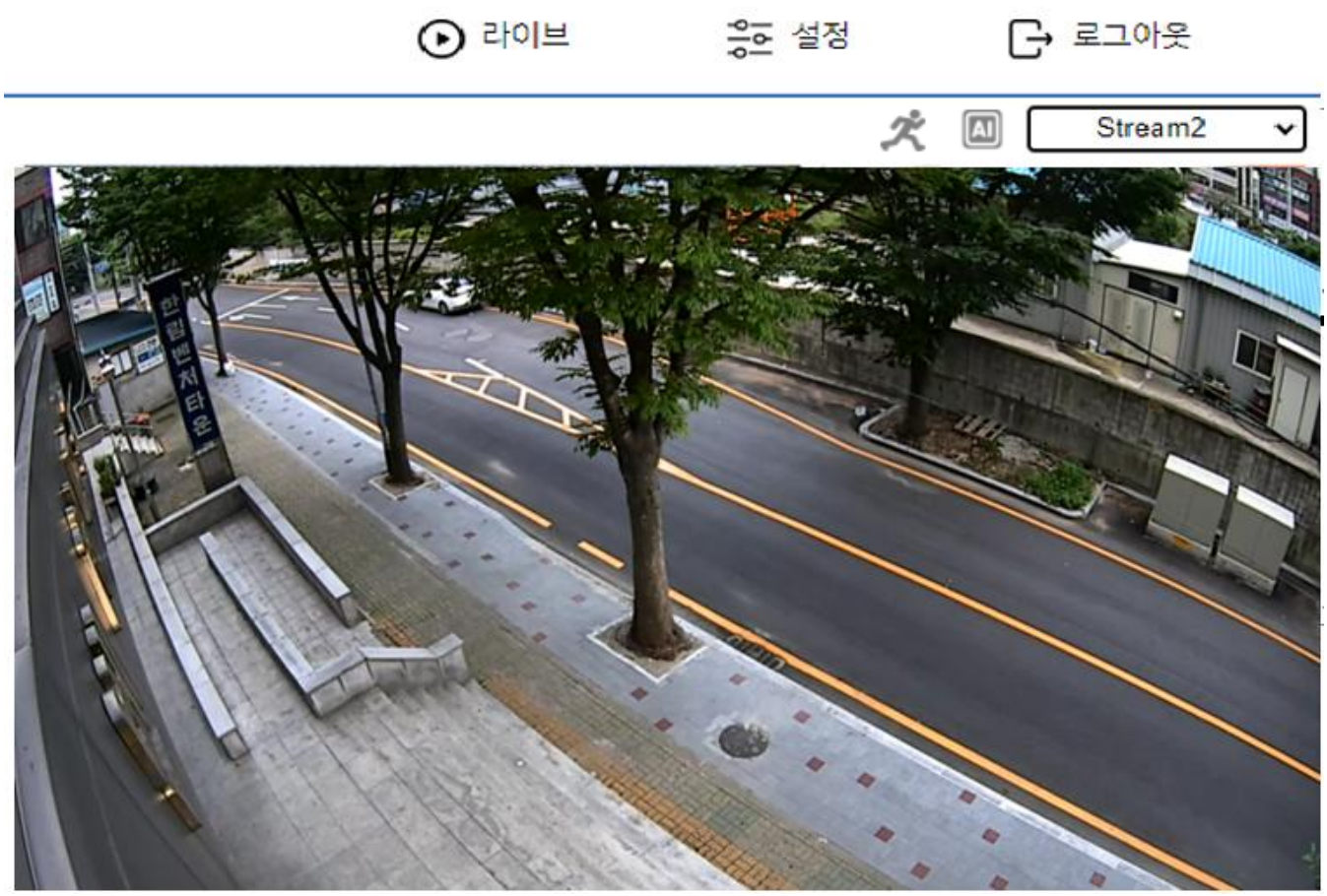
인터넷 주소창에 초기화 상태의 카메라 IP를 입력하여 WebViewer로 접속합니다.
사용자 이름 및 비밀번호를 설정하여 로그인 합니다.



<참고>
비밀번호는 9자 이상, 대/소문자, 숫자, 특수문자가 하나 이상 포함되어야 합니다. (최대 32자리)

라이브

웹페이지 상단의 라이브 버튼을 클릭하면 IP 카메라의 LIVE 영상을 보실 수 있습니다.



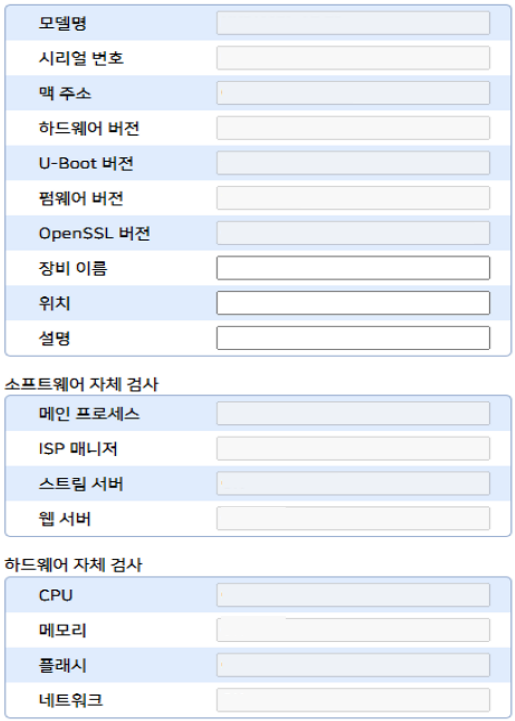
<참고>
브라우저는 최신 버전 사용을 권장합니다.

설정

시스템

기본정보

모델명, 시리얼 번호, 맥 주소, 하드웨어 버전, 펌웨어 버전, OpenSSL 버전, 장비 이름, 위치, 설명, 자체 검사 결과가 보여집니다.
장비 이름, 위치, 설명은 특정 SW에 접속했을 때 보여지는 이름으로, 변경이 가능합니다.

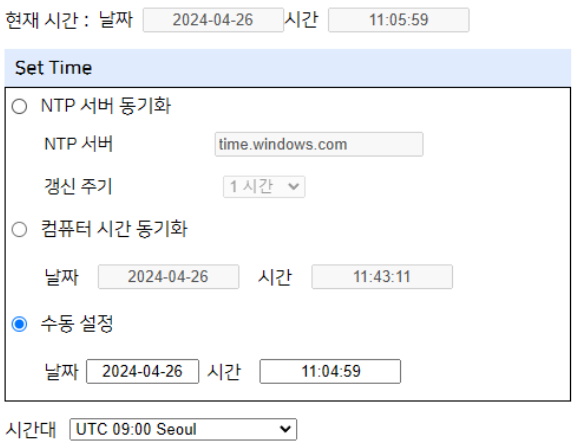


날짜 및 시간

카메라의 날짜/시간을 설정합니다.

Set Time

NTP 서버 동기화 : NTP 서버의 시간을 받아 동기화합니다.
컴퓨터 시간 동기화 : 컴퓨터의 시간을 받아 동기화합니다.
수동 설정 : 사용자가 지정한 시간으로 동기화합니다.



DST

일광 절약 시간제(DST)을 지원합니다. DST가 적용되는 지역에 IP 카메라를 설치할 경우 DST를 사용 바랍니다.

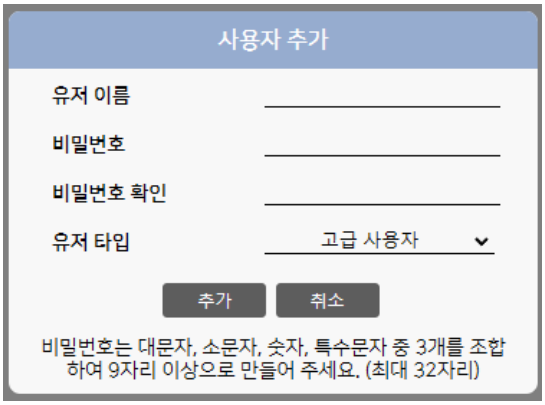


사용자

사용자의 이름, 비밀번호, 유저타입을 변경할 수 있습니다.

<참고>
비밀번호는 9자 이상이며, 소문자, 대문자, 숫자, 특수문자가 하나 이상씩 포함되어야 합니다. (최대 32자리)
관리자 권한을 가진 사용자는 삭제할 수 없습니다.
Admin 사용자만 관리자 권한을 가질 수 있습니다.

