

FaceStation 2

설치 가이드

버전 1.22
한국어

KO 101.00.FS2 V1.22A

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안전을 위한 주의사항

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

경고

지시 사항을 위반하여 심각한 상해나 사망에 이를 수 있습니다.

설치 관련

직사 광선, 습기, 먼지나 그을음이 많은 곳에는 설치하지 마십시오.

- 화재 또는 감전의 원인이 됩니다.

전열기 등으로 인해 열이 발생하는 곳에는 설치하지 마십시오.

- 과열로 인한 화재 또는 감전의 원인이 됩니다.

물기가 없는 장소에 설치하십시오.

- 습기로 인한 제품 손상 및 감전의 원인이 됩니다.

전자파 장애가 없는 곳에 설치하십시오.

- 제품 손상 또는 감전의 원인이 됩니다.

사용자가 임의로 제품을 설치하거나 수리하지 마십시오.

- 화재, 감전, 부상의 원인이 됩니다.
- 사용자의 임의 설치나 수리로 인해 제품이 손상된 경우에는 무상 서비스를 받을 수 없습니다.

사용 관련

제품 내부에 물, 음료수, 약품 등의 액체가 들어가지 않도록 주의하십시오.

- 감전, 화재, 제품 손상의 원인이 됩니다.

주의

지시 사항을 위반하여 경미한 상해나 제품 손상이 발생할 수 있습니다.

설치 관련

전원 케이블 등을 통행 장소에 방치하지 마십시오.

- 제품 파손 또는 신체 상해의 원인이 됩니다.

자석, TV, (특히 CRT) 모니터, 스피커 등 자성이 강한 물체 주변에 설치하지 마십시오.

- 고장의 원인이 됩니다.

직류 24V, 2.5 A 이상의 전원 어댑터만 사용하십시오.

- 적합한 전원을 사용하지 않을 때에는 장치가 정상적으로 작동하지 않습니다.

Secure I/O 2, 전기정(전기식 잠금장치), FaceStation 2는 반드시 개별 전원을 사용하십시오.

- 전원을 함께 연결하여 사용하면 장치가 오작동할 수 있습니다.

여러 대의 장치를 설치할 때 최소 이격 거리를 확인하십시오.

- 그렇지 않으면 다른 장치의 RF 성능에 영향을 주어 장치가 오작동할 수 있습니다.

사용 관련

제품을 떨어뜨리거나 충격을 주지 마십시오.

- 고장의 원인이 됩니다.

암호를 타인이 알지 못하도록 주의하여 관리하고, 주기적으로 변경하여 주십시오.

- 불법 침입의 원인이 됩니다.

제품의 버튼을 무리하게 누르거나 날카로운 도구를 사용해 누르지 마십시오.

- 고장의 원인이 됩니다.

제품 청소 시 물, 벤젠, 알코올 등이 아닌 부드러운 마른 천으로 닦아 주십시오.

- 제품 고장의 원인이 됩니다.

FaceStation 2는 정전식 화면을 사용합니다. 비 오는 날씨와 같이 습기가 많거나 제품 표면에 물이 많이 묻은 경우 마른 천으로 닦은 뒤 사용하십시오.

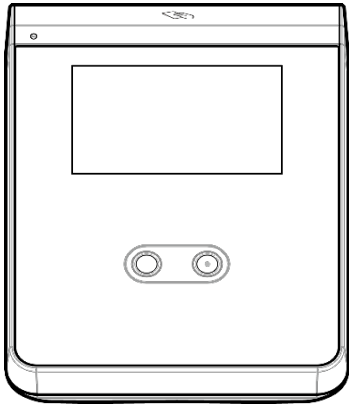
RTC 배터리

잘못된 종류의 배터리로 교체하면 폭발의 위험이 있습니다.

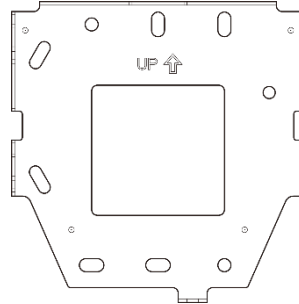
배터리는 거주 지역 또는 국제 폐기물 규정에 따라 폐기하십시오.

시작하기

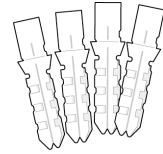
구성품



FaceStation 2



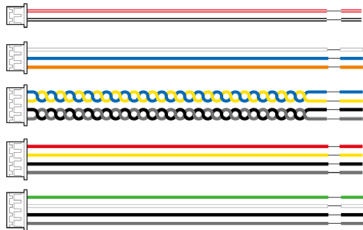
벽걸이용 브래킷



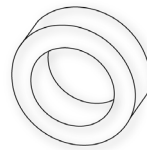
PVC 앵커 x4



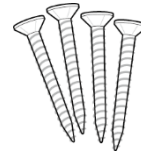
브래킷 고정용 나사
(별 모양)



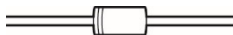
연결 케이블
(2핀 1개, 3핀 1개, 4핀 3개)



