



DirectIP Gigabit PoE Switch

사용설명서

DH-2328PF

사용설명서를 읽기 전에

본 사용설명서는 ㈜아이디스의 제품인 DirectIP Gigabit PoE Switch의 설치 및 운영을 위한 기본 설명서입니다.

본 기기를 처음 대하는 사용자는 물론, 이전에 동급의 장비를 많이 다루어 본 사용자라도 사용 전에는 반드시 본 사용설명서의 내용을 읽어 본 뒤 설명서 내의 주의 사항에 유의하여 제품을 다루는 것이 좋으며, 안전상의 경고 및 주의 사항은 제품을 올바르게 사용하여 위험이나 재산상의 피해를 막기 위한 내용으로 반드시 지켜주시기 바랍니다.

읽으신 후에는 반드시 언제나라도 볼 수 있는 곳에 보관해 주세요.



- 본 사용설명서를 무단으로 복제할 수 없습니다.
- 규격품 이외의 제품을 사용하여 발생한 손상과 사용설명서 사용방법을 지키지 않고 제품을 손상 시켰을 경우에는 당사에 책임지지 않으므로 주의하시기 바랍니다
- DirectIP Gigabit PoE Switch를 처음 사용해 보거나, 사용이 익숙하지 않은 사용자는 설치하거나 사용하는 중에 반드시 구입처로 문의하여 전문 기술자의 도움을 받을 것을 권장합니다.
- 시스템의 기능 확장성이나 고장수리를 위해 시스템을 분해할 경우에는 반드시 구입처로 문의하여 전문가의 도움을 받아야 합니다.
- 본 기기는 업무용으로 전자파적합등록을 한 기기이오니 판매자 또는 사용자는 이 점을 주의하시기 바라며, 만약 잘못 판매 또는 구입하였을 때에는 가정용으로 교환하시기 바랍니다.

안전을 위한 주의 사항 표기

| 아이콘 | 표기 | 의미 |
|-----|----|--|
| | 경고 | 지시사항을 위반할 경우 사람이 사망하거나 중상을 입을 가능성이 있는 심각한 내용입니다. |
| | 주의 | 지시사항을 위반할 경우 사람이 부상을 입거나 물적 손해 발생이 예상되는 내용입니다. |

본문 표기

| 아이콘 | 표기 | 의미 |
|-----|----|------------------------------------|
| | 주의 | 기능 동작과 관련된 내용으로 반드시 알아두어야 할 내용입니다. |
| | 참고 | 기능 동작에 도움이 되는 내용입니다. |

안전을 위한 주의 사항

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



경고

지시사항을 위반했을 때 심각한 상해가 발생하거나 사망에 이를 가능성이 있는 경우

설치 관련

설치하기 전에 반드시 본 기기의 전원을 끄고 전원 플러그를 동시에 여러 개 꽂아 사용하지 마세요.

- 이상 발열 및 화재, 감전의 위험이 있습니다.

온도가 너무 높은 곳이나 낮은 곳, 습기가 많은 곳에 설치하지 마세요. 또한 물 또는 습기 등의 방수가 되지 않는 곳에 노출시키지 마세요.

- 화재의 원인이 될 수 있습니다.

직사광선이 비치지 않는 서늘한 장소에 설치하고 적정 온도를 유지해 주세요. 촛불, 난방 기구 등 열기구와 가까운 곳에 설치하지 마세요.

- 화재의 위험이 있습니다.

본 기기 내부에 고전압 부위가 있으므로 임의로 뚜껑을 열거나, 분해, 수리, 개조하지 마세요.

- 이상 작동으로 인해 화재, 감전, 상해의 위험이 있습니다.

기기 뒷면은 연결 단자들이 돌출되어 있어 벽에 너무 가깝게 설치하면 케이블이 무리하게 구부러지거나 눌러져 파손될 수 있으므로 벽에서 15cm 이상 거리를 유지하여 설치하세요

- 화재, 감전, 상해의 원인이 됩니다.

습기, 먼지, 그을음 등이 많은 곳에는 설치하지 마세요

- 감전, 화재의 원인이 됩니다.