유저 타입 별 권한
관리자(Administrator) : 모든 권한
고급 사용자(Advanced User) : 사용자 정보 외 모든 권한
일반 사용자(Normal User) : LIVE View만 가능



유지 보수

카메라를 초기화&재시작 하거나 시스템 로그를 확인할 수 있습니다.

전체 초기화
모든 설정을 초기화 합니다.

기본값으로 복원
카메라 네트워크 설정을 제외하고 전부 초기화 합니다.

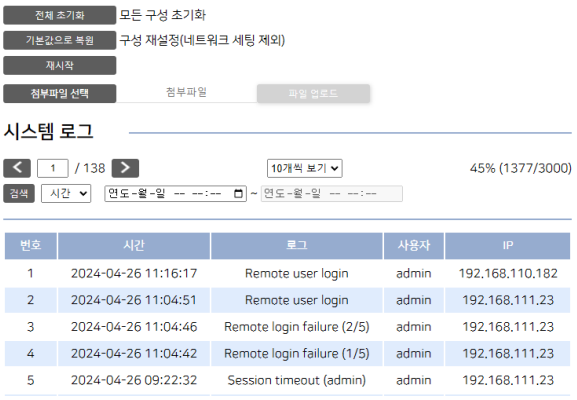
재시작
카메라를 재시작 합니다.

펌웨어 업그레이드(첨부파일 선택)
업그레이드할 펌웨어의 경로를 선택한 뒤 "파일 업로드"를 실행하면 IP카메라의 펌웨어를 업그레이드할 수 있습니다.

시스템 로그
시스템 로그는 시스템의 부팅 상태, 사용자 상태, 설정 변경 상태 등을 리스트로 표시하며 로그 발생시간, 발생로그, 사용자 계정, 접속 IP로 검색 가능합니다.

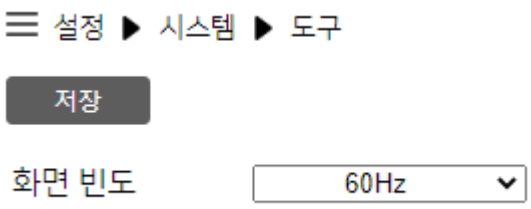
목록은 마우스 스크롤 또는 페이지 목록을 검색하여 확인할 수 있습니다.

<참고>
시스템 로그는 관리자 계정으로만 확인할 수 있습니다.



도구

화면 빈도
NTSC(60Hz) / PAL(50Hz)를 설정합니다.



비디오/오디오

비디오 설정

Stream

저장

스트림	인코딩	프로파일	해상도	프레임레이트	GoP	비트레이트 종류	비트레이트
1	H.264	Main	2560x1440	30	30	CBR	4000
2	H.264	Main	1280x720	30	30	CBR	2000
3	H.264	Main	640x360	30	30	CBR	1000
4	JPEG	N/A	1280x720	5	N/A	CBR	2000

URL rtsp://192.168.110.10/ch1/stream1

Stream 1~4

Stream 1은 Main Stream으로, 일반적으로 라이브 모니터링 및 고해상도 녹화용으로 사용됩니다.

인코딩

스트림의 인코딩 방식을 선택할 수 있습니다. H.264 혹은 H.265 선택 가능합니다.

프로파일

스트림의 Profiles을 보여줍니다. Main profile, Baseline profile, High Profile 중 선택할 수 있습니다.
단, H.265인 경우 Main profile로 고정됩니다.

해상도

H.264 Resolution은 Main stream의 해상도이며, 해상도는 2592x1944, 2560x1440, 1920x1440, 1920x1080을 선택할 수 있습니다. (지원 해상도는 카메라에 따라 다릅니다.)

프레임레이트

스트림의 프레임 레이트를 선택합니다. 프레임 레이트는 NTSC인 경우 30fps~1fps를, PAL인 경우 25fps~1fps를 선택할 수 있습니다.

GoP

I frame의 삽입 주기를 설정합니다. (Group Of Pictures의 약자로 I-frame과 다음 I-frame 사이의 프레임 수를 의미합니다.)

비트레이트 종류

비트레이트 종류를 선택합니다. CBR(고정비트레이트 전송), VBR(가변 비트레이트 전송)을 선택할 수 있습니다.

비트레이트

영상의 비트레이트를 설정합니다. 비트레이트는 사용자가 임의로 적용할 수 있습니다.

카메라 설정
화이트 밸런스



Mode
자동, 자동 확장, 사전 설정, 수동 Mode중 하나를 선택할 수 있습니다.
- ■ 자동 : 빛에 따라 자동으로 조절됩니다
- ■ 자동 확장 : AUTO의 확장모드로, 색온도가 극저온 또는 극고온 환경에 적합합니다.
- ■ 사전 설정 : 하얀색 물체를 비추어 화이트밸런스를 맞춥니다.
- ■ 수동 : 적색 및 청색 게인 값을 직접 입력하여 화이트밸런스를 맞춥니다.

색 온도
색 온도를 조절합니다. (3000K, 5000K, 8000K)

적색 게인
적색 게인 값을 조절합니다.

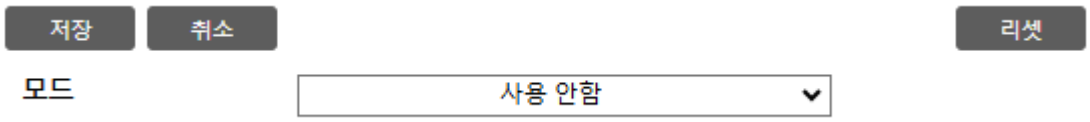
청색 게인
청색 게인 값을 조절합니다.

채도
영상 색감을 조절합니다.

색조 및 채도
색조 게인 값과 채도를 조절합니다.

역광보정

HLC, BLC, WDR, 사용안함 Mode 중 하나를 선택할 수 있습니다.



HLC

노출이 기준 값 이상 초과한 곳을 마스킹하여 전체의 노출을 보정하는 기능입니다.

- HLC 레벨 : 높을수록 강한 빛을 마스킹 하며, 낮을수록 약한 빛도 마스킹 합니다.
- HLC 색상 : 마스킹 하는 색을 선택할 수 있습니다.

BLC

역광 보정 기능으로 설정된 영역을 적정 밝기로 맞추어 선명한 영상을 얻을 수 있습니다.

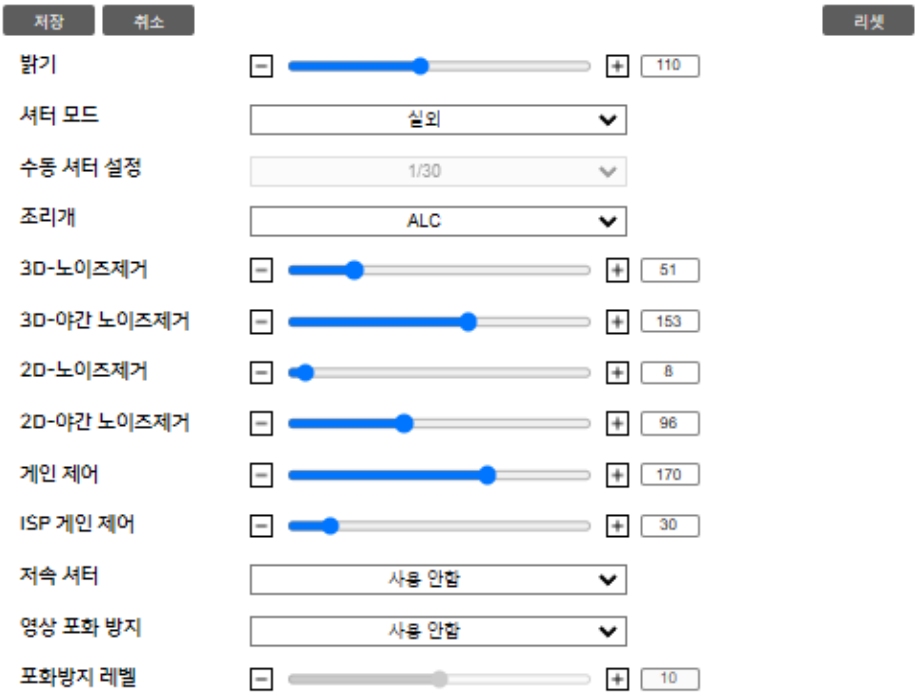
WDR

3D 역광 보정 기능으로 매우 밝거나 매우 어두운 영역도 잘 보이게 합니다.