페라이트 코어



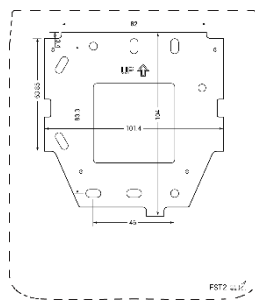
고정용 나사 x4



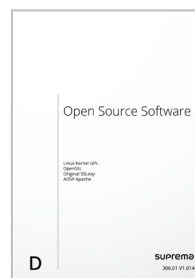
다이오드



120Ω 저항



드릴링 템플릿



오픈소스라이선스 가이드

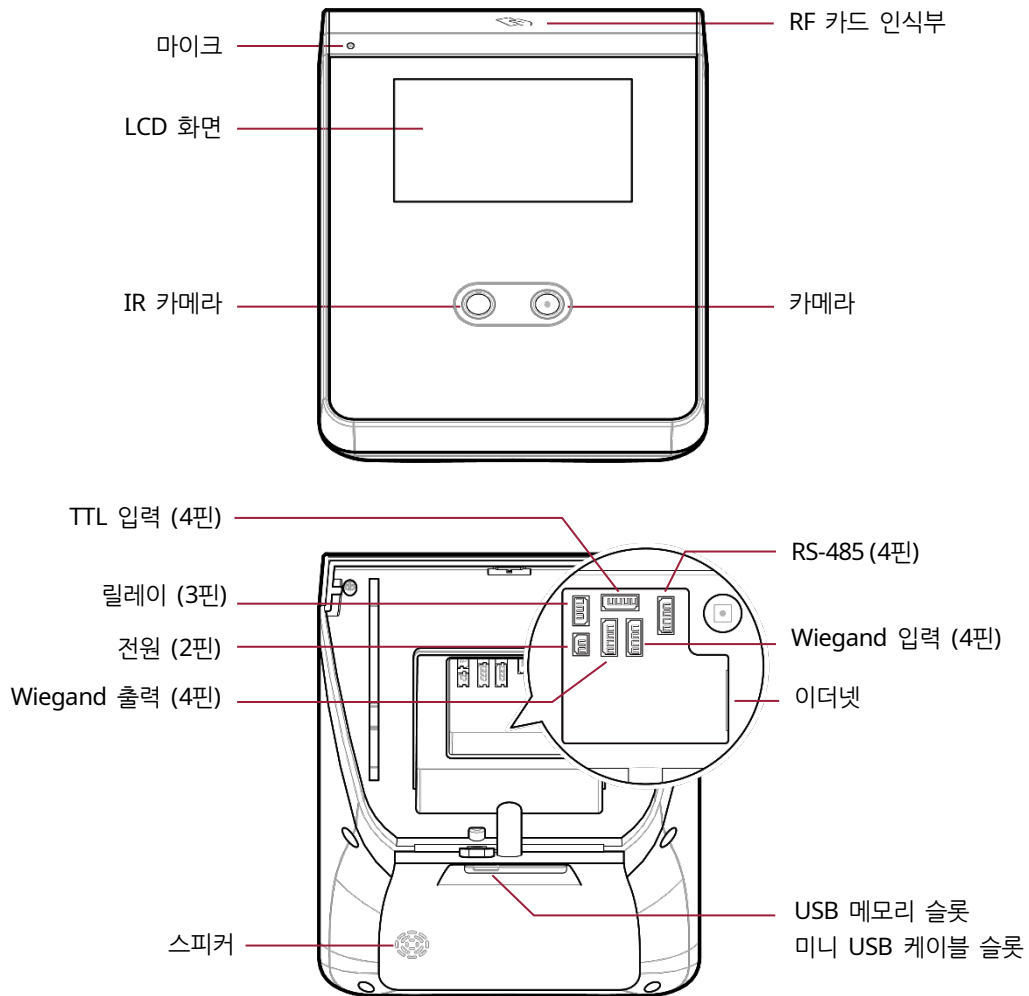


퀵 가이드

알아두기

- 구성품은 설치 환경에 따라 달라질 수 있습니다.
- FaceStation 2 전용 킬링 브래킷은 별매품입니다.
- 브래킷과 제품을 조립할 때 향상된 보안을 위해 제품 고정용 나사 대신 동봉된 브래킷 고정용 나사(별 모양)를 이용할 수 있습니다.
- 제품 사용에 대한 내용은 슈프리마 웹 사이트(www.supremainc.com)에 접속하여 사용자 가이드를 확인하십시오.

각 부분의 명칭 및 기능



명칭	기능 설명
마이크	인터폰이 연결되었을 때 사용자의 음성을 전달합니다.
LCD 화면	동작을 위한 UI를 제공합니다.
IR 카메라	IR 이미지를 촬영합니다.
카메라	실제 이미지를 촬영합니다.
RF 카드 인식부	출입을 위해 카드를 인식시키는 부분입니다.
스피커	소리를 들을 수 있습니다.
USB 메모리 슬롯	USB 메모리를 연결합니다. <ul style="list-style-type: none"> 슈프리마 열화상 카메라(TCM10-FS2)와 USB 메모리는 동시에 사용할 수 없습니다.
미니 USB 케이블 슬롯	추후 지원 예정.
TTL 입력 (4핀)	TTL 입력 케이블을 연결합니다.
RS-485 (4핀)	RS-485 케이블을 연결합니다.
릴레이 (3핀)	릴레이 케이블을 연결합니다.

전원 (2핀)	전원 케이블을 연결합니다.
이더넷	이더넷 케이블을 연결합니다.
Wiegand 입력 (4핀)	Wiegand 입력 케이블을 연결합니다.
Wiegand 출력 (4핀)	Wiegand 출력 케이블을 연결합니다.

케이블 및 커넥터

전원



핀	명칭	색상
1	PWR +VDC	빨간색(흰띠)
2	PWR GND	검은색(흰띠)

릴레이



핀	명칭	색상
1	RLY NO	흰색
2	RLY COM	파란색
3	RLY NC	주황색

RS-485



핀	명칭	색상
1	485 TRXP	파란색
2	485 TRXN	노란색
3	485 GND	검은색
4	SH GND	회색

TTL 입력



핀	명칭	색상
1	TTL IN0	빨간색
2	TTL IN1	노란색
3	TTL GND	검은색
4	SH GND	회색

Wiegand 입출력



핀	명칭	색상
1	WG D0	초록색
2	WG D1	흰색
3	WG GND	검은색
4	SH GND	회색

올바른 얼굴 등록 및 인증 방법

얼굴 등록 시 주의 사항

- 얼굴을 등록할 때 장치와 얼굴의 거리를 40 ~ 80 cm로 유지하십시오.
- 표정이 변하지 않도록 주의하십시오. (웃는 얼굴, 찡그린 얼굴, 윙크 등)
- 화면의 지시에 따르지 않을 경우 얼굴 등록이 오래 걸리거나 실패할 수 있습니다.
- 눈이나 눈썹이 가려지지 않도록 주의하십시오.
- 모자, 마스크, 선글라스, 안대를 착용하지 마십시오.
- 두 명의 얼굴이 화면에 동시에 나타나지 않도록 주의하십시오. 한 번에 한 사람씩 등록하십시오.
- 안경을 착용한 사용자는 안경 착용 전/후 얼굴을 모두 등록할 것을 권장합니다.

얼굴 인증 시 주의 사항

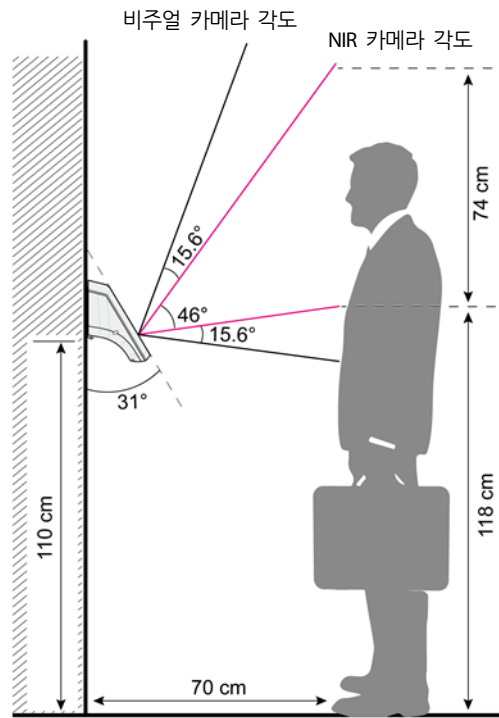
- 장치의 화면에 표시된 안내선 안에 얼굴이 나타나도록 하십시오.
- 착용하던 안경을 바꾼 경우 인증에 실패할 수 있습니다. 안경을 착용하지 않은 얼굴을 등록한 경우 안경을 벗고 얼굴을 인증 하십시오. 안경을 착용한 얼굴만 등록한 경우 기존에 착용하던 안경으로 바뀌어서 인증을 다시 시도하십시오.
- 모자, 마스크, 선글라스, 안대 등으로 얼굴의 일부를 가릴 경우 인증에 실패할 수 있습니다. 눈썹과 얼굴을 모두 장치가 인식할 수 있도록 얼굴을 가리지 마십시오.

설치

브래킷 및 제품 고정

일반 브래킷

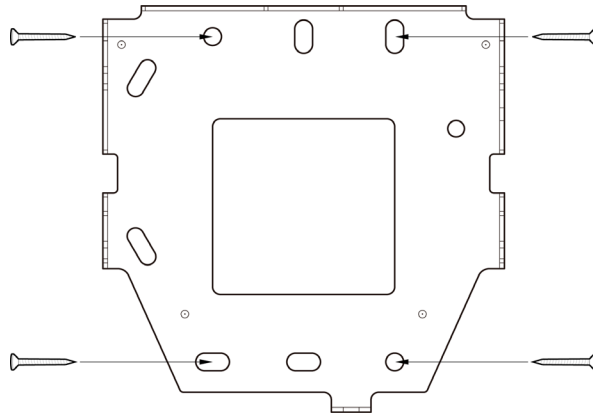
1 제공된 드릴링 템플릿을 이용하여 제품을 장착할 위치를 정하십시오.