설치되는 장소는 먼지가 없도록 항상 깨끗하게 유지하세요. 기기를 청소할 때에는 반드시 마른 수건으로 닦아 주고, 물, 신나, 유기 용제를 사용하지 마세요.

- 기기의 표면을 상하게 할 우려가 있고, 고장 및 감전의 위험이 있습니다.

제품을 물이 떨어지거나 튀는 곳에 방치시키지 말고, 꽃병처럼 물이 들어있는 것을 제품 위에 올려 놓지 마세요.

- 화재, 감전, 상해의 원인이 됩니다.

전원 관련

본 기기의 작동을 위한 압력 전압은 전압 변동 범위가 규정 전압의 10% 이내이어야 하며, 전원 콘센트는 반드시 접지가 되어 있어야 합니다. 전원 케이블을 연결하는 콘센트에는 헤어 드라이기, 다리미, 냉장고 등의 전열 기구를 같이 사용하지 마세요.

- 이상 발열 및 화재, 감전의 원인이 됩니다.

전원 케이블을 무리하게 구부리거나 무거운 물건에 눌러 파손되지 않도록 주의하세요.

- 화재의 원인이 됩니다.

전원 케이블을 당겨 빼거나 젖은 손으로 전원 플러그를 만지지 마세요. 전원 플러그의 구멍이 헐거울 경우 전원 플러그를 꽂지 마세요.

- 화재 및 감전의 위험이 있습니다.

사용 관련

제품 위에 물, 커피, 음료수 등과 같은 액체가 담긴 그릇을 올려 놓지 마세요.

- 액체가 쏟아져 제품 내부로 들어가면 고장 및 화재의 원인이 됩니다.

습기 찬 바닥, 접지되지 않은 전원 확장 케이블, 피복이 벗겨진 전원 케이블, 안전 접지의 결여 등의 위험한 상황에 노출되지 않도록 주의하세요. 문제가 발생할 경우 구입처나 전문가에게 문의하세요.

- 화재 및 감전의 위험이 있습니다.

이상한 소리가 나거나 냄새가 날 때에는 즉시 전원 플러그를 뽑고 구입처나 서비스 센터로 문의하세요.

- 화재, 감전의 위험이 있습니다.



주의

지시사항을 위반했을 때 경미한 상해나 제품 손상이 발생할 수 있는 가능성이 있는 경우

설치 관련

강한 자성이나 전파가 있는 곳, 충격이 있는 곳, 라디오나 TV 등의 무선 기기에 근접한 곳에는 설치하지 마세요.

- 자석류나 전파, 진동이 없는 곳에 설치하세요.

밀폐되지 않고 바람이 잘 통하는 곳에 설치하고 시스템 운영실의 공기를 적절히 순환시키는 것이 좋습니다

- 주변 환경 요소에 의한 고장의 원인이 됩니다. 뒷면은 15cm 이상, 옆면은 5cm 이상 간격을 두고 설치하세요.

평평하고 안정된 장소에 설치하고 수직으로 세우거나 비스듬히 놓고 사용하지 마세요.

- 기기가 넘어지거나 떨어질 경우, 고장의 원인이 되며 상해의 위험이 있습니다.

사용자가 전원 플러그를 쉽게 조작할 수 있는 곳에 설치하세요.

- 제품에 심각한 이상 및 화재 발생 시 전원 플러그를 제거하여 위험 요소를 쉽게 제거할 수 있도록 하세요.

강한 충격이나 진동이 없는 곳에 설치하세요.

- 고장의 원인이 됩니다.

사용 관련

통풍을 위해서 뚫린 홈에 도전성 물체가 빠지지 않도록 주의하세요.

- 고장의 원인이 됩니다.

제품 위에 무거운 물건을 올려 놓지 마세요.

- 고장의 원인이 됩니다.

제품 구동 중에는 전원 플러그를 뽑지 말고 제품을 움직이거나 이동시키지 마세요.

- 고장의 원인이 됩니다.

광케이블 연결 시 반드시 전원이 꺼진 상태에서 연결하세요.

