



# Cable Management

## PRODUCTS GUIDE

