DirectIP Gigabit PoE Switch

取扱説明書

DH-2328PF

Powered by DirectIP

取扱説明書を読む前に

本取扱説明書では、(株)IDISの製品であるDirectIP Gigabit PoE Switchの設置および運用のための基本的な説明を記述しています。

本機をはじめてご使用になるユーザーの方はもちろん、多くの類似装置を使用してきたユーザーの方でも、ご使用の前には必ず本取扱説明書をよく読み注意事項をご確認の上、本機を使用することをお勧めいたします。なお、安全上の警告および注意事項は、製品を正しく使い危険や財産上の被害を防ぐために必ずお守りください。

お読みになった後は、いつでも確認できる場所に必ず保管して下さい。

- 本書を無断で複製することは禁じられています。
- 規格品以外の製品を使用することで発生した損傷、または取扱説明書の使用方法に従わずに発生した 製品の損傷は、当社で責任を負いかねますのでご了承下さい。
- DirectIP Gigabit PoE Switchを初めてご使用になるか、使い方がよく分からないユーザーは、設置や使用す る途中に必ず販売店までお問い合わせ頂き、専門のエンジニアのサポートを受けて下さい。
- システムの機能拡張および故障・修繕のためにシステムを分解する場合は、必ず販売店までお問い合わせ頂き、専門家のサポートを受けなければなりません。
- 本機は業務用として電磁波適合登録を済ませた装置のため、販売者またはユーザーはこの点にご注意ください。間違って販売または購入された場合には家庭用に交換してください。

安全上の注意事項の表示

アイコン	表記	意味
	警告	この事項を守らない場合、死亡や重症を負う恐れがある内容です。
	注意	この事項を守らない場合、軽症を負うことや、財産の損害が発生する恐れがある内容です。

本文での表記

アイコン	表記	意味
	注意	本機の機能や動作に関する内容のため、必ず熟知される必要があります。
	参考	本機を使用する上で役立つ内容です。

安全上の注意事項

製品を正しく使うことでユーザーの安全を確保し、財産上の損害などを事前に防止するために必ずお守りください。

警告　指示事項を守らない場合、死亡や重症を負う恐れがある場合。

設置について

設置する前に必ず本機の電源をOFFにしてください。本機が使用するコンセントにタコ足配線はご遠慮ください。

- 異常発熱や火災、感電の原因となります。

温度が高すぎるところや低いところ、湿度の高いところには設置しないでください。

- 火災の原因となります。

直射光線の当たらない涼しい場所に設置し、適正な温度を維持してください。ロウソクや暖房器具など、熱を発する機器の近くには設置しないでください。

- 火災が発生する恐れがあります。

本機の内部に高電圧部分があるため、任意で蓋を開けたり分解・修理・改造したりしないでください。

- 異常動作により火災や感電、けがの原因となります。

本機の後面には接続のための端子が突出しているため壁に近すぎるところに設置すると、ケーブルが無理に曲がったり押さえつけられたりして破損する恐れがあります。壁から15cm以上の間隔を開けて設置してください。

- 火災、感電、けがの原因となります。

湿気、ホコリ、煤などの多いところには設置しないでください。

- 感電、火災の原因となります。

設置する場所は、ホコリが溜まらないよう常に清潔を保ってください。製品を掃除するときには、必ず乾いた雑巾で拭き取ってください。水やシンナー、有機溶剤は使用しないでください。

- 製品の表面を傷つけ、故障や感電の恐れがあります。

水が落ちたりはねたりする場所に機器を置かないでください。また、花瓶のような水が入っている容器を機器の上に置かないでください。

- 火災、感電、けがの原因となります。

電源について

本機が動作するための電源電圧は、電圧の変動範囲が規程電圧の10%以内である必要があります。電源コンセントは必ず接地してください。電源ケーブルを接続するコンセントには、ヘアドライヤーやアイロン、冷蔵庫などの電熱器具を一緒に使用しないでください。