광케이블을 연결하기 전에 미리 광케이블의 고무 뚜껑을 벗기지 마세요. 뚜껑은 광케이블이 오염 물질에 노출되지 않도록 합니다. 또한 고무 뚜껑은 벗긴 후 다음 사용을 위해 잘 보관하세요.

광케이블 연결 시 광케이블의 끝이나 케이블을 통해 송수신되는 레이저에 직접적으로 눈을 대거나 쳐다보지 마세요.

장비의 동작 상태를 수시로 확인하여 이상이 있을 경우 즉시 구입처나 서비스 센터에 문의하세요.

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제1장 - 제품 소개

제품의 특징점

본 제품은 다중 포트에 IEEE 802.3af 및 IEEE 802.3at Power over Ethernet(PoE)를 지원하는 DirectIP 기반의 Gigabit Switch로서 다음과 같은 특징을 가지고 있습니다.

- **DirectIP 기능**

- 자동 네트워크 IP 설정 기능 제공
- DirectIP NVR(Network Video Recorder)에 각 포트의 정보 제공

- **PoE 기능**

- IEEE 802.3af/at 규격 지원 (IEEE 802.3af/at compliant)
- 이더넷 케이블들을 통한 전력 공급 가능 (Power to the application over Ethernet cable)
- 전력 중앙 제어를 통한 네트워크 가용성 증대
- PoE Alternate A 방식의 전원 공급

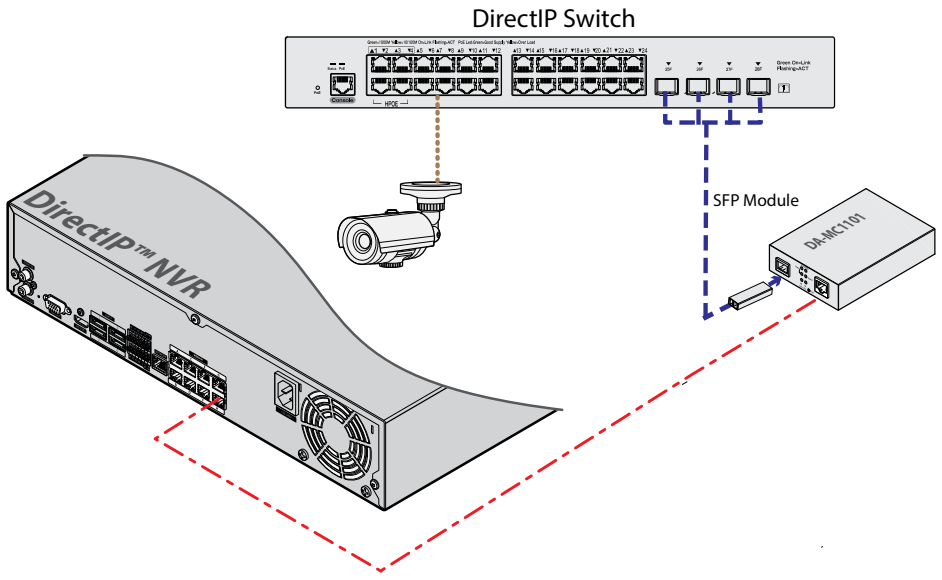


1, 2, 3, 6번 데이터 라인 상에 전원이 같이 공급됨 (Power feeding over 1/2 & 3/6 data twisted)

- **고성능의 안정화된 인터페이스**

- 서비스 포트와 업링크 포트 모두 1Gbps 속도 지원

DirectIP Gigabit PoE Switch를 이용한 제품 연결



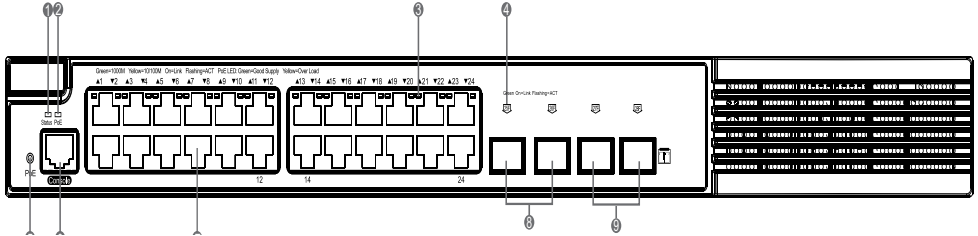
구성품 확인

제품 구입 후 포장을 벗겨낸 후 다음의 구성품이 모두 포함되어 있는지 확인하세요.