알아두기

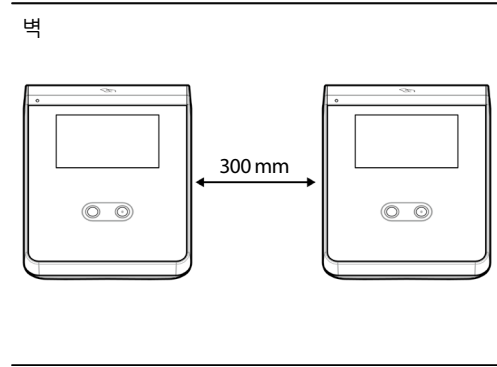
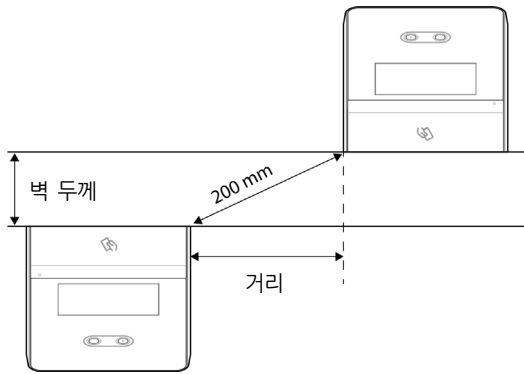
- 장치를 설치할 최적의 높이는 110 cm입니다.
- 장치에 직사광선이 닿지 않는 곳에 설치하십시오.
- 사용자가 얼굴을 인증할 때 얼굴에 직사광선이 닿지 않도록 설치 위치를 조정하십시오.

2 FaceStation 2를 장착할 위치에 브래킷 고정용 나사를 이용하여 브래킷을 단단히 고정하십시오.



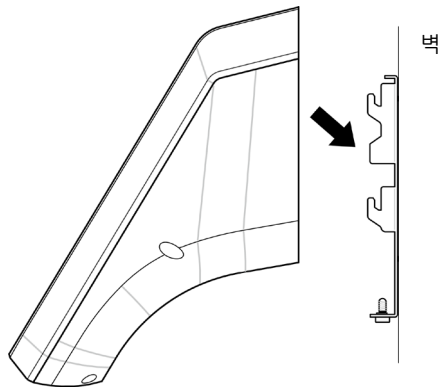
알아두기

- FaceStation 2를 콘크리트 벽에 설치할 경우 드릴로 구멍을 뚫어 PVC 앵커를 끼운 뒤 고정용 나사로 고정하십시오.
- RF 신호 간섭을 피하기 위해 최소 이격 거리를 확인하여 설치하십시오.

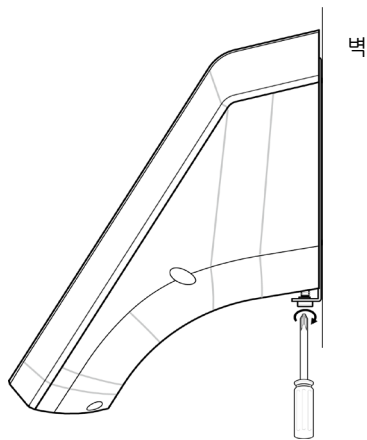


벽 두께	거리
100 mm	283 mm
120 mm	275 mm
150 mm	260 mm

3 고정된 브래킷 위에 FaceStation 2를 장착하십시오.



4 FaceStation 2의 제품 고정용 나사를 돌려 FaceStation 2와 브래킷을 조립하십시오.



틸팅 브래킷

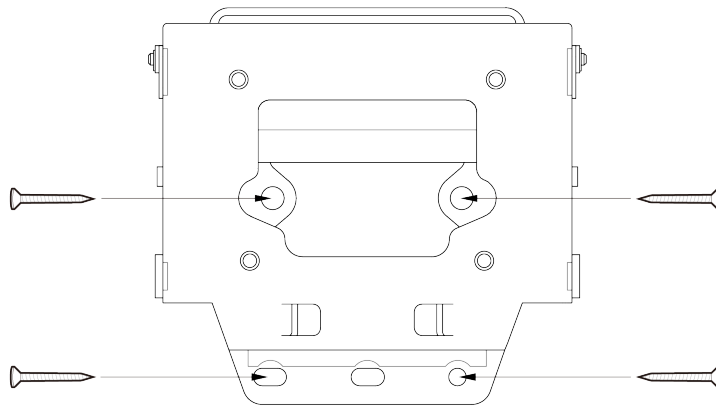
FaceStation 2는 전용 틸팅 브래킷을 이용해 인증 시 각도 조절이 가능하도록 설치할 수 있습니다. FaceStation 2 전용 틸팅 브래킷은 별매품입니다.

1 제공된 드릴링 템플릿을 이용하여 제품을 장착할 위치를 정하십시오.

알아두기

- 장치를 설치할 최적의 높이는 110 cm입니다.
- 장치에 직사광선이 닿지 않는 곳에 설치하십시오.
- 사용자가 얼굴을 인증할 때 얼굴에 직사광선이 닿지 않도록 설치 위치를 조정하십시오.

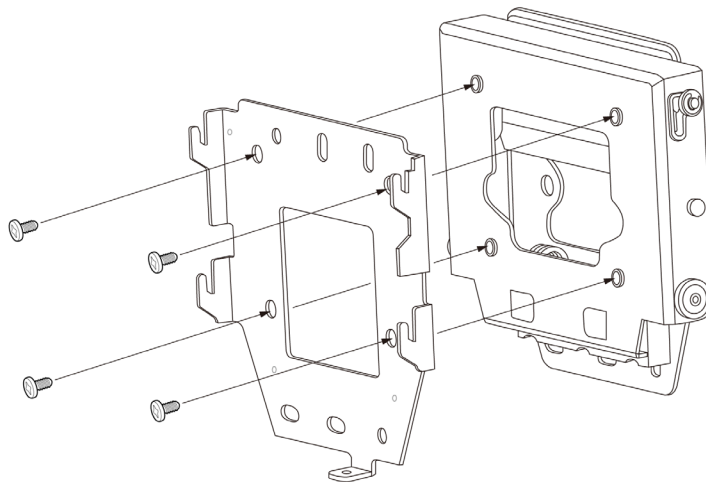
2 FaceStation 2를 장착할 위치에 틸팅 브래킷 고정용 나사를 이용하여 틸팅 브래킷을 단단히 고정하십시오.



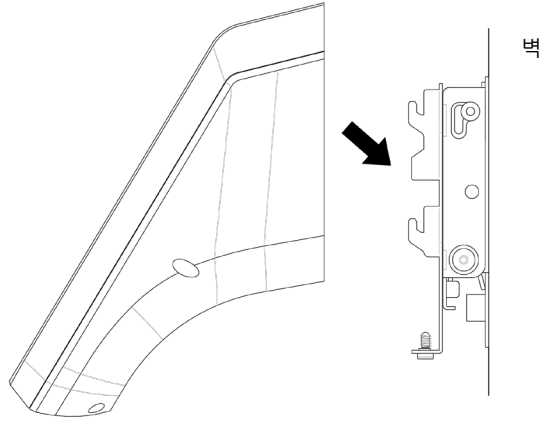
알아두기

- FaceStation 2를 콘크리트 벽에 설치할 경우 드릴로 구멍을 뚫어 PVC 앵커를 끼운 뒤 고정용 나사로 고정하십시오.
- RF 신호 간섭을 피하기 위해 최소 이격 거리를 확인하여 설치하십시오.