사용 안함

역광 보정 기능을 끕니다.

노출보정



밝기
밝기를 조절합니다. 높을수록 밝아 집니다. (0~255)

셔터 모드 : 환경에 따른 셔터 스피드를 설정

- 실내
- 실내-흐림 방지
- 실외
- 실외-흐림 방지
- 수동
- 깜빡임 방지

실내/실외 흐림 방지
블러 현상을 방지하는 설정입니다.

깜빡임 방지
플리커 현상을 방지하는 설정입니다.

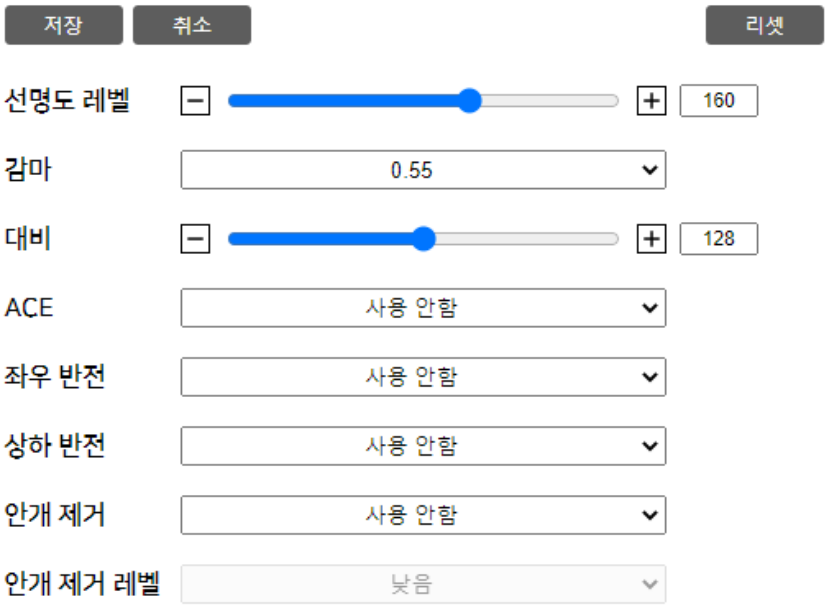
수동 셔터 설정
셔터 모드가 수동일 때 셔터 속도를 11 단계(1/30 ~ 1/30000)로 변경할 수 있습니다.

조리개
조리개 제어 방식 설정 (ALC, ELC)

2D-DNR, 3D-DNR
저조도 환경에서 영상의 노이즈를 감쇄합니다.

게인 제어
Automatic Gain Control의 약자로 외부 빛의 양이 줄어 카메라 감도가 떨어 졌을 때 출력을 항상 일정하게 유지하기 위해 자동으로 이득을 보정하고 제어하는 기능입니다. 높을수록 AGC에 의한 보정과 제어를 많이 합니다. AGC 값이 높을수록 노이즈가 발생할 수 있습니다.

이미지 보정



선명도 레벨
영상의 선명도를 조정합니다.

감마
영상의 Gamma 값을 조정합니다.

대비
영상의 대비 값을 조정합니다.

ACE
밝기 차이가 심한 역광 환경에서 어두운 곳의 밝기를 높여 화질을 개선합니다.

좌우 반전
화면의 좌/우가 반전합니다.

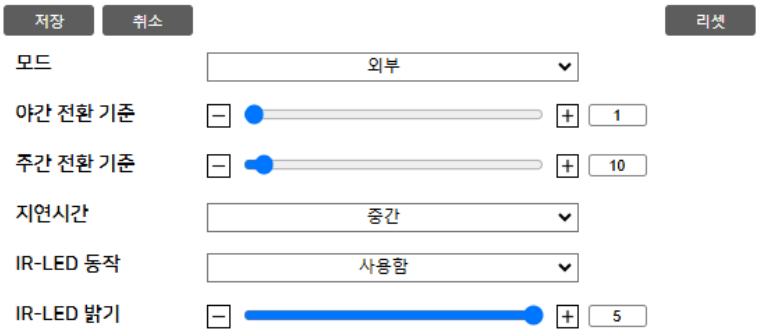
상하 반전
화면의 상/하가 반전합니다.

안개 제거
안개, 황사로 인해 뿌옇게 된 영상을 선명하게 해 줍니다. (ON/OFF)

- 자동: 영상을 분석하여 자동으로 동작합니다.
- 수동: 안개 제거 레벨을 낮음, 중간, 높음 중 선택할 수 있습니다.

주야간 모드

주간 모드 또는 야간 모드로 변경되는 기준을 선택합니다.



모드

- 자동: 영상을 분석하여 주간 ↔ 야간 이 자동으로 변경
- 색상: 항상 컬러 영상
- 흑백: 항상 흑백 영상
- 외부: 조도센서(CDS)로 감지된 값을 분석하여 주간 ↔ 야간이 자동으로 변경
- 저조도: 저조도 환경에서도 컬러 영상을 출력합니다. 아주 낮은 조도 환경에서는 흑백 영상이 출력됩니다.
- 스케줄 변경: 시작 시간부터 종료 시간까지 컬러 영상을 출력합니다. 종료 시간 이후부터 흑백 영상이 출력됩니다.

야간 전환 기준 (외부 모드 지원)

주간 -> 야간 변경 레벨을 설정합니다..

주간 전환 기준 (외부 모드 지원)

야간 -> 주간 변경 레벨을 설정합니다.

게인 레벨 (자동 모드 지원)

주간 ↔ 야간 변경 레벨을 설정합니다. 낮을수록 저조도에서 변경됩니다.

헌팅 방지 레벨 (자동 모드 지원)

밝기가 주간과 야간 기준레벨 근처인 경우에 잦은 주간 ↔ 야간 변환이 발생할 수 있습니다. 이러한 잦은 변환을 방지하기 위해 헌팅 방지 레벨을 조절합니다. 높을수록 주간 ↔ 야간 경계에서 잦은 변환을 방지할 수 있습니다.

지연시간

주간 ↔ 야간 변경될 때 설정한 시간 이후 변경됩니다.

IR-LED 동작

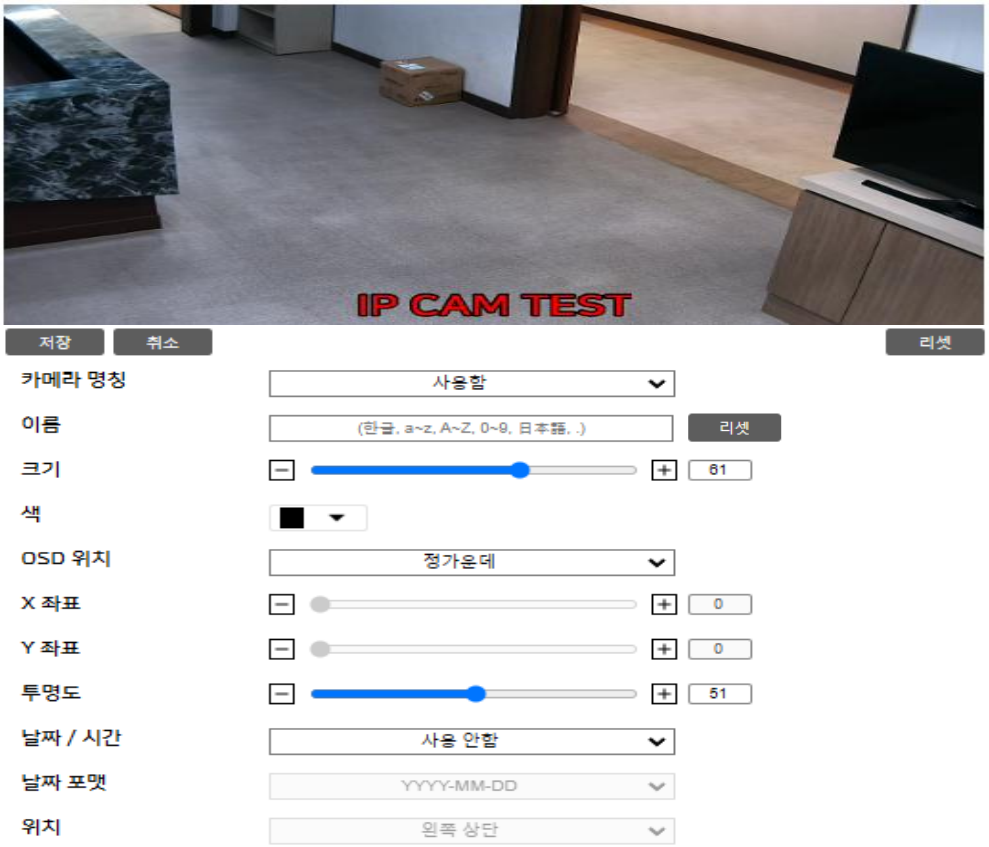
IR LED를 ON/OFF 설정할 수 있다

IR-LED 밝기

IR LED의 밝기를 조절할 수 있다. (값이 높을수록 밝음)

OSD

카메라 영상에 OSD 를 삽입 합니다.