- 異常発熱や火災、感電の原因となります。

電源ケーブルを無理に曲げたり、重い物を乗せたりして破損しないようにしてください。

- 火災の原因となります。

電源ケーブル部分を無理に引き抜いたり、濡れた手で電源プラグに触らないでください。コンセントがゆるい場合は電源プラグを差し込まないでください。

- 火災、感電の恐れがあります。

使用について

水やコーヒー、飲料水など液体が入っているボトルなどは製本の上に置かないください。

- 液滴がこぼれて製品の内部に流れ込むと、故障や火災の原因となります。

湿気のある床や接地されていない電源延長ケーブル、被覆の剥がれた電源ケーブル、安全接地の欠如など、危険な状況を作らないように注意してください。問題が発生した場合は、販売店や施工業者にお問い合わせください。

- 火災、感電の恐れがあります。

異常な音がしたり臭いがしたりする場合は、すぐに電源プラグを抜いて販売店やサービスセンターまでお問い合わせください。

- 火災、感電の恐れがあります。

注意　指示事項を守らない場合は、軽傷を負ったり、製品が損傷したりする可能性があります。

設置について

強い磁性や電波のある場所、衝撃のある場所、ラジオやテレビなどの無線機器に近い場所には設置しないでください。

- 磁石類や電波、振動のないところに設置してください。

密閉されていない風通しの良い場所に設置し、システム運営室の空気は適切に循環させてください。

- 周辺の環境要素による故障の原因となります。後面は15cm以上、側面は5cm以上の間隔を置いて設置してください。

水平で安定した場所に設置し、垂直に立てたり斜めに置いて使用しないでください。

- 機器が倒れたり落ちたりする場合、故障したり人にけがをさせたりする恐れがあります。

ユーザーが電源プラグを簡単に取り外せる場所に設置してください。

- 製品に深刻な異常や火災が発生した場合、電源プラグを抜いて危険要素を簡単に取り除けるようにしてください。

強い衝撃や振動のない場所に設置してください。

- 故障の原因となります。

使用について

通風のために開いている溝に導電性物体が落ちないように注意してください。

- 故障の原因となります。

製品の上に重い物を置かないでください。

- 故障の原因となります。

製品の駆動中には電源プラグを抜いたり、製品を動かしたりしないでください。

- 故障の原因となります。

光ケーブルは必ず電源をOFFにしてから接続してください。

光ケーブルを接続する前は、光ケーブルのゴムキャップを先に外さないでください。キャップは光ケーブルが汚染物質に触れないように保護してくれます。また、ゴムキャップは次回使用するため清潔なところに保管してください。

光ケーブル接続時、光ケーブルの端やケーブルによって送受信するレーザーを裸眼で見ないでください。

製品の動作状態を随時確認し、異常が見つかったときはすぐに販売店やサービスセンターにお問い合わせください。

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第1章ー製品紹介

製品の特徴

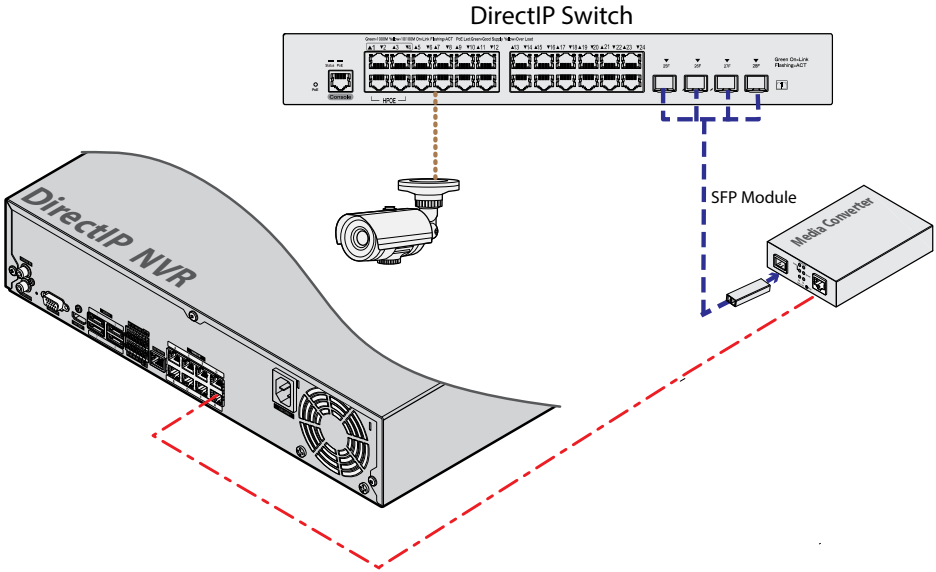
本製品は多重ポートにIEEE 802.3afおよびIEEE 802.3at Power over Ethernet(PoE)に対応するDirectIP基盤のGigabit Switchであり、下記のような特徴があります。