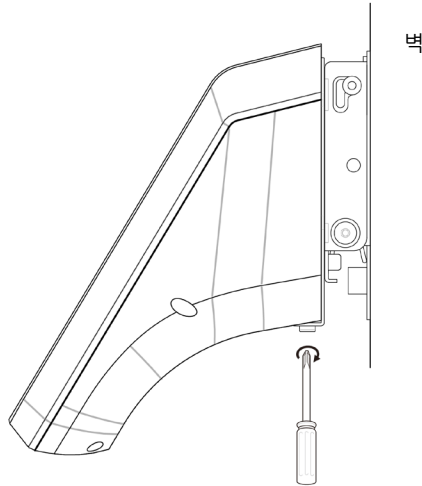
3 틸팅 브래킷 위에 브래킷을 단단히 고정하십시오.



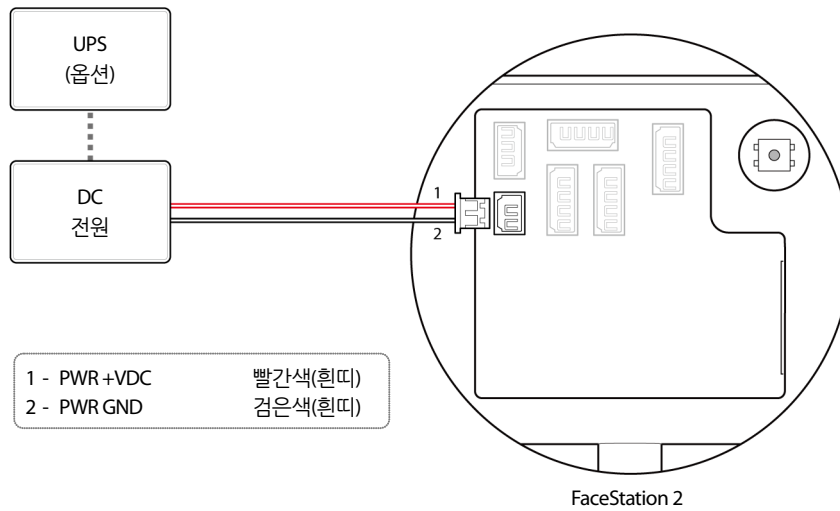
- 4** 고정된 브래킷 위에 FaceStation 2를 장착하십시오.



- 5** FaceStation 2의 제품 고정용 나사를 돌려 FaceStation 2와 브래킷을 조립하십시오.



전원 연결



알아두기

- 전원 어댑터는 DC 24V(± 10%), 최소 2,500mA 이상의 제품으로 IEC/EN 60950-1 승인을 받은 제품을 사용하십시오. 전원 어댑터에 다른 기기를 연결하여 사용하려면 단말기의 소모 전력과 다른 기기에 필요한 소모 전력을 합한 전류 용량 이상의 어댑터를 사용해야 합니다.
- Secure I/O 2, 전기정(전기식 잠금장치), 제품은 반드시 개별 전원을 사용하십시오. 전원을 함께 연결하여 사용하면 장치가 오작동할 수 있습니다.
- 별도의 전원 장치를 사용할 경우 FaceStation 2와 전원 장치 간의 거리에 주의하십시오. 장치와 전원 장치는 최대한 가깝게 설치해야 합니다. 올바르게 연결하지 않을 경우 장치가 오작동할 수 있으므로 주의하십시오. 장치와 전원 장치의 거리가 먼 경우 16 AWG 또는 18 AWG 케이블을 사용할 것을 권장합니다. 사용하는 케이블 규격과 설치 환경에 따라 연결할 수 있는 거리가 다를 수 있습니다.

케이블 규격	최대 연장 길이
16 AWG	150 m
18 AWG	136 m
20 AWG	90 m

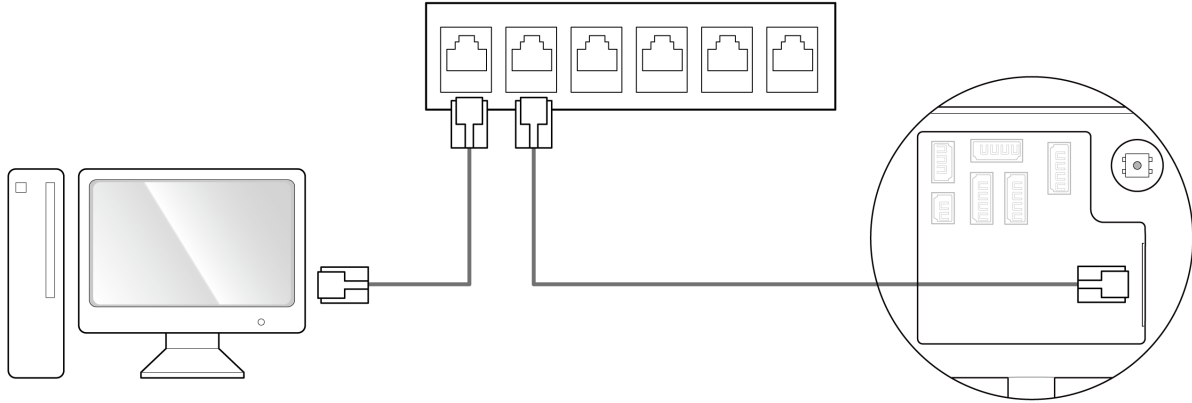
- 전원 어댑터 (DC 24V(± 10%), 2.5A)를 사용할 경우 전원 케이블의 길이를 임의로 연장하지 마십시오.
- CAT5 UTP 2-Wire 케이블을 전원 공급 용도로 사용하지 마십시오.

네트워크 연결

TCP/IP

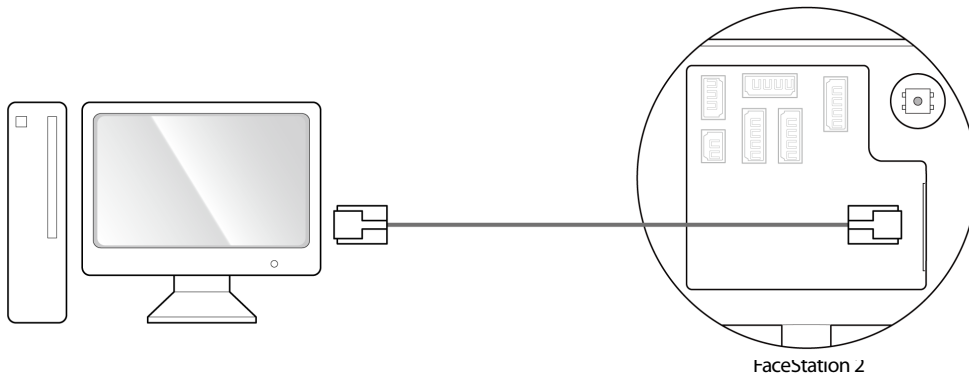
LAN 연결 (허브와 연결)

일반 타입의 CAT-5e 케이블을 사용하여 허브와 연결할 수 있습니다.