- DH-2328PF 본체
- 전원 케이블
- 제품 매뉴얼
- 랙 장착용 Bracket 2개
- Bracket 부착용 나사 6개
- 접지 Wire 1개
- Shedding Clamp for Power Cable 1개
- Foot Pad 4개

각 부분의 명칭 및 기능

전면 패널



| | | | | | |
|---|---------------------------------|---|-------------------|---|-----------------------------|
| ① | 시스템 상태 LED | ② | PoE 상태 LED | ③ | 10/100/1000Base-T 포트 상태 LED |
| ④ | 파이버 포트 상태 LED | ⑤ | PoE 모드 스위치오버 버튼 | ⑥ | 콘솔 포트 |
| ⑦ | 10/100/1000Base-T 자동 감지형 이더넷 포트 | ⑧ | 1000Base-X SFP 포트 | ⑨ | 1000Base-X SFP 포트 |

제1장-제품소개

10/100/1000Base-T 자동 감지형 이더넷 포트-(RJ-45 서비스 포트)

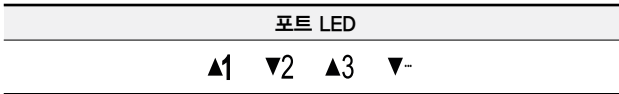
포트번호 1~24는 PoE 기능을 제공하는 RJ-45 포트입니다. 네트워크 카메라를 이 포트 중 하나에 연결할 수 있습니다.



- PD 네트워크 카메라는 별도의 외부 전원 입력이 없어도 신호선을 이용하여 전원을 공급받을 수 있습니다.
- 각 포트는 Auto-MDI/MDI-X 감지 기능을 지원합니다.
- 네트워크 속도에 따라 다른 모드로 동작합니다. (10/100Mbps: full/half duplex 모드, 1000Mbps: full duplex 모드)

RJ-45 서비스 포트 LED

RJ-45 서비스 포트의 상태 정보를 보여주는 LED입니다. 좌측부터 우측 방향으로 순서대로 각 포트 번호와 매핑이 됩니다.



- 포트에 연결된 디바이스의 연결 및 통신 속도에 따라 LED의 색깔이 표시됩니다.
- 각 LED는 PoE 모드 스위치 버튼의 동작 상태에 따라 LNK/ACT 상태와 PoE 상태를 구분하여 보여줍니다.

1000Base-X SFP 포트 (SFP 업링크 슬롯)

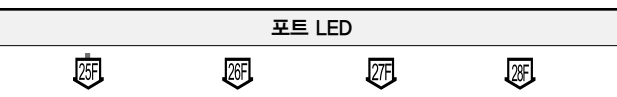
SFP 업링크 포트는 광 케이블을 이용하여 장거리에 위치한 상위 장비와 연결할 때 사용하는 포트입니다. 다중의 네트워크 장비를 케스케이딩(cascading) 형태로 연결하는데 유용합니다.



- 업링크 용도로 사용하지 않을 경우에는 서비스 포트로도 활용이 가능합니다.
- 각 포트들은 Full Duplex 모드로만 동작합니다.
- SFP 업링크 포트에 연결될 수 있는 SFP 모듈은 **제3장 - 기타 정보의 지원 SFP 트랜시버 (Transceiver) 모듈 리스트** 부분을 참조하세요.

SFP 업링크 포트 LED

SFP 업링크 포트의 상태 정보를 보여주는 LED입니다.



- 포트에 연결된 디바이스의 연결 및 통신 속도에 따라 LED의 색깔이 표시됩니다.

콘솔 포트

콘솔 포트는 지원하지 않습니다.