이름

카메라 OSD에 표시할 내용을 설정합니다.

크기

카메라 OSD 크기를 지정합니다.

색

카메라 OSD 색상을 지정합니다.

OSD 위치

카메라 OSD 위치를 지정합니다.

X/Y 좌표 (직접 입력 선택 시)

카메라 OSD 위치를 사용자가 직접 지정합니다.

투명도

OSD 투명도를 지정합니다. (값이 낮을수록 투명해짐)

날짜 / 시간

카메라의 날짜/시간을 영상에 삽입합니다.

날짜 포맷

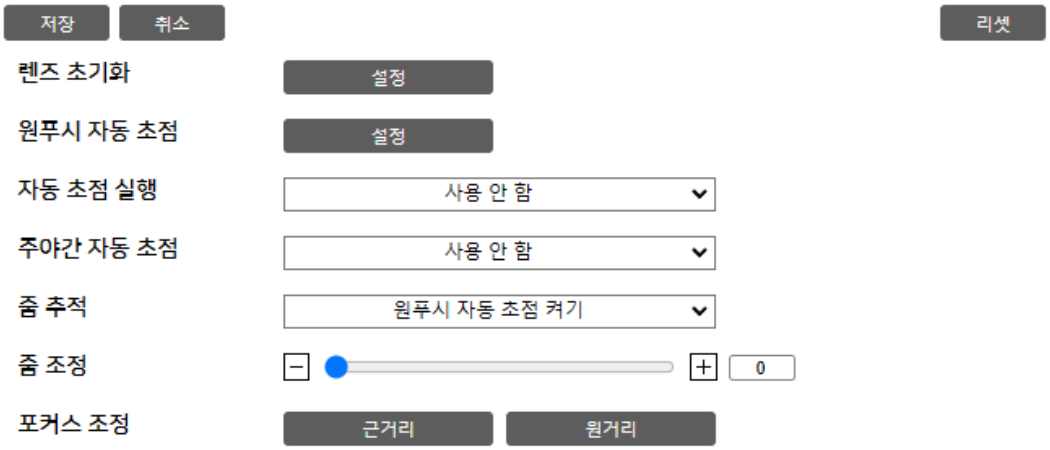
날짜 형식을 선택합니다.

위치

카메라 날짜/시간 위치를 지정합니다.

포커스

카메라 렌즈를 설정합니다.



렌즈 초기화

카메라 렌즈 설정을 공장 출하 기본값으로 복원합니다.

원푸시 자동 초점

자동으로 포커스를 맞춥니다.

자동 초점 실행

카메라 전원 ON 시 자동으로 포커스를 맞춥니다.

주야간 자동 초점

Day&Night 변환 시 자동으로 포커스를 맞춥니다.

줌 추적

줌인/아웃 시 포커스 동작 방식을 설정합니다.

줌 조정

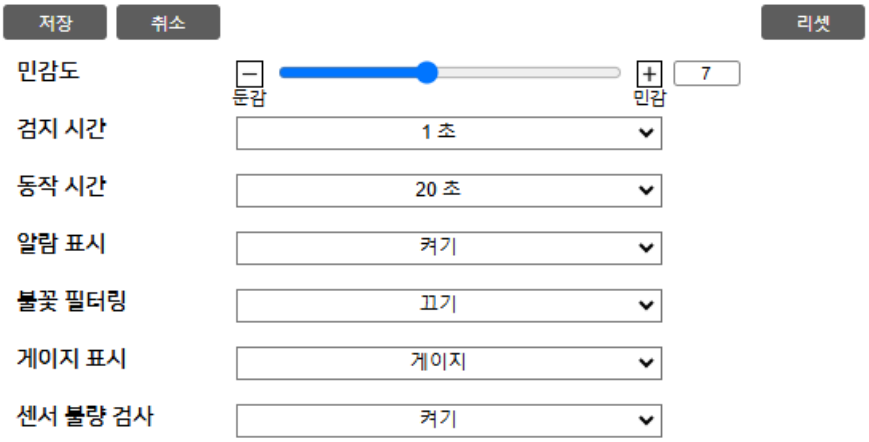
카메라 줌인/아웃을 제어합니다.

포커스 조정

포커스를 수동으로 제어합니다.

불꽃

불꽃 인식 및 감도 설정을 설정할 수 있습니다. (* 불꽃감지 카메라만 해당합니다.)



민감도

숫자가 클수록 불꽃에 민감합니다. (1~10 steps)

검지 시간

불꽃으로 판단하기 위한 감지시간을 설정합니다.
(1/3/5/10sec)

동작 시간

불꽃 알람은 불꽃이 감지되는 동안 발생하며, 불꽃이 꺼진이후에도 action time 설정 시간동안 알람이 지속됩니다.
(5~60sec)

알람 표시

불꽃 감지 시 영상에 표시되는 오버레이를 표시/숨김 할 수 있습니다.

불꽃 필터링

불꽃에서 발생하는 주파수(1~20Hz) 이상으로 입력되는 신호를 필터링 할 수 있습니다.
(높을수록 더 다양한 비화재보를 예방할 수 있음)

검지 비율 (* 모델에 따라 다를 수 있습니다.)

불꽃 센서 1 과 센서 2 의 불꽃 검지 비율을 설정합니다.
(자동, 수동)

수동 (* 모델에 따라 다를 수 있습니다.)

검지 비율 설정을 수동으로 설정 시 비율을 임의로 조절할 수 있습니다.
낮은 값인 경우 불꽃에 대해 둔감해지며, 값이 증가할수록 불꽃에 민감해집니다.

게이지 표시

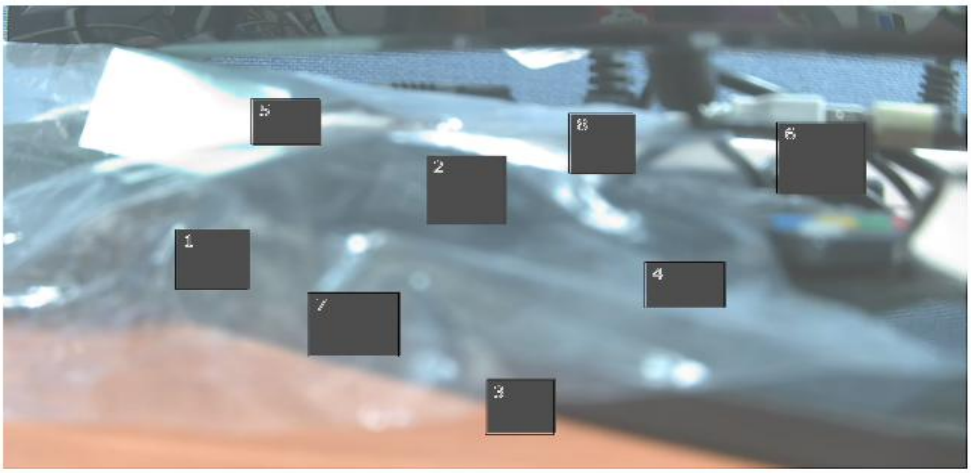
불꽃 감지 게이지를 표시/숨김 설정할 수 있습니다.

센서 불량 검사

불꽃 센서를 자체 검사하고 불량이 감지되면 화면을 녹색으로 마스킹하고 화면 중간에 경고 문구가 표시됩니다.

프라이버시 영역

카메라 특정 영역을 보이지 않게 마스킹 할 수 있습니다.
최대 8개까지 영역을 지정할 수 있습니다.



저장 | 전체 지우기

활성화 여부	켜기
영역 색	검은색
투명도	0%

번호	이름	활성화	삭제
1	Mask1	켜기	삭제
2	Mask2	켜기	삭제
3	Mask3	켜기	삭제
4	Mask4	켜기	삭제
5	Mask5	켜기	삭제
6	Mask6	켜기	삭제
7	Mask7	켜기	삭제
8	Mask8	켜기	삭제

활성화 여부
프라이버시 마스킹 영역을 활성화/비활성화할 수 있습니다.