- **DirectIP機能**
  - 自動ネットワークIP設定機能を提供
  - DirectIP™ NVR(Network Video Recorder)に各ポートの情報提供
- **PoE機能**
  - IEEE 802.3af/at規格に対応(IEEE 802.3af/at compliant)
  - イーサネットケーブルによる電力供給機能(Power to the application over Ethernet cable)
  - 電力中央制御によるネットワーク可用性の向上
  - PoE Alternate A方式の電源供給

    1、2、3、6番データライン上に電源が一緒に供給される(Power feeding over 1/2 & 3/6 data twisted)

- **高性能の安定化したインターフェース**
  - サービスポートとアップリンクポートのいずれも1Gbps速度に対応
- **ネットワークセキュリティサービス**
  - IEEE 802.1xネットワークログイン方式
  - SSHによるデータセキュリティ

DirectIP Gigabit PoE Switchを利用した製品接続



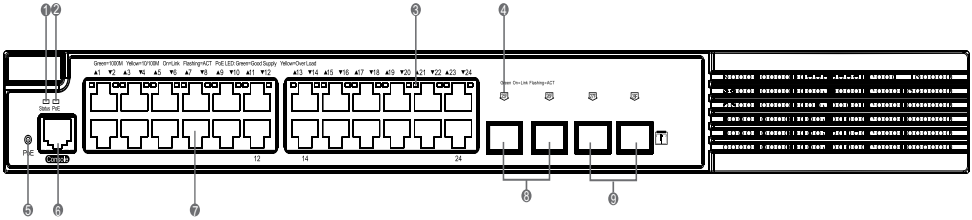
部品の確認

製品を購入したら梱包を解体し、下記の部品がすべて含まれているか確認してください。

- DH-2328PF本体
- 電源ケーブル
- 取扱説明書
- ラック装着用Bracket2個,
- Bracket取り付け用ネジ6個
- 接地wire 1個
- Shedding clamp for電源ケーブル1個
- Foot pad 4個

各部分の名称および機能

前面パネル



❶	システム状態LED	❷	PoE状態LED	❸	10/100/1000Base-Tポート状態LED
❹	ファイバーポート状態LED	❺	PoEモードのスイッチオーバーボタン	❻	コンソールポート
❼	10/100/1000Base-T自動検知型のイーサネットポート	❽	1000Base-X SFPポート	❾	1000Base-X SFPポート

10/100/1000Base-T自動検知型のイーサネットポート (RJ-45サービスポート)

ポート番号1~24はPoE機能を提供するRJ-45ポートです。ネットワークカメラをこのポートへ接続します。

- PDネットワークカメラは外部電源がなくても、信号ラインで電源を供給することができます。
- 各ポートはAuto-MDI/MDI-X機能に対応します。
- ネットワーク速度によって異なるモードで動作します。(10/100Mbps : full/half duplex モード、1000Mbps: full duplexモード)