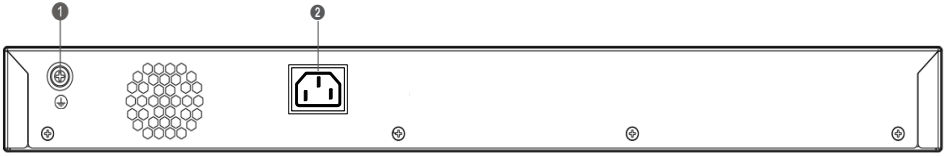
PoE 모드 스위치 버튼

PoE 모드 스위치 버튼을 2초 이상 길게 누르면 표시 모드가 PoE 모드와 Port 속도 모드간에 전환됩니다.

<LED 상태 정보>

| LED | 패널 식별 | 상태 | 상세 설명 |
|---------------------------|-------|-------|--|
| 시스템 상태 LED | 상태 | 꺼짐 | 스위치에 전력이 공급되고 있지 않음 |
| | | 녹색 점멸 | 시스템이 초기화 중임 감박임이 계속되는 경우, 이상이 발생했다는 신호임 |
| | | 녹색 점등 | 스위치가 정상 작동 중임 |
| | | 황색 점등 | 온도 경고 스위치의 작업 환경을 즉시 점검해야 함 |
| | | 적색 점등 | 스위치가 오작동 중임 |
| PoE 상태 LED | PoE | 주황 점등 | 스위칭 상태를 나타냄 |
| | | 황색 점등 | PoE 상태를 나타냄 |
| 1000 Mbps RJ-45 포트 상태 LED | 1-24 | 꺼짐 | 포트가 연결되어 있지 않음 |
| | | 녹색 점등 | 포트가 연결되어 있지 않음 |
| | | 녹색 점멸 | 포트가 1000 Mbps로 트래픽을 수신하거나 전송하고 있음 |
| | | 황색 점등 | 포트가 10/100 Mbps로 연결되어 있음 |
| | | 황색 점멸 | 포트가 10/100 Mbps로 트래픽을 수신하거나 전송하고 있음 |
| RJ45 포트 PoE 상태 LED | 1-24 | 꺼짐 | PoE가 활성화되어 있지 않음 |
| | | 녹색 점등 | PoE가 활성화되어 있음. 포트가 정상 작동 중임 |
| | | 황색 점등 | PoE 포트가 비정상 작동 중임 |
| 1000 Mbps SFP 포트 상태 LED | 25-28 | 꺼짐 | 포트가 연결되어 있지 않음 |
| | | 녹색 점등 | 포트가 1000 Mbps로 연결되어 있음 |
| | | 녹색 점멸 | 포트가 1000 Mbps로 트래픽을 수신하거나 전송하고 있음 |

후면 패널



| | |
|---------|----------|
| ① 접지 단자 | ② 전원 커넥터 |
|---------|----------|

① 접지 단자

접지 단자는 사용자가 제품에 접촉 시 발생할 수 있는 감전 사고를 예방하기 위해 접지선을 연결하는 부분입니다.



접지선 연결 방법은 **제 2장 - 설치의 접지** 부분을 참조하세요.

② 전원 커넥터

전원 케이블을 네트워크 스위치의 전원 커넥터에 연결합니다. 본 제품은 전원 버튼이 없으므로 전원이 연결되자마자 켜집니다.

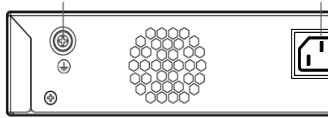


- 전원 케이블은 잘 배선하여 발에 걸리지 않도록 하고, 케이블이 가구에 의해 벗겨지지 않도록 주의하세요.
- 전원 케이블을 양탄자나 카펫 아래에 설치하지 마세요.
- 전원 케이블은 접지를 가지고 있으나, 만약 콘센트가 접지 코드를 가지고 있지 않다고 해서 플러그를 변형하면 안됩니다.
- 하나의 콘센트에 너무 많은 장치를 끼워 과부하가 생기지 않도록 주의하세요.

제2장 - 설치

접지

사용자는 감전을 예방하기 위해 반드시 접지를 시켜야 합니다. 접지를 하는 방법은 아래 설명을 참조하세요.