영역 색
프라이버시 마스킹의 색을 선택할 수 있습니다, 모든 마스킹 영역은 한가지 색으로 마스킹 됩니다.

투명도
프라이버시 마스킹의 투명도를 조절할 수 있습니다.

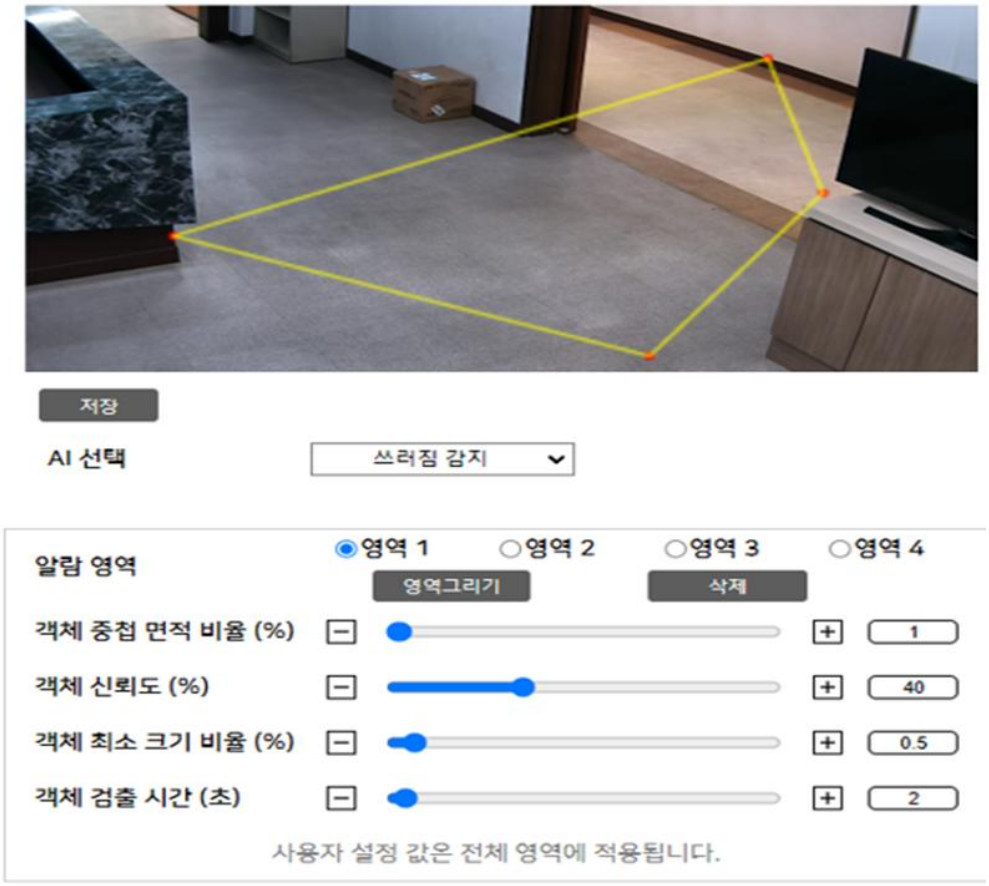
활성화
프라이버시 영역1~8 중 선택적으로 활성화/비활성화할 수 있습니다.

삭제
프라이버시 영역을 삭제할 수 있습니다.

이벤트

AI (* 모델에 따리 다를 수 있습니다.)

AI 기능을 켜거나 끌 수 있습니다.



AI 선택

침입, 쓰러짐, 라인크로스, 배회, 불/연기(지원예정) 중 1 개의 기능을 선택할 수 있습니다.

객체 정보 표시

AI가 검출한 객체의 정보(신뢰도)를 화면에 표시합니다.

<주의>

1. 객체 인식은 사람만 가능합니다. (차량 인식 미지원)
2. 영역은 최대 4 개까지 설정 가능합니다.
3. 비정상적인 영역은 [저장] 시 자동으로 삭제됩니다. 예) 영역 라인(점)이 이어지지 않은 경우
4. 펌웨어 종류에 따라 지원하는 AI 기능이 다를 수 있습니다.

침입 감지

검출된 객체가 설정 영역안으로 들어갔을 때 사용자 설정 조건을 충족하면 AI 침입 이벤트가 발생됩니다.



알람 영역

영역 그리기

지정할 알람 영역을 선택하고 영상위에 점을 이어서 영역을 설정합니다. **(설정된 영역은 보라색으로 표시됨)**
최대 4개의 영역 설정이 가능하며, 4 ~ 6각형을 지원합니다.

삭제

선택한 알람 영역이 지워집니다.

객체 중첩 면적 비율

객체 박스의 몇 %가 설정 영역을 침범했는가 하는 조건값을 설정합니다. (값이 낮을수록 AI감지가 잘 됨)
값 지정은 슬라이드바 또는 직접 값을 입력하는 방법이 있습니다.

- 값 1 : 객체박스 면적의 1/100이 영역 안으로 들어갔을 때 AI이벤트 발생.
- 값100 ㄴㄹㄴㅇ : 객체박스가 영역에 완전히 들어갔을 때 AI이벤트 발생.

객체 신뢰도

AI 가 검출한 객체중 몇 %이상의 신뢰도를 가진 객체를 인식할 것인가 하는 조건값을 정합니다.

(값이 낮을수록 객체는 많이 검출되지만 오인식 가능성은 높습니다.)

- 값 50 : 카메라의 AI 엔진이 검출한 신뢰도 50% 이상의 객체만 객체로 탐지함

객체 최소 크기 비율

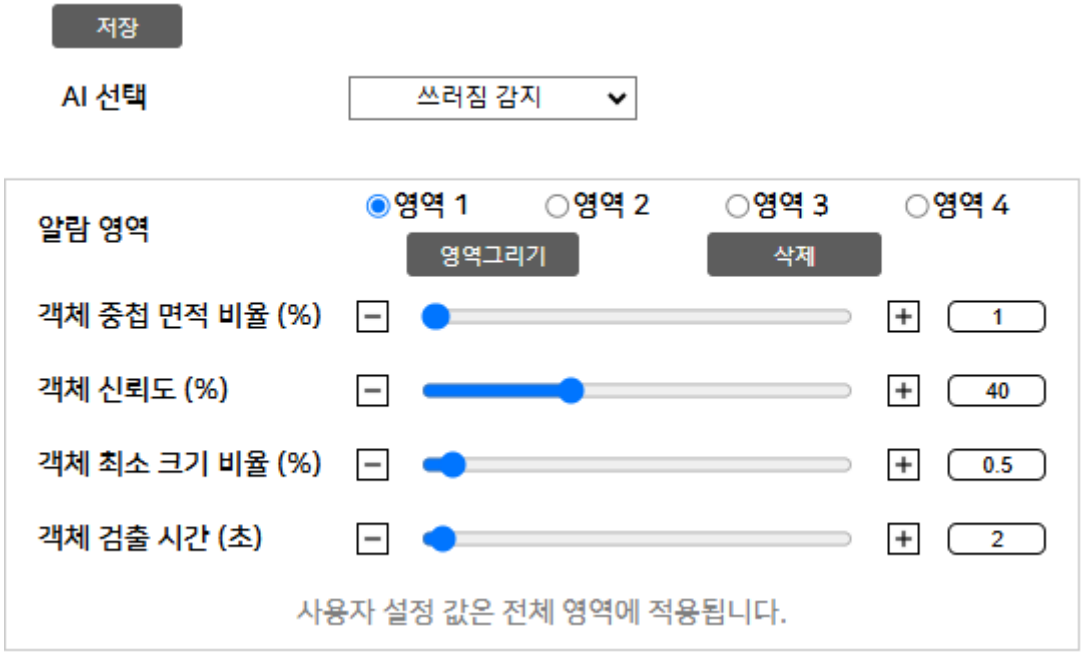
AI 객체 최소 크기를 지정합니다, 만약 1로 설정 시 해상도에서 객체가 차지하는 비율이 1% 이상 되어야 인식하고 0.9% 이하이면 객체로 인식되지 않습니다.

객체 검출 시간

객체로 판단하기 위한 감지시간을 설정합니다. (1~60sec)

쓰러짐 감지

설정 영역안에 쓰러진 사람이 발견되었을 때 사용자 설정 조건을 충족하면 AI 쓰러짐 이벤트가 발생됩니다.