RJ-45サービスポートLED

RJ-45サービスポートのステータス情報を表示するLEDです。左側から順番に、各ポート番号とマッピングされます。

ポートLED
▲1 ▼2 ▲3 ▼…

- ポートに接続されているデバイスの接続および通信速度によってLEDの色が変化します。
- 各LEDはPoEモードのスイッチボタンの設定状態によってLNK/ACT状態やPoE状態を区分して表示します。

1000Base-X SFPポート (SFPアップリンクスロット)

SFPアップリンクポートは光ケーブルを利用して、遠距離にある上位の装置と接続するときに使用するポートです。多重のネットワーク装置をカスケーディングの形式で接続するときに使用します。

- アップリンクの用途に使用しない場合にはサービスポートとしても活用されます。
- 各ポートはFull Duplexモードだけで動作します。
- SFPアップリンクポートに接続されるSFPモジュールは、**第3章-その他の情報**の**サポートするSFPトランシーバーモジュールリスト**をお読みください。

SFPアップリンクポートLED

SFPアップリンクポートのステータス情報を表示するLEDです。

ポートLED			

ポートに接続されているデバイスの接続および通信速度によってLEDの色が変化します。

コンソールポート

コンソールポートは対応していません。

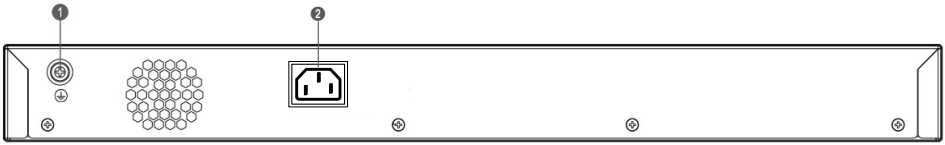
PoEモードのスイッチボタン

該当ボタンを2秒以上長押しすると,表示モードがPoEモードとポート速度モードの間に切り替わります。

LED状態情報

LED	パネル識別	状態	詳細の説明
システム状態LED	状態	オフ	スイッチに電力が供給されていない
		緑色点滅	システム初期化している 点滅し続ける場合、異常発生の信号
		緑色点灯	スイッチが正常動作している
		黄色点灯	温度警告 スイッチの作業環境を即時点検する必要がある
		赤色点灯	スイッチが誤動作している
PoE状態LED	PoE	オレンジ色点灯	スイッチング状態を示す
		黄色点灯	PoE状態を示す
1000 Mbps RJ-45のポート状態LED	1-24	オフ	ポートが接続されていない
		緑色点灯	ポートが接続されていない
		緑色点滅	ポートが1000 Mbpsでトラフィックを受信したり送信している
		黄色点灯	ポートが10/100 Mbpsに接続されている
		黄色点滅	ポートが10/100 Mbpsでトラフィックを受信したり送信している
RJ45ポートPoE状態LED	1-24	オフ	PoEが無効になっている
		緑色点灯	PoEが有効になっているポートが正常動作している
		黄色点灯	PoEポートが異常動作している
1000 Mbps SFPポート状態LED	25-28	オフ	ポートが接続されていない
		緑色点灯	ポートが1000 Mbpに接続されている
		緑色点滅	ポートが1000 Mbpsでトラフィックを受信したり送信している

後面パネル



❶	接地端子	❷	電源コネクタ

① 接地端子

接地端子はユーザーが製品に接触するときに発生し得る感電事故を予防するために接地線を接続する部分です。

接地線を接続する方法は**第2章-設置**の**接地**をお読みください。

② 電源コネクタ

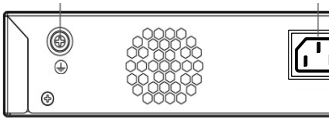
電源ケーブルをネットワークスイッチの電源コネクタに接続します。本製品は電源ボタンがないため、電源を接続するとすぐに立ち上がります。