LAN 연결 (PC와 직접 연결)

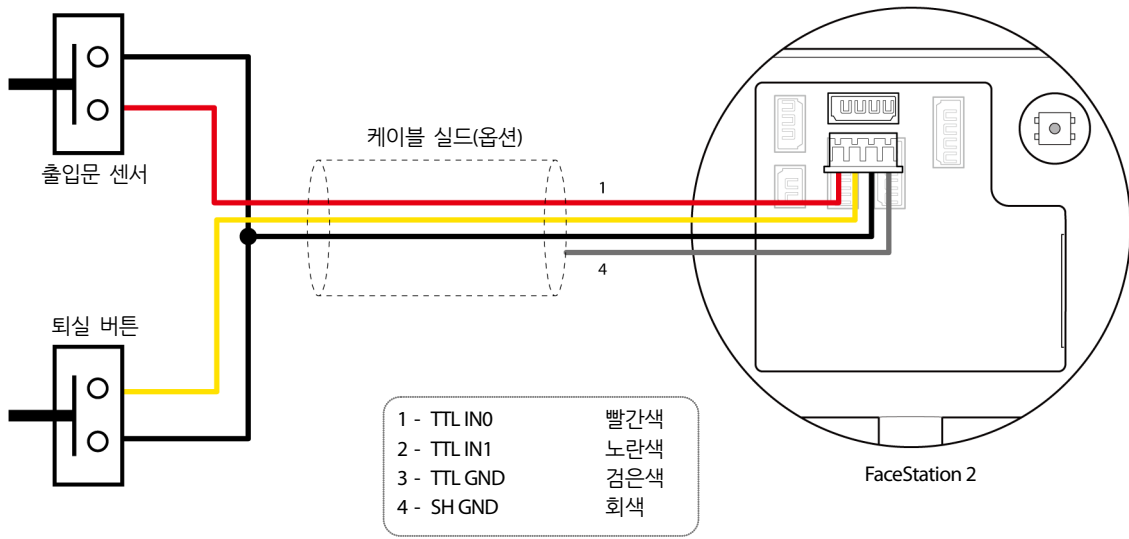
FaceStation 2 는 자동 MDI/MDIX 기능을 가지고 있으므로 크로스 케이블이나 일반 스트레이트 타입의 CAT-5e 케이블로 PC와 직접 연결할 수 있습니다.



알아두기

- 기가비트 이더넷 스위치를 사용할 때 아래 정보를 확인하십시오.
 - Cat5e 비차폐 꼬임선(UTP)을 사용하십시오.
 - 4 쌍(8 선)을 모두 네트워크 연결로 사용하십시오.
 - 네트워크 케이블의 일부 쌍이나 선을 다른 용도로 사용하지 마십시오.

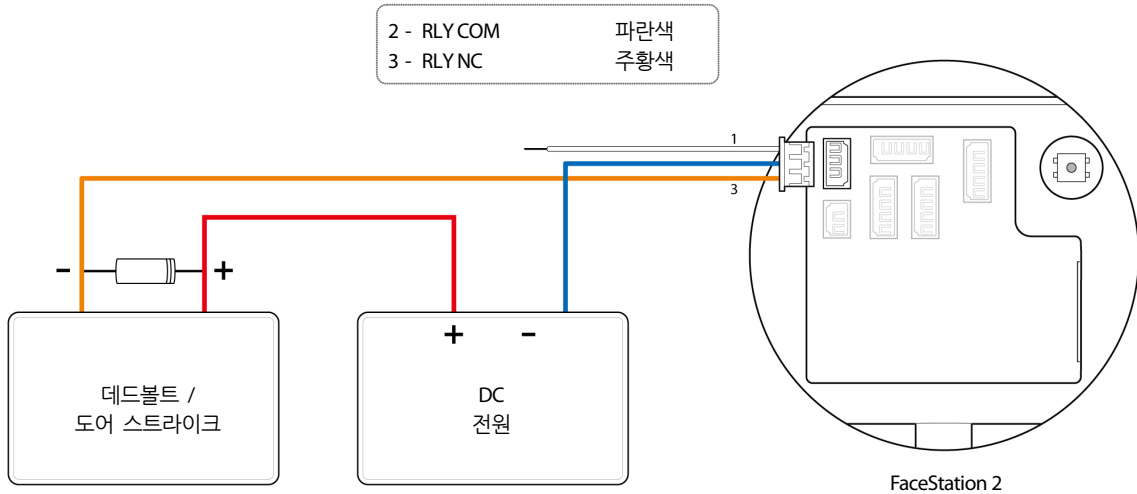
TTL 입력 연결



릴레이 연결

Fail Safe Lock

Fail Safe Lock을 사용하려면 아래 그림과 같이 N/C 릴레이를 연결하십시오. Fail Safe Lock은 정상 시 릴레이 회로에 전류가 흐르며, 릴레이가 동작하여 전류를 일시적으로 차단하면 출입문이 열립니다. 정전이 되거나 외부 요인으로 장치의 전원이 끊길 경우 출입문이 열립니다.

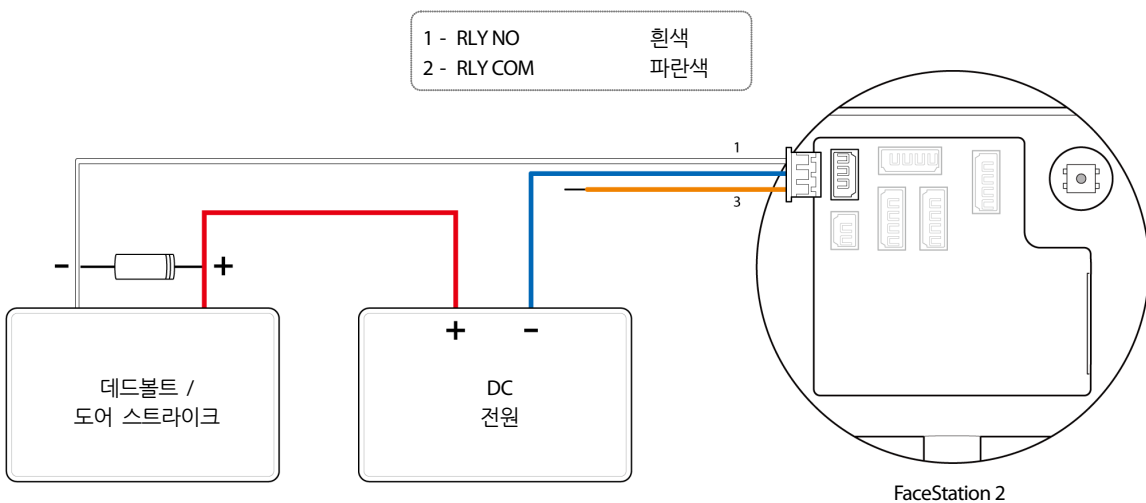


알아두기

- 출입문 잠금 장치가 작동할 때 발생하는 역전류로부터 릴레이를 보호하기 위해 그림과 같이 출입문 잠금 장치 배선 양쪽에 다이오드를 설치하십시오.
- 다이오드의 설치 방향에 주의하십시오. 다이오드는 출입문 잠금 장치와 가깝게 설치하십시오.
- FaceStation 2와 출입문 잠금 장치는 별도의 전원을 사용하십시오.

