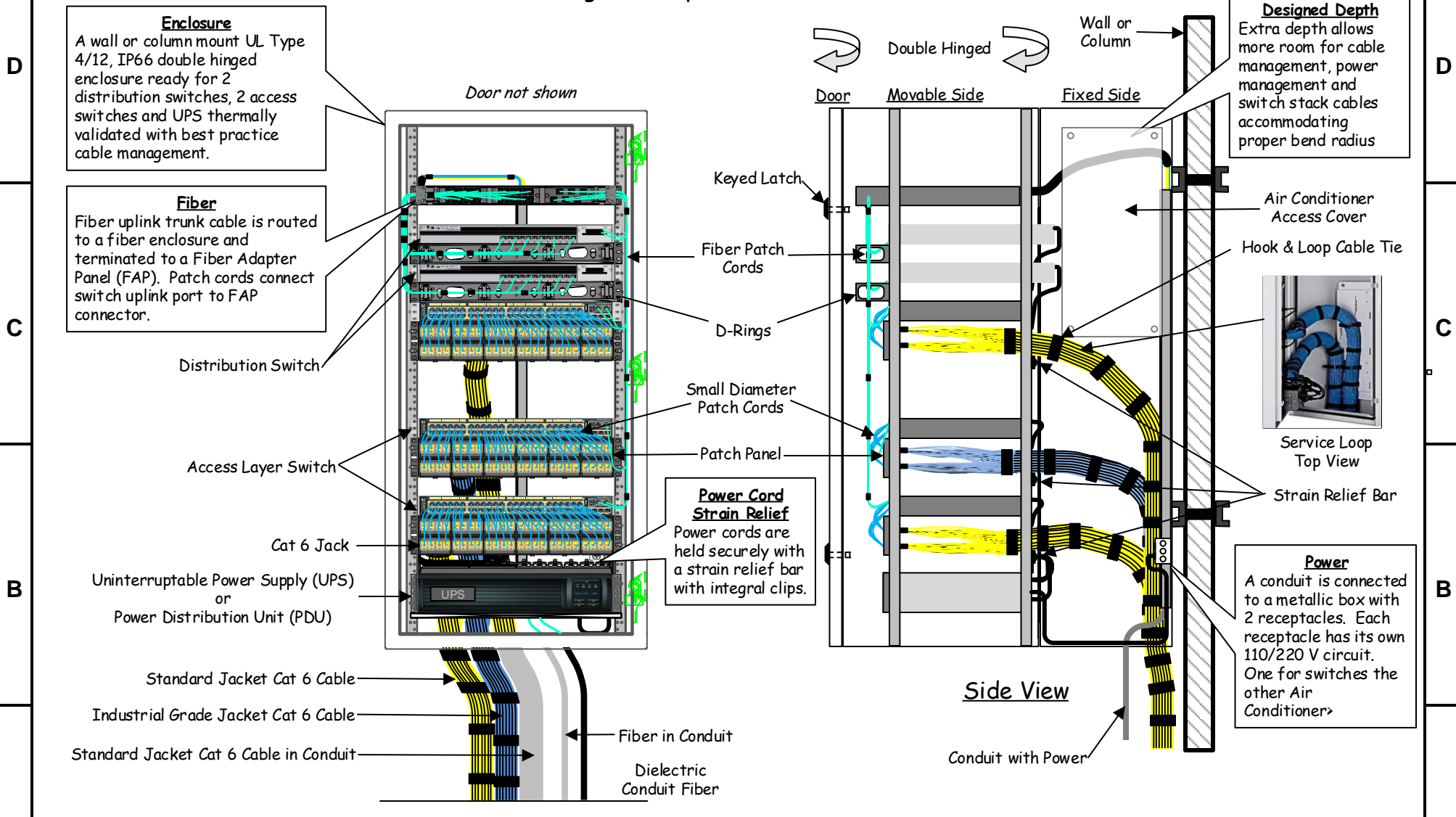


A Pre-Configured Industrial Distribution Frame (IDF) reduces deployment time and cost for high density 19" rack mounted network switches



**Enclosure**  
A wall or column mount UL Type 4/12, IP66 double hinged enclosure ready for 2 distribution switches, 2 access switches and UPS thermally validated with best practice cable management.

**Fiber**  
Fiber uplink trunk cable is routed to a fiber enclosure and terminated to a Fiber Adapter Panel (FAP). Patch cords connect switch uplink port to FAP connector.