알람 영역

영역 그리기

지정할 알람 영역을 선택하고 영상위에 점을 이어서 영역을 설정합니다. **(설정된 영역은 보라색으로 표시됨)**
최대 4개의 영역 설정이 가능하며, 4 ~ 6각형을 지원합니다.

삭제

선택한 알람 영역이 지워집니다.

객체 중첩 면적 비율

객체 박스의 몇 %가 설정 영역을 침범했는가 하는 조건값을 정합니다.(값이 낮을수록 AI감지가 잘 됨)
값 지정은 슬라이드바 또는 직접 값을 입력하는 방법이 있습니다.

- 값 1 : 객체박스 면적의 1/100이 영역 안으로 들어갔을 때 AI이벤트 발생.
- 값100 : 객체박스가 영역에 완전히 들어갔을 때 AI이벤트 발생.

객체 신뢰도

AI 가 검출한 객체중 몇 %이상의 신뢰도를 가진 객체를 인식할 것인가 하는 조건값을 정합니다.

(값이 낮을수록 객체는 많이 검출되지만 오인식 가능성은 높습니다.)

- 값 50 : 카메라의 AI 엔진이 검출한 신뢰도 50% 이상의 객체만 객체로 탐지함

객체 최소 크기 비율

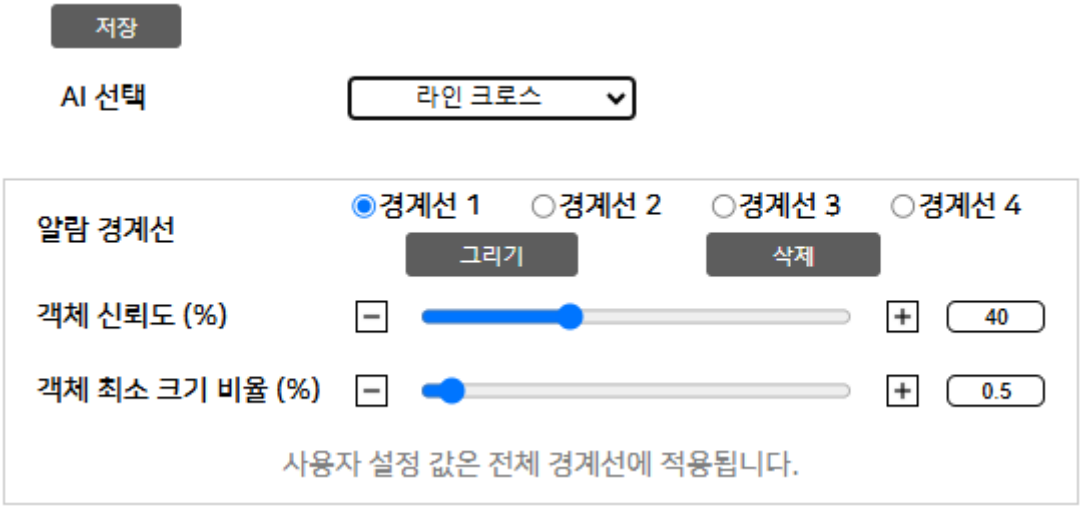
AI 객체 최소 크기를 지정합니다, 만약 1로 설정 시 해상도에서 객체가 차지하는 비율이 1% 이상 되어야 인식하고 0.9% 이하이면 객체로 인식되지 않습니다.

객체 검출 시간

객체로 판단하기 위한 감지시간을 설정합니다. (1~60sec)

라인 크로스

객체가 경계선을 교차할 때 사용자 설정 조건을 충족하면 AI 라인크로스 이벤트가 발생됩니다.



알람 경계선

그리기

지정할 알람경계선을 선택하고 영상에 점을 그어서 경계선을 설정합니다. **(설정된 경계선은 보라색으로 표시됨)**

삭제

선택한 경계선이 지워집니다.

객체 신뢰도

AI 가 검출한 객체중 몇 %이상의 신뢰도를 가진 객체를 인식할 것인가 하는 조건값을 정합니다.

(값이 낮을수록 객체는 많이 검출되지만 오인식 가능성은 높습니다.)

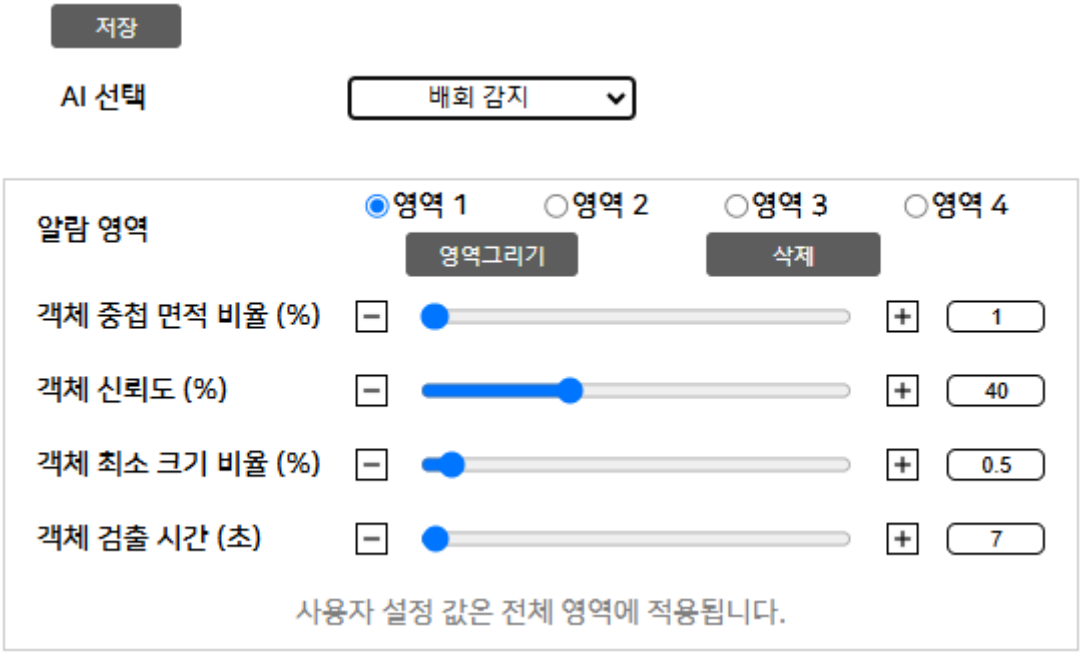
- 값 50 : 카메라의 AI 엔진이 검출한 신뢰도 50% 이상의 객체만 객체로 탐지함

객체 최소 크기 비율

AI 객체 최소 크기를 지정합니다, 만약 1로 설정 시 해상도에서 객체가 차지하는 비율이 1% 이상 되어야 인식하고 0.9% 이하이면 객체로 인식되지 않습니다.

배회 감지

객체가 지정한 영역에서 배회할 때 사용자 지정 조건을 충족하면 AI 배회 이벤트가 발생됩니다.



알람 영역

영역 그리기

지정할 알람 영역을 선택하고 영상위에 점을 이어서 영역을 설정합니다. **(설정된 영역은 보라색으로 표시됨)**
최대 4개의 영역 설정이 가능하며, 4 ~ 6각형을 지원합니다.

삭제

선택한 알람 영역이 지워집니다.

객체 중첩 면적 비율

객체 박스의 몇 %가 설정 영역을 침범했는가 하는 조건값을 정합니다.(값이 낮을수록 AI감지가 잘 됨)
값 지정은 슬라이드바 또는 직접 값을 입력하는 방법이 있습니다.

- 값 1 : 객체박스 면적의 1/100이 영역 안으로 들어갔을 때 AI이벤트 발생.
- 값100 : 객체박스가 영역에 완전히 들어갔을 때 AI이벤트 발생.

객체 신뢰도

AI 가 검출한 객체중 몇 %이상의 신뢰도를 가진 객체를 인식할 것인가 하는 조건값을 정합니다.

(값이 낮을수록 객체는 많이 검출되지만 오인식 가능성은 높습니다.)

- 값 50 : 카메라의 AI 엔진이 검출한 신뢰도 50% 이상의 객체만 객체로 탐지함

객체 최소 크기 비율

AI 객체 최소 크기를 지정합니다, 만약 1로 설정 시 해상도에서 객체가 차지하는 비율이 1% 이상 되어야 인식하고 0.9% 이하이면 객체로 인식되지 않습니다.