Fail Secure Lock

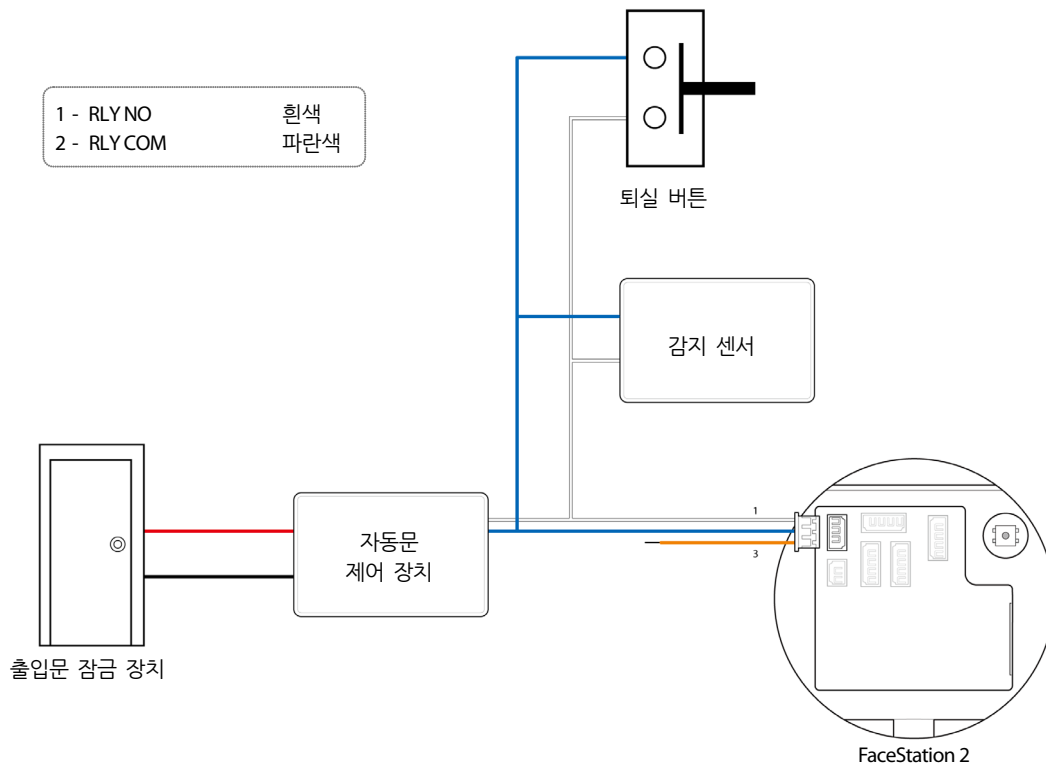
Fail Secure Lock을 사용하려면 아래 그림과 같이 N/O 릴레이를 연결하십시오. Fail Secure Lock은 정상 시 릴레이 회로에 전류가 흐르지 않으며, 릴레이가 동작하여 전류가 흐르면 출입문이 열립니다. 정전이 되거나 외부 요인으로 장치의 전원이 끊길 경우 출입문이 잠깁니다.



알아두기

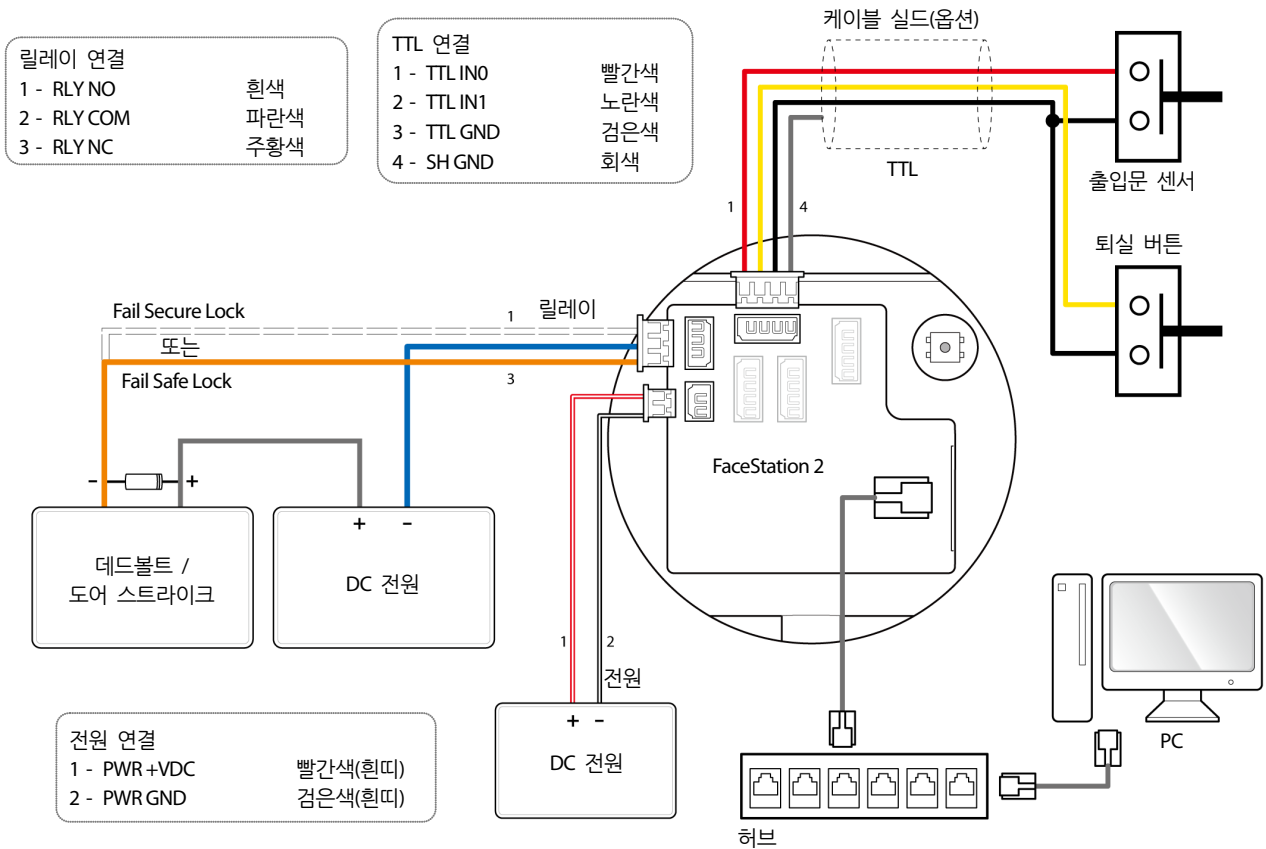
- 출입문 잠금 장치가 작동할 때 발생하는 역전류로부터 릴레이를 보호하기 위해 그림과 같이 출입문 잠금 장치 배선 양쪽에 다이오드를 설치하십시오.
- 다이오드의 설치 방향에 주의하십시오. 다이오드는 출입문 잠금 장치와 가깝게 설치하십시오.
- FaceStation 2와 출입문 잠금 장치는 별도의 전원을 사용하십시오.

자동문 연결



독립형 연결

별도의 I/O 장치를 연결하지 않고 FaceStation 2를 직접 출입문 잠금 장치, 퇴실 버튼, 출입문 센서 등에 연결할 수 있습니다.