- 電源ケーブルはきれいに配線し足に引っかかったり、家具などによってケーブルの被覆が剥がれないように注意してください。
- 電源ケーブルは絨毯やカーペットの下を通さないでください。
- 電源ケーブルは接地をされていますが、コンセントが接地端子を持っていなくてもプラグを変形してはなりません。
- タコ足配線は危険ですのでお止めください。

第2章ー設置

接地

ユーザーは感電事故を予防するために必ず接地しなければなりません。接地する方法については下図を参考してください。



接続方法

1 製品後面の電源スイッチの隣にある接地線の取り付けネジが締結されている部分からネジを取り外してください。

2 接地線を接地線接続部分にネジでしっかり固定してください。

3 製品に接続した接地線をラックまたはその他の接地接続部に接続してください。

ポート接続

DirectIP NVRに接続

UTPケーブルを利用する場合

1 DirectIPNVRの**VIDEO IN**(ビデオ入力)ポートと、本製品**RJ-45アップリンク**ポートをUTPケーブルのRJ-45コネクタに接続してください。

2 **RJ-45アップリンク**ポートのLED状態を確認し、接続が正常であるか確認してください。

光ケーブルを利用し、遠距離上で接続する場合

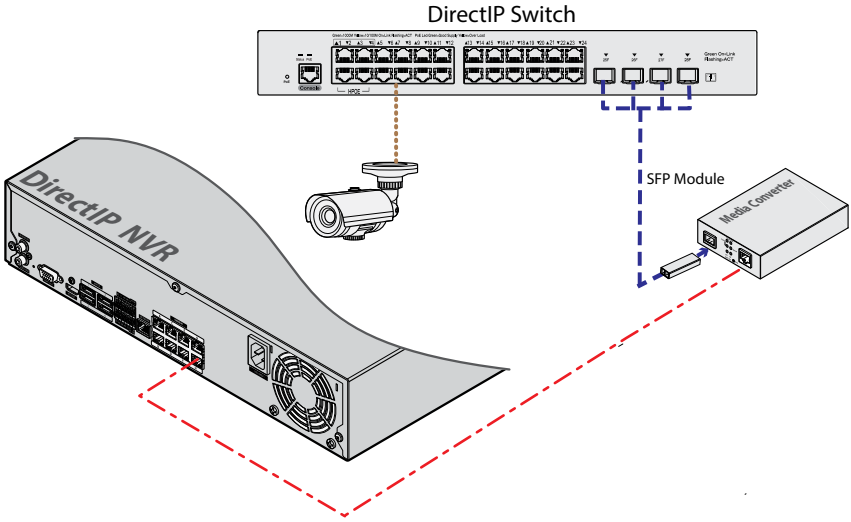
1. DirectIPNVRの**VIDEO IN**(ビデオ入力)ポートと、DA-MC1101[1)]の**RJ-45ポート**をUTPケーブルのRJ-45コネクタに接続してください。

2. DA-MC1101の**SFPスロット**にSFP Moduleを挿入し、光ファイバケーブルの一方を接続してください。

3. 本製品の**SFPアップリンクスロット**にSFP Moduleを挿入し、光ファイバケーブルのもう一方を接続してください。

4. **SFPアップリンクポート**のLED状態およびDA-MC1101の**TX**、**FO**のLEDの状態を確認し、接続が正常に行われているか確認してください。

DA-MC1101[1)] (10/100/1000BASE-T to Gigabit Fiber Media Converter)はGigabitネットワークの構成ニーズにお応えするためのIDISのコンバーター製品です。