객체 검출 시간

객체로 판단하기 위한 감지시간을 설정합니다. (1~60sec)

연기 감지

연기가 지정한 영역에서 발생할 때 사용자 지정 조건을 충족하면 AI 연기 이벤트가 발생됩니다.



알람 영역

영역 그리기

지정할 알람 영역을 선택하고 영상위에 점을 이어서 영역을 설정합니다. **(설정된 영역은 보라색으로 표시됨)**
최대 4개의 영역 설정이 가능하며, 4 ~ 6각형을 지원합니다.

삭제

선택한 알람 영역이 지워집니다.

객체 중첩 면적 비율

객체 박스의 몇 %가 설정 영역을 침범했는가 하는 조건값을 정합니다.(값이 낮을수록 AI감지가 잘 됨)
값 지정은 슬라이드바 또는 직접 값을 입력하는 방법이 있습니다.

- 값 1 : 객체박스 면적의 1/100이 영역 안으로 들어갔을 때 AI이벤트 발생.
- 값100 : 객체박스가 영역에 완전히 들어갔을 때 AI이벤트 발생.

객체 신뢰도

AI 가 검출한 객체중 몇 %이상의 신뢰도를 가진 객체를 인식할 것인가 하는 조건값을 정합니다.

(값이 낮을수록 객체는 많이 검출되지만 오인식 가능성은 높습니다.)

- 값 50 : 카메라의 AI 엔진이 검출한 신뢰도 50% 이상의 객체만 객체로 탐지함

객체 최소 크기 비율

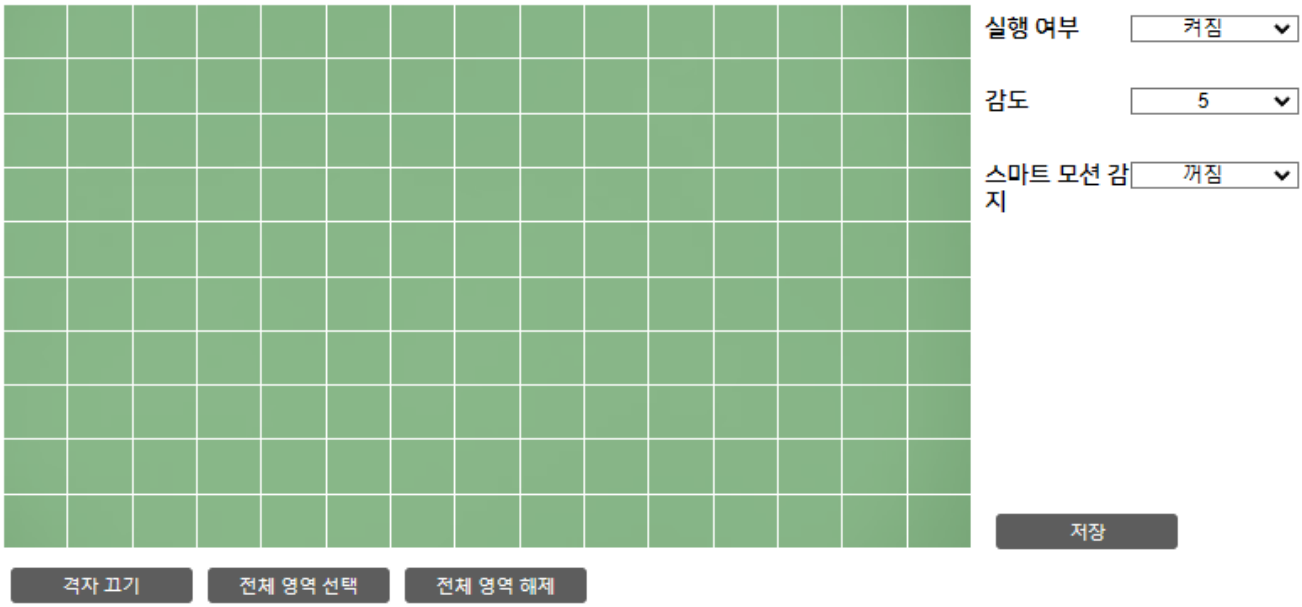
AI 객체 최소 크기를 지정합니다, 만약 1로 설정 시 해상도에서 객체가 차지하는 비율이 1% 이상 되어야 인식하고 0.9% 이하이면 객체로 인식되지 않습니다.

객체 검출 시간

객체로 판단하기 위한 감지시간을 설정합니다. (1~60sec)

움직임 감지

움직임 감지 기능을 켜거나 끌 수 있습니다.



격자 켜기/끄기

설정 화면에 격자를 표시합니다.

전체 영역 선택

움직임 감지 영역을 전체로 지정합니다.

전체 영역 해제

움직임 감지 영역을 전체 해제합니다.

감도

움직임의 민감도를 조절합니다. 숫자가 클수록 움직임에 민감합니다.

스마트 모션 감지 (* 모델에 따라 다를 수 있습니다.)

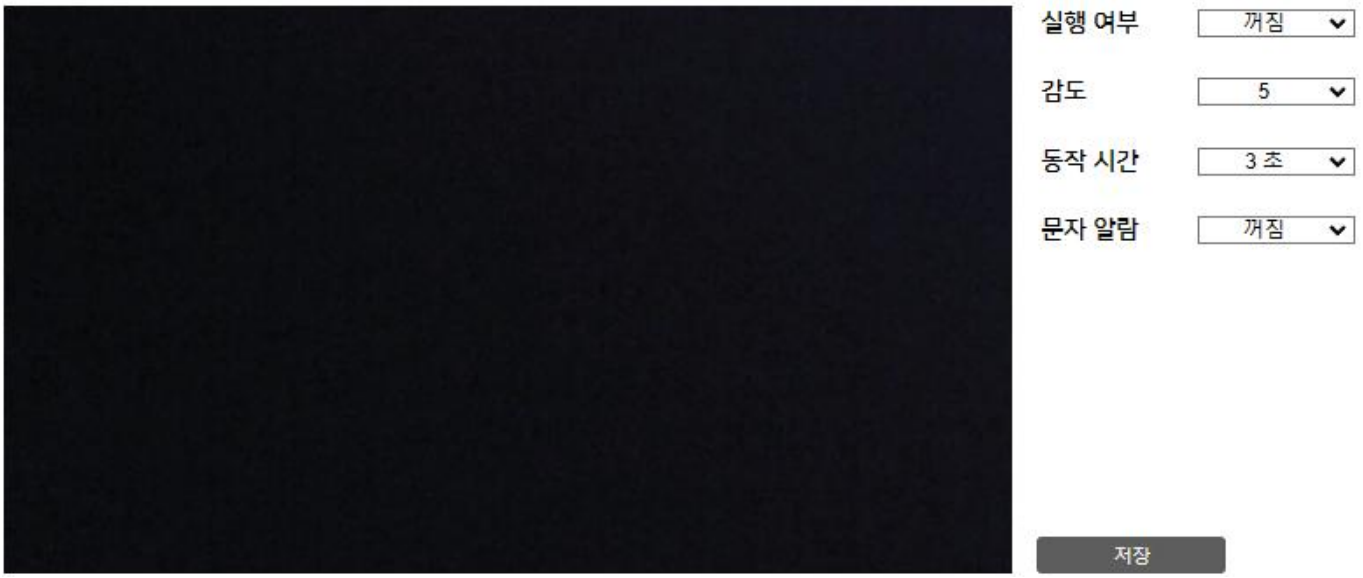
환경 변화에 의해 유발되는 오감지를 줄이고 AI 기능과 연동하여 실제 객체의 움직임만을 감지하는 기능입니다.

<주의>

1. 펌웨어 종류에 따라 스마트 모션 감지 기능을 지원하지 않을 수 있습니다.

템퍼링 감지

카메라 이상동작 감지 기능을 켜거나 끌 수 있습니다.



실행 여부

템퍼링 감지 기능을 활성화/비활성화 할 수 있습니다.

감도

카메라 이상동작의 민감도를 조절합니다. 숫자가 클수록 이상동작에 민감합니다.

동작 시간

알람 지속 시간을 설정합니다. 템퍼링이 감지되는 동안 알람이 발생하며, 템퍼링이 더 이상 감지되지 않으면 Action Time 설정 시간동안 알람이 지속됩니다.