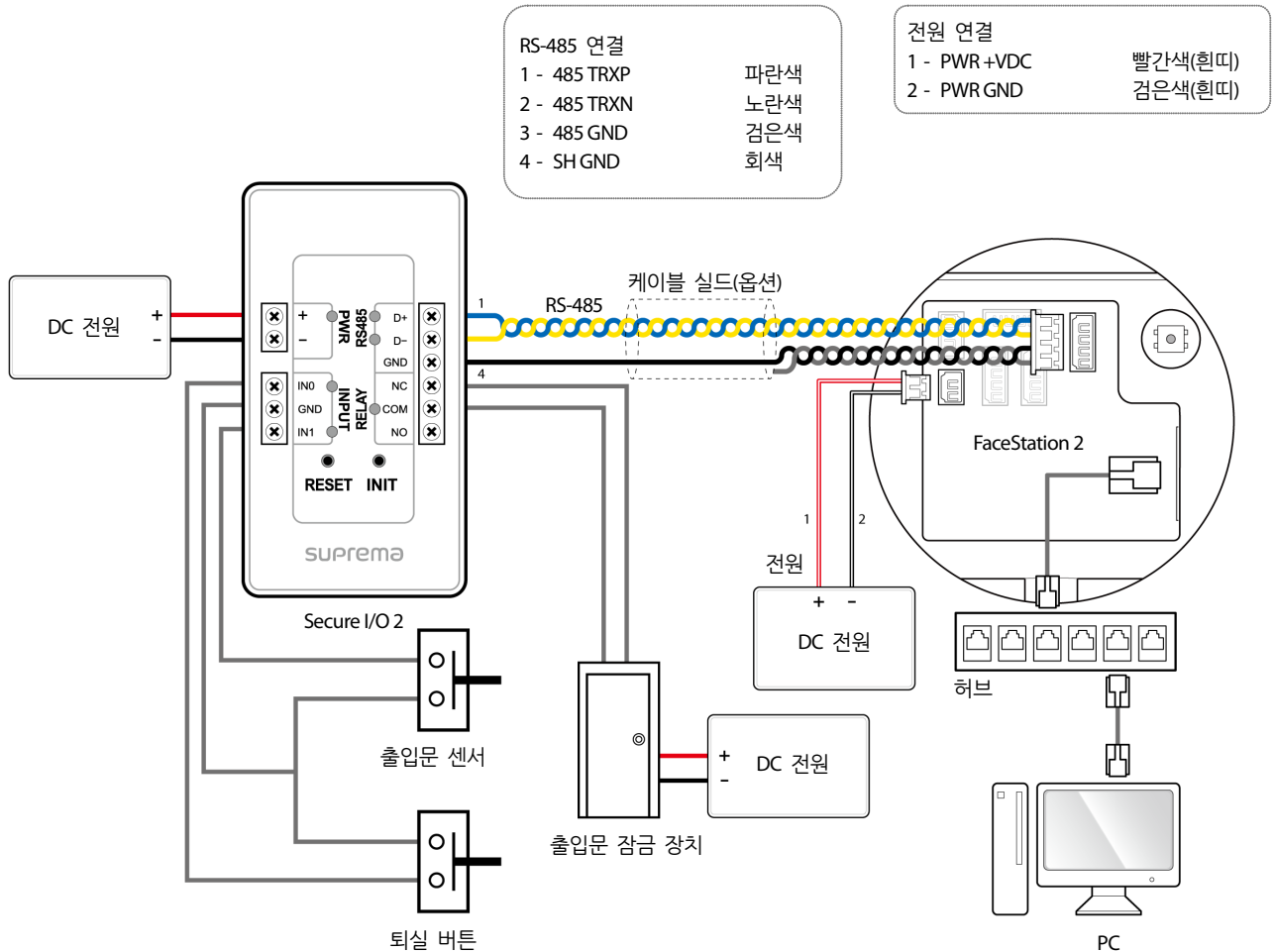
알아두기

- RS-485 케이블로 슬레이브 장치를 연결하여 FaceStation 2를 다중 출입문 제어 장치로 사용할 수 있습니다. 슬레이브 장치는 더미 리더로 사용되며 인증은 마스터 장치에서 수행합니다.
- 지문 인식 장치가 FaceStation 2의 슬레이브 장치로 구성된 경우 다른 FaceStation 2를 슬레이브 장치로 추가할 수 없습니다.
- 지문 인식 장치가 마스터 장치일 때 FaceStation 2를 슬레이브 장치로 추가할 수 없습니다.
- FaceStation 2가 마스터 장치이고 FaceStation 2를 슬레이브 장치로 연결할 때 1대의 FaceStation 2만 슬레이브 장치로 추가할 수 있습니다.
- FaceStation 2가 얼굴 인식 장치의 슬레이브 장치로 구성된 경우 Secure I/O 2와 DM-20을 각각 1대씩 추가로 연결할 수 있습니다.
- FaceStation 2가 얼굴 인식 장치의 슬레이브 장치로 구성된 경우 OM-120을 추가로 연결할 수 없습니다.
- 연결할 수 있는 최대 슬레이브 장치 수는 인증 방법, 사용자 수, 장치 수에 따라 달라지며 슬레이브 장치 수는 인증 속도에 영향을 줍니다.
- 마스터 장치는 31개의 슬레이브 장치를 제어할 수 있습니다. RS-485 대역폭으로 인해 최대 7대의 지문 인식 장치를 연결할 수 있습니다.
- 더 자세한 내용은 슈프리마 기술 지원팀(CS@suprema.co.kr)에 문의하십시오.

Secure I/O 2 연결

FaceStation 2에 I/O 장치인 Secure I/O 2를 RS-485로 연결할 수 있습니다. FaceStation 2 와 Secure I/O 2의 연결이 끊기거나 외부 요인에 의해 FaceStation 2의 전원이 차단되더라도 보안을 유지할 수 있습니다.

- RS-485 케이블은 AWG24, 꼬임선(Twisted Pair), 최대 길이 1.2 km를 사용하십시오.
- RS-485 데이터 체인으로 연결할 경우 종단 저항(120Ω)을 데이터 체인 연결의 양 끝에 연결하십시오. 중간 선로에 연결할 경우 신호 레벨이 작아져 통신 성능이 떨어지므로 반드시 데이터 체인 연결의 양 끝에 연결하십시오.

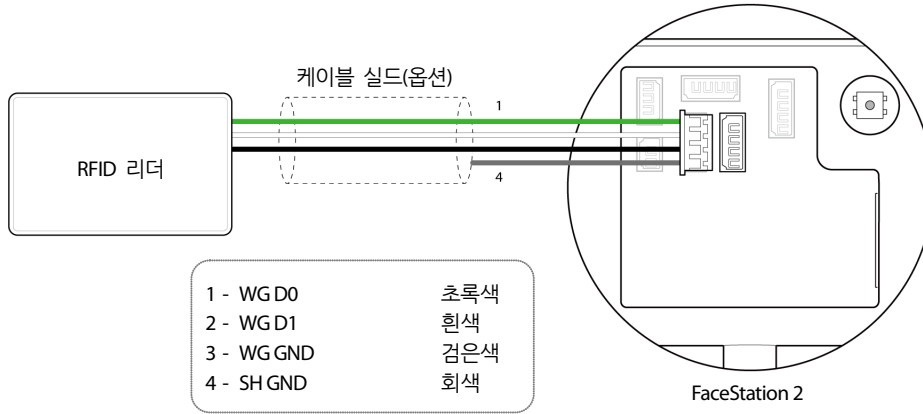


알아두기

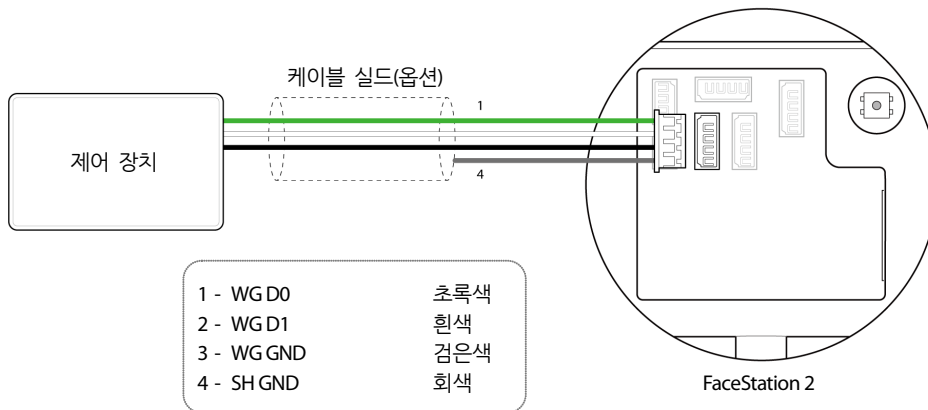
- RS-485 케이블로 슬레이브 장치를 연결하여 FaceStation 2를 다중 출입문 제어 장치로 사용할 수 있습니다. 슬레이브 장치는 더미 리더로 사용되며 인증은 마스터 장치에서 수행합니다.
- 지문 인식 장치가 FaceStation 2의 슬레이브 장치로 구성된 경우 다른 FaceStation 2를 슬레이브 장치로 추가할 수 없습니다.
- 지문 인식 장치가 마스터 장치일 때 FaceStation 2를 슬레이브 장치로 추가할 수 없습니다.
- FaceStation 2가 마스터 장치이고 FaceStation 2를 슬레이브 장치로 연결할 때 1대의 FaceStation 2만 슬레이브 장치로 추가할 수 있습니다.
- FaceStation 2가 얼굴 인식 장치의 슬레이브 장치로 구성된 경우 Secure I/O 2와 DM-20을 각각 1대씩 추가로 연결할 수 있습니다.
- FaceStation 2가 얼굴 인식 장치의 슬레이브 장치로 구성된 경우 OM-120을 추가로 연결할 수 없습니다.
- 연결할 수 있는 최대 슬레이브 장치 수는 인증 방법, 사용자 수, 장치 수에 따라 달라지며 슬레이브 장치 수는 인증 속도에 영향을 줍니다.
- 마스터 장치는 31개의 슬레이브 장치를 제어할 수 있습니다. RS-485 대역폭으로 인해 최대 7대의 지문 인식 장치를 연결할 수 있습니다.
- 더 자세한 내용은 슈프리마 기술 지원팀(CS@suprema.co.kr)에 문의하십시오.