연결 방법

- 1 제품 뒷면 전원 스위치 옆에 있는 접지선 연결 나사가 연결되어 있는 부분에서 나사를 해체하세요.
- 2 제공된 접지선을 접지선 연결 부위에 나사로 다시 연결하여 완전히 고정시키세요.
- 3 제품에 연결한 접지선의 랙 또는 기타 접지 연결부에 연결하세요.

포트 연결

DirectIP NVR에 연결

UTP 케이블을 이용하는 경우

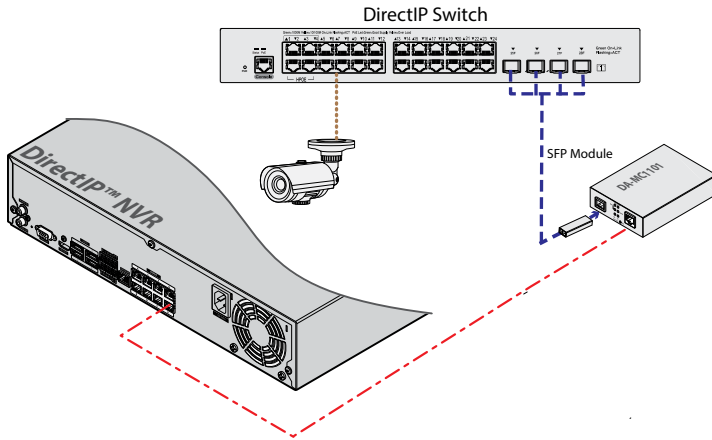
- 1 DirectIP NVR의 **VIDEO IN** (비디오 입력) 포트와 본 제품 **RJ-45 업링크** 포트를 UTP 케이블의 RJ-45 커넥터로 연결하세요.
- 2 **RJ-45 업링크** 포트의 LED 상태를 확인하여 연결이 정상적으로 되었는지 확인하세요.

광케이블을 이용하여 원거리 상에서 연결하는 경우

- 1 DirectIP NVR의 **VIDEO IN** (비디오 입력) 포트와 DA-MC1101¹⁾의 **RJ-45 포트**를 UTP 케이블의 RJ-45 커넥터로 연결하세요.
- 2 DA-MC1101의 **SFP 슬롯**에 SFP Module을 삽입하고, 광섬유 케이블의 한쪽을 연결하세요.
- 3 본 제품 **SFP 업링크 슬롯**에 SFP Module을 삽입하고, 광섬유 케이블의 다른 쪽을 연결하세요.
- 4 **SFP 업링크 포트**의 LED 상태 및 DA-MC1101의 **TX, FO**의 LED 상태를 확인하여 연결이 정상적으로 되었는지 확인하세요.



DA-MC1101¹⁾ (10/100/1000BASE-T to Gigabit Fiber Media Converter)은 Gigabit 네트워크 구성 요구를 충족시키기 위한 DIS의 컨버터 제품입니다.

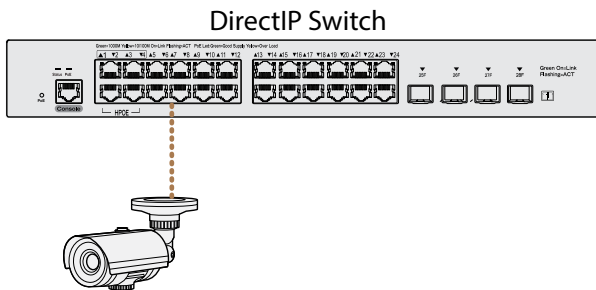


DirectIP 카메라에 연결

- 1 본 제품 RJ-45 서비스 포트와 네트워크 카메라의 RJ-45 포트를 UTP 케이블의 RJ-45 커넥터로 연결하세요.
- 2 RJ-45 서비스 포트의 LED 상태를 확인하여 연결이 정상적으로 되었는지 확인하세요.



PoE 카메라는 UTP 케이블을 통해 전원을 공급받을 수 있습니다.