**Designed Depth**  
Extra depth allows more room for cable management, power management and switch stack cables accommodating proper bend radius

**Power Cord Strain Relief**  
Power cords are held securely with a strain relief bar with integral clips.

**Power**  
A conduit is connected to a metallic box with 2 receptacles. Each receptacle has its own 110/220 V circuit. One for switches the other Air Conditioner

**Use this drawing when:**

- Deploying 19" rack mounted switches
- Network has numerous links
- Tying together a large installation

Front View

Side View

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Pre-configured Industrial Distribution Frame Reference Design

4 3 2 1

D

D

C

C

B

B

A

A

4 3 2 1

## Panduit Bill of Material

Part Number	Description
<b>Industrial Distribution Frame</b>	
ZDF48-RA	Pre-Configured IDF Wall or Column mount UL Type 4/12 and IP66 double hinged enclosure ready for 2 access switches and 2 distribution switches complete with patch panels, cable management, grounding, and power. Room for 3 <sup>rd</sup> Access Switch with a maximum 144 copper downlinks. Accommodates 24 fiber links. Has access cover for Air Conditioner. Has space for UPS or PDU.
ZDF48-EA	Pre-Configured IDF with no power receptacle (Europe/Asia)
<b>Connectivity and Patching</b>	
CJ688TGBU	Cat 6, RJ45, UTP Mini-Com® Jack
UTP28SP8INBU	Cat 6, Small Dia, UTP, RJ45, 8", Blue Patch cord
PUR6004BU-UY	Cat 6, UTP, Riser (CMR), 4 pair, solid, Blue
IUC6C04ABL-CEG	Cat 6, U/UTP, Industrial (CM), 4 pair, PVC jacket, stranded
FAP12WAQDLCZ	LC 10Gig™ OM3/OM4 FAP with twelve LC Duplex Multimode Fiber Optic Adapters, zirconia ceramic split sleeve
FX2ERLNLNSNM001	2-fiber OM3 10 GbE LC duplex patch cord, 1 Meter
FX2ERLNLNSNM002	2-fiber OM3 10 GbE LC duplex patch cord, 2 Meter
FOPRX12Y	12-fiber OM3 10 GbE multimode riser rated aluminum interlocking armored cable
FSPD512	Rugged 12-Fiber OM2 Dielectric Conduited multimode Armored Distribution cable (No grounding required)
FODRX12Y	12-fiber OM3 10 GbE multimode riser rated distribution cable.
FLCDMCXAQY	LC OptiCam® 10Gig™ 50/125µm OM3/OM4 Multimode Duplex Fiber Optic Connector for 900µm.

### For More Information and Help

For more information, contact your local distributor, Panduit Sales rep or go to [www.panduit.com/ia](http://www.panduit.com/ia) or email [iai@panduit.com](mailto:iai@panduit.com)

## About this Configuration

The Panduit Pre-Configured Industrial Distribution Frame (IDF) is specifically engineered to deploy and protect rack mount Ethernet switches in industrial applications.

### About Panduit Industrial Distribution Frame

An IDF is intended for high density industrial star networks in a harsh environment that are connecting numerous HMIs, PLCs, Drives, I/O blocks to keep traffic local using rack mount access switches. An IDF can also house distribution switches to efficiently route traffic between access switches that are often DIN mounted switches in a control panel.

### Horizontal Cable Service Loop

Since the horizontal cabling is extended when opening the IDF, a cable service loop is needed for both fiber and copper. There needs to be slack to fully open the enclosure but not too much as the extra cabling consumes excess space and can act as a spring when closing. Also, the cable length increases from the first to the last copper port. The IDF stationary section has hook & loop ties in the back to secure cabling. The copper cabling is also secured with hook & loop ties to strain relief bars on the movable side to minimize tugging on the jack when opening the enclosure. Fiber horizontal cable is channeled through duct and loom tube then into a fiber enclosure for protection.

### Thermal Management

For this configuration with (2) Cisco 3750X and (2) Cisco 2960S switches, the IDF can operate with an ambient temperature up to 25 Deg C (77 Deg F) without air conditioner. An optional air conditioner Pentair AC Unit: N28 will allow the IDF to operate up to 50 degrees C (122 Deg F) ambient air temperature.

### Connectivity and Patching

Typically, switch uplinks are fiber as it converges switches the fastest after an interrupt to re-establish connection and can handle aggregated switch traffic. Also, an IDF may be more than 100M (max distance for solid copper) from Main Distribution Frame (MDF), data center, or core switch. This drawing features multi mode OM3 fiber. Single mode can be used for long distances or high bandwidth needs. Different multi-mode can be used as well (OM1, OM2, OM3, and OM4) to match switch transceiver.

Copper downlinks are impacted by environment and traffic. This drawing shows various unshielded (UTP) copper cabling constructions ranging from standard to industrial. Cabling may need a harsh rating or protected in conduit depending on the environment. Also, shielded (STP) cable may need to be considered for high EMI environments.

The IDF is designed with switches and patch panels in close proximity. A short (8") small diameter patch cord is recommended to reduce space with easier handling.

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