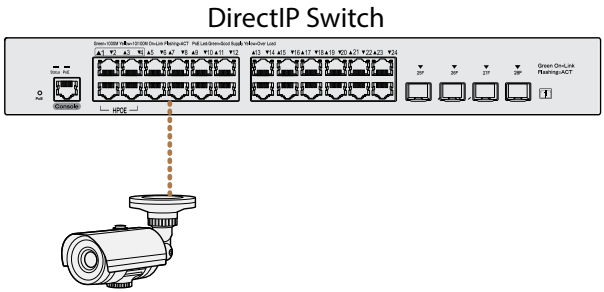


DirectIPカメラに接続

1 本製品**RJ-45サービスポート**とネットワークカメラの**RJ-45ポート**をUTPケーブルのRJ-45コネクターに接続してください。

2 **RJ-45サービスポート**のLED状態を確認し、接続が正常であるか確認してください。

PoEカメラはUTPケーブルから電源を供給することができます。



多重カスケーディング(Cascading)接続

UTPケーブルを利用する場合

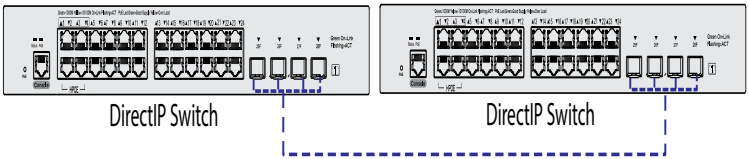
1 多重カスケーディング接続を行う最初の本製品と2番目の本製品の**RJ-45アップリンクポート**をUTPケーブルのRJ-45コネクタに接続してください。

2 **RJ-45アップリンクポート**のLED状態を確認し、接続が正常であるか確認してください。

光ケーブルを利用し、遠距離上で接続する場合

1 多重カスケーディング接続を行う最初の本製品と2番目の本製品の**SFPアップリンクスロット**にSFP Moduleを挿入し、光ファイバケーブルで互いに接続してください。

2 **SFPアップリンクポート**のLED状態を確認し、接続が正常であるか確認してください。



ポート接続時の注意および参考事項

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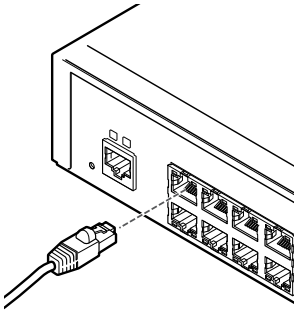
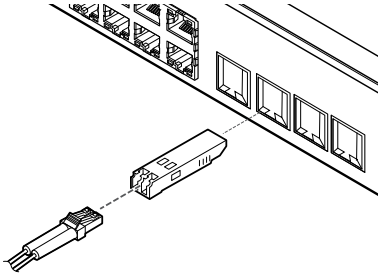


[10/100/1000BASE-T ポート接続]



[1000BASE-X SFP ポート接続]

第3章ーその他の情報

対応するSFPトランシーバー(Transceiver)モジュールのリスト

SFPポートに使用可能なSFPモジュールの種類です。

Standard	直径(um)	波長(nm)	距離	モード	コネクタ	SFPモジュール
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

一部のSFP Moduleの場合、本製品に装着すると正常に動作しないことがあります。上表に記載されているSFP Moduleを使用することをお勧めします。

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製品の仕様

製品名		DH-2328PF
CPU		1Ghz single core
システムメモリ		512MB SDRAM、256MB Flash
スイッチング容量(Switching Capacity)		56Gbps
Copperサービスポート		24 RJ-45コネクタ (10/100/1000BASE-T)
Opticalアップリンクポート		4 SFPスロット(1000BASE-X)
コンソール規格		1 RJ-45コネクタ
電源入力		AC100-240V、50/60Hz、5.5-2.5A
消費電力		max. 460W
PSE電力		54.5VDC, 600mA, PoE 24 ports, max. 380W
PoE対応規格		IEEE 802.3af-2003 / IEEE 802.3at-2009 Compliant
PD装置接続		最大24台のIEEE 802.3af装置、または最大12台のIEEE 802.3at装置
環境条件	**動作温度**	0 ~ 50℃ (32 ~ 122℉)
	動作湿度	10 ~ 90%
	保管温度	-20 ~ 70℃ (-4 ~ 158℉)
サイズ(W1 x H x D)		440mm x 44mm x 260mm
本体の重量		4.28Kg
認証規格(Electrical Approvals)		FCC、CE、CB、NRTL、KC

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