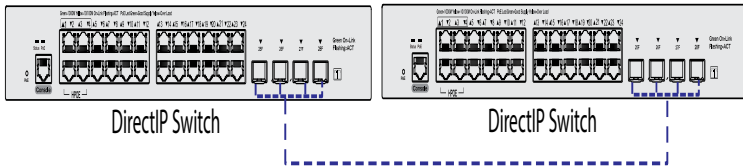
다중 캐스케이딩(Cascading) 연결

UTP 케이블을 이용하는 경우

- 1 다중 캐스케이딩 연결을 할 첫번째 본 제품과 두번째 본 제품의 **RJ-45 업링크 포트**를 UTP 케이블의 RJ-45 커넥터로 서로 연결하세요.
- 2 **RJ-45 업링크 포트**의 LED 상태를 확인하여 두 제품의 연결이 정상적으로 되었는지 확인하세요.

광케이블 이용하여 원거리 상에서 연결하는 경우

- 1 다중 캐스케이딩 연결을 할 첫번째 본 제품과 두번째 본 제품의 **SFP 업링크 슬롯**에 SFP Module 을 삽입하고 광섬유 케이블로 서로 연결하세요.
- 2 **SFP 업링크 포트**의 LED 상태를 확인하여 연결이 정상적으로 되었는지 확인하세요.



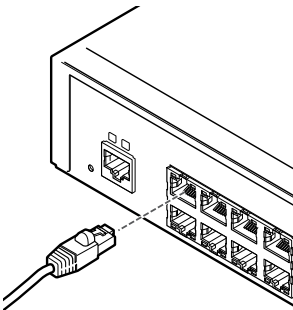
포트 연결 시 주의 및 참고 사항



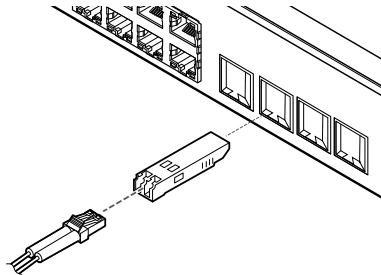
- UTP 케이블의 길이는 100m 이내로 합니다.
- 본 제품은 SFP 업링크 포트와 관련하여 시그널 전달을 위해 레이저를 사용합니다. 이 레이저는 Class 1 레이저 형식 승인에 적합한 것으로 정상적인 작동 중일 경우 눈에 위험은 없습니다. 그러나 안전을 위해 제품 전원이 켜져있을 때는 포트를 직접적으로 쳐다보지 마세요.
- 케이블을 연결하기 전에 미리 광 케이블의 고무 뚜껑을 벗기지 마세요. 뚜껑은 광 케이블이 오염 물질에 노출되지 않도록 하세요.
- Dual-core SFP 모듈을 사용하는 경우 사용자의 RX 포트는 상대 장비의 TX 포트와 연결되고, 사용자의 TX 포트는 상대 장비의 RX 포트와 연결되었는지 확인하세요.



- 본 제품 10/100/1000BASE-T 포트는 RJ-45 커넥터의 Category 5 이상의 UTP 케이블 사용을 권장합니다. 각 포트는 자동으로 MDI/MDIX 커넥터를 인식하기 때문에 다른 장비의 TX 포트와 연결할 때 Crossover 케이블을 사용할 필요가 없습니다.
- 광섬유 케이블을 통해 500m ~ 10Km까지 연결 거리를 연장할 수 있습니다. 거리는 사용 SFP 모듈에 따라 달라질 수 있습니다.
- 제품에 연결할 광케이블은 안전을 위해 최대 작동 온도가 본체의 최대 작동 온도(50℃)보다 높거나 같은 것으로 선택하세요.
- 광케이블이 연결되는 포트가 깨끗한지 확인하세요. 포트가 오염되어 있을 경우 광신호 전송이 제대로 이루어지지 않을 수 있습니다. 포트를 청소할 때는 깨끗한 티슈나 면봉에 약간의 에탄올을 묻혀 부드럽게 닦아주세요.