Wiegand 연결

Wiegand input Device로 사용



Wiegand output Device로 사용



제품 사양

구분	항목	규격
크리덴셜	바이오인식	얼굴
	RF 카드	<ul style="list-style-type: none"> FS2-D: 125kHz EM & 13.56MHz MIFARE, MIFARE Plus, DESFire EV1/EV2*, FeliCa, NFC FS2-DS: 125kHz EM & 13.56MHz MIFARE, MIFARE Plus, DESFire EV1/EV2*, FeliCa, NFC FS2-AWB: 125kHz EM, HID Prox & 13.56MHz MIFARE, MIFARE Plus, DESFire EV1/EV2*, FeliCa, iCLASS SE/SR/Seos, NFC, BLE
	RF 인식 거리*	MIFARE/DESFire/iCLASS : 50 mm, EM/HID Prox/FeliCa: 30 mm, BLE: 50 mm
	위조 얼굴 검출	지원
일반	CPU	1.4 GHz Quad Core
	메모리	8GB Flash + 1GB RAM
	LCD 종류	4" TFT 컬러 터치
	LCD 해상도	800 x 480
	소리	24 bit/Voice DSP (에코 캔슬)
	동작 온도	-20°C ~ 50°C
	보관 온도	-40°C ~ 70°C
	동작 습도	0% ~ 80%, 비응축
	보관 습도	0% ~ 90%, 비응축
	카메라 종류	CMOS
	카메라 해상도	720 x 480
	카메라 각도	비주얼 렌즈: 대각선 92.7° IR 렌즈: 대각선 58°
	치수 (W x H x D)	141 mm x 164 mm x 125 mm
	무게	장치: 628 g 브래킷: 74 g (와셔 및 볼트 포함)
인증	CE, FCC, KC, RoHS, REACH, WEEE	
저장 용량	최대 사용자 수 (1:1)	30,000
	최대 사용자 수 (1:N)	4,000
	최대 템플릿 수 (1:1)	900,000
	최대 템플릿 수 (1:N)	120,000
	최대 로그 수	5,000,000
	최대 이미지 로그 수	50,000
인터페이스	Wi-Fi	지원 (Built-in, IEEE 802.11 b/g)
	이더넷	지원 (10/100/1000 Mbps, 자동 MDI/MDI-X)
	RS-485	1채널 마스터/슬레이브 (선택 가능)
	Wiegand	입력 1채널, 출력 1채널
	TTL 입력	입력 2채널
	릴레이	1 개
	USB	USB 2.0 (Host)
	탐퍼	지원
전기 규격	전원	전압: 24 VDC 전류: 최대 2.5 A
	스위치 입력 VIH	최소: 3 V 최대: 5 V
	스위치 입력 VIL	최대: 1 V
	스위치 풀업 저항	4.7 kΩ (입력 단자는 4.7 kΩ으로 풀업되어 있습니다.)

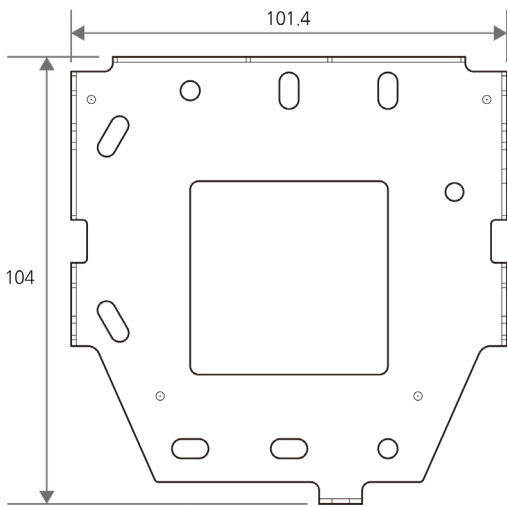
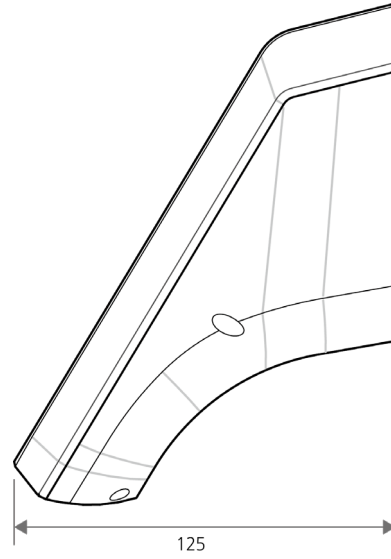
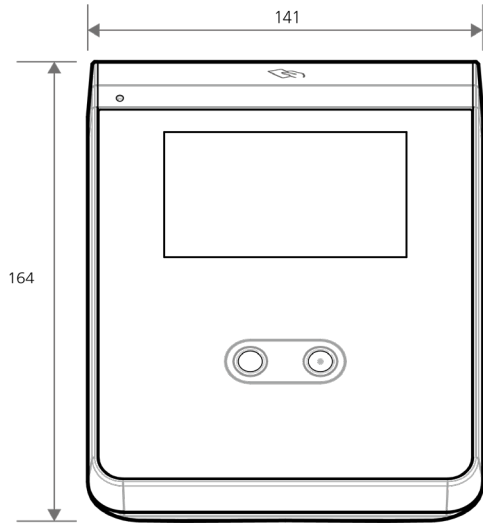
Wiegand 출력 VOH	4.8 V 이상
Wiegand 출력 VOL	0.2 V 이하
Wiegand 출력 풀업 저항	1 kΩ으로 내부 풀업
릴레이	전압: 최대 30 VDC 전류: 1 A, 최대 2 A

* RF 인식 거리는 설치 환경에 따라 다를 수 있습니다.

* DESFire EV2 카드는 DESFire EV1 카드와 하위 호환되므로, DESFire EV1 카드의 기능을 포함하여 CSN 및 스마트 카드 기능이 지원됩니다.

제품 치수

(단위: mm)



FCC 준수 정보

이 기기는 FCC 규제의 Part 15를 준수합니다.

작동은 다음의 두 조건을 따릅니다.

- (1) 이 기기는 해로운 전파 방해를 발생시키지 않습니다.
- (2) 이 기기는 원치 않는 작동을 일으키는 전파 방해를 포함한 어떠한 전파 방해도 수용합니다.

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Version 3, 29 June 2007

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