문자 알람

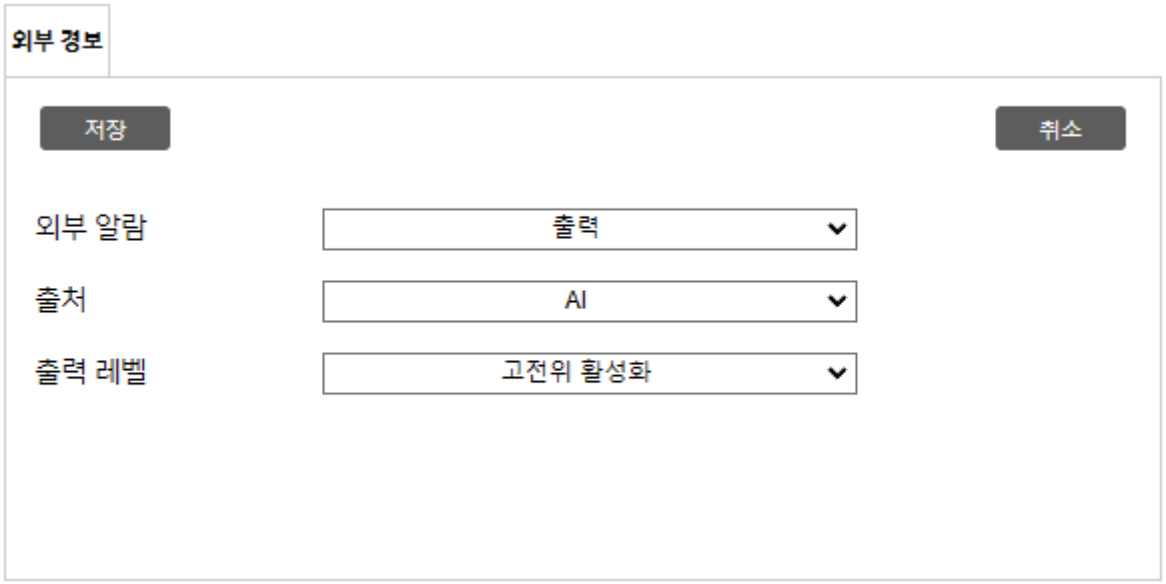
템퍼링이 감지되는 동안 감지된 이벤트의 종류가 영문으로 영상 위에 오버레이되어 표출됩니다.

- 템퍼링 이벤트 종류

템퍼링 이벤트	이벤트 발생 상황
Defocus detect	카메라 시야 가림 감지됨
Bright change	급격한 밝기 변화 감지됨
Camera moving	카메라 위치 또는 화각 변경 감지됨

이벤트 동작 (* 모델에 따라 다를 수 있습니다.)

카메라에서 특정 이벤트 발생 시 외부 신호선을 통해 알람 출력이 동작하게 설정할 수 있습니다.



외부 알람

외부 신호선 알람 출력 동작을 활성화/비활성화합니다.

출처

AI, 움직임, 템퍼링, 불꽃중 1 개의 이벤트를 선택할 수 있습니다.

출력 레벨

고전위 활성화 : Low 상태에서 이벤트 발생 시 High 로 출력되며 GND 와 떨어집니다. (NVR 의 Normal Close 와 유사함)

저전위 활성화 : High 상태에서 이벤트 발생 시 Low 로 출력되며 GND 와 연결됩니다. (NVR 의 Normal Open 과 유사함)

네트워크

IP

IP 카메라의 네트워크 정보를 설정할 수 있습니다.



자동 주소 지정 (DHCP)

IP 카메라가 연결된 네트워크에 DHCP 서버가 있다면, DHCP를 '사용함'으로 설정할 경우 IP카메라는 DHCP 서버로부터 자동으로 IP를 할당받을 수 있습니다.
IP 카메라가 연결된 네트워크에 DHCP 서버가 없다면, DHCP를 '사용 안함'으로 설정해야 하며, IP 주소를 수동으로 설정해야 합니다. IP 카메라의 IP 주소는 네트워크 관리자에게 할당받으시기 바랍니다.

IP 주소

IP 주소는 카메라와 Control Center혹은 NVR에 접속 시 사용됩니다. 단 서브넷마스크, 게이트웨이가 올바르게 설정되어 있어야 하며, 네트워크 관리자에게 부여받아 입력합니다. (DHCP '사용함'으로 설정 시 비활성화 됩니다.)

넷마스크

네트워크상에서 통신할수 있는 IP의 범위를 설정하는 기능으로 네트워크 관리자에게 부여받아 입력합니다. (DHCP '사용함'으로 설정시 비활성화 됩니다.)

게이트웨이

카메라의 외부 네트워크와 연결되기 위하여 게이트웨이의 주소는 반드시 입력되어야 하며, 게이트웨이 주소는 네트워크 관리자에게 부여받아 입력합니다. (DHCP '사용함'으로 설정시 비활성화 됩니다.)

DNS

Domain Name Server의 약자로 도메인을 사용하기 위해서는 DNS 주소를 반드시 입력되어야 하며, DNS 주소는 네트워크 관리자에게 부여받아 입력합니다. (DHCP '사용함'으로 설정시 비활성화 됩니다.)

TLS

Transport Layer Security 의 약자로, 데이터를 암호화해서 송수신하는 기능을 제공합니다.

포트

기본 포트는 80입니다. 사용하지 않는 다른 포트로 변경이 가능합니다.

RTSP 포트

Real Time Streaming Protocol의 약자로, 실시간 스트리밍을 제공합니다.
기본 포트는 554입니다. 사용하지 않는 다른 포트로 변경이 가능합니다.

<참고>
TLS 를 '사용함'으로 선택 후 카메라 WebViewer 접속은 https://<IP 주소>:<Port 번호>로 입력해야 합니다.

IP 필터링

IP 필터링을 활성화하여 특정 IP 주소의 접속을 허용하거나 거절할 수 있습니다.
(최대 10 개의 IP 대역을 설정할 수 있습니다.)

허용

192.168.0.0 ~ 192.168.0.255 입력 후 허용 선택 시 192.168.0.0 ~ 192.168.0.255의 IP는 접속 허용하고 이외 IP는 접속 차단합니다.

거절

192.168.0.0 ~ 192.168.0.255 입력 후 거절 선택 시 192.168.0.0 ~ 192.168.0.255의 IP는 접속 거절하고 이외 IP는 접속 허용합니다.

<주의>.
IP 필터링 페이지의 설정을 바꾸기 전에 사용법을 숙지하시기 바랍니다.



부록

문제 해결 [FAQ]

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서비스 요청하시기 전에 꼭 알아 두세요.

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1. 고객 주의사항
   - ✓ 보안 시스템 및 제품의 이상 유무를 정기적으로(매일) 점검하여 사용하시기 바랍니다.
   - ✓ 본 제품은 감시 보조장비로 도난(재산피해), 화재, 천재지변 등으로 인해 발생된 물적/인적 피해에 대해서는 제조사에서 책임지지 않습니다.
   - ✓ A/S 는 당사 해당 제품(단품)에 대해서만 가능합니다.
   - ✓ 설치문제로 인한 불량은 설치 전문 업체 및 유지 보수업체를 통해 처리하셔야 합니다.
   - ✓ 제품 사용 설명서에 포함되지 않는 기능이나, 타사 쇼핑몰 등에서 잘못 기재된 기능은 당사에서 책임을 질 수 없습니다.
   - ✓ 서비스 요청시 제품에 저장된 중요한 데이터는 서비스를 받는 동안 손실될 수 있으므로, 반드시 백업을 받아 두시기 바랍니다. 수리과정에서 손실될 경우 당사에서 책임을 질 수 없습니다.
2. 제품 사용설명으로 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 발생하여 서비스를 요청시
   - ✓ 제품 간단조정이나 분해하지 않고 처리하는 경우
   - ✓ 제품고장 요인이 아닌 S/W 업그레이드 요청시
4. 그 밖의 경우
   - ✓ 품질이 좋지 않은 기록매체 사용에 따른 고장이나 사용설명 서비스 요청시
   - ✓ 제품이 비정상적인 환경에서 사용하거나 설치되어 문제가 발생한 경우

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제 품 명	NK2100 Series NK5100 Series NK2200 Series	보 증 기 간
모 델 명		구입 후 1 년 (공급계약에 따라 변경될 수 있음)
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보 증 기 간	년 월 일	
시리얼번호		

고객 주소	성 명	
	연락처	
판매점주소(상호)	성 명	
	연락처	

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㈜ 웹게이트

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