[10/100/1000BASE-T 포트 연결]



[1000BASE-X SFP 포트 연결]

제3장 - 기타 정보

지원 SFP 트랜시버(Transceiver) 모듈 리스트

SFP 포트에 사용 가능한 SFP 모듈의 종류입니다.

| Standard | 지름 (um) | 파장 (nm) | 거리 | 모드 | 커넥터 | SFP 모듈 |
|-------------|----------|---------|------|--------|-----|--------------------------|
| 1000BASE-SX | 50/125 | 850 | 500m | Multi | LC | Finisar FTLF8519P3BNL |
| | 62.5/125 | 850 | 300m | Multi | LC | |
| 1000BASE-LX | 9/125 | 1310 | 10Km | Single | LC | Finisar FTLF1318P3BTL |



일부 SFP Module의 경우 본 제품에 장착시 정상적으로 동작하지 않을 수 있습니다. 위의 호환표에 있는 SFP Module의 사용을 권장합니다.

문제 해결 (Q&A)

| 증상 | 확인 사항 |
|-----------------------------|---|
| 전원 LED가 켜지지 않습니다. | <ul style="list-style-type: none"> ● 전원 케이블을 확인하세요. ● 케이블이 꽂혀있는 콘센트의 전원 공급 상태를 확인하세요. |
| 전원을 켜면 잠시 후에 시스템이 종료됩니다. | <p>전원 연결 부분에 누전 현상이 있는지 확인하세요.</p> <ul style="list-style-type: none"> ● 콘센트가 누전되거나 전류가 불안정한지 확인하세요. ● 스위치 본체의 통풍구와 포트가 깨끗한지 확인하세요. ● 상기 확인 내용에서 이상이 없는 경우 내부 전원 장치에 문제가 있을 수 있으니, 서비스 센터에 문의하세요. |
| 시스템이 제대로 부팅되지 않습니다. | <ul style="list-style-type: none"> ● 제품의 전원 케이블을 제거 후 다시 연결하여 제품을 재구동시킨 다음 부팅 상태를 확인하세요. |
| 시스템이 네트워크 인터페이스를 인식하지 못합니다. | <p>인터페이스 케이블과 케이블 연결 상태를 확인하세요.</p> <ul style="list-style-type: none"> ● 각 포트의 상태 정보를 보여주는 LED를 확인하세요. |

제품 사양

| | | |
|-------------------------------------|--------------|---|
| 제품명 | | DH-2328PF |
| CPU | | 1Ghz single core |
| 시스템 메모리 | | 512MB SDRAM, 256MB Flash |
| 스위칭 용량 (Switching Capacity) | | 56Gbps |
| Copper 서비스 포트 | | 24 RJ-45 커넥터 (10/100/1000BASE-T) |
| Optical 업링크 포트 | | 4 SFP 슬롯 (1000BASE-X) |
| 콘솔 규격 | | 1 RJ-45 커넥터 |
| 정격 입력 | | 100-240V~, 50-60Hz, 5.5A~2.5A |
| 전력 소비량 | | max 460W |
| PSE 전력 | | 54.5V $\overline{\text{~}}$, 600mA, PoE 24 ports, max 380W |
| PoE 지원 규격 | | IEEE 802.3af-2003 / IEEE 802.3at-2009 |
| PD 장비 연결 | | 최대 24개 IEEE 802.3af 장비, 또는 최대 12개 IEEE802.3at 장비 |
| 환경 조건 | 동작 온도 | 0 ~ 50°C (32 ~ 122°F) |
| | 동작 습도 | 10 ~ 90% |
| | 보관 온도 | -20 ~ 70°C (-4 ~ 158°F) |
| 크기 (W x H x D) | | 440mm x 42.8mm x 268mm (17.3" x 1.7" x 10.5") |
| 본체 중량 | | 4.3kg (9.47lb) |
| 인증 규격 (Electrical Approvals) | | FCC, CE, CB, NRTL, KC |



- 크기의 W(너비)는 랙 장착용 날개를 뺀 값입니다.
- 본 제품 사양은 제품의 질을 높이기 위해 사전에 예고 없이 변경될 수 있습니다.

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Version 2, June 1991

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Jean-loup Gailly
jloup@gzip.org

Mark Adler
madler@alumni.caltech.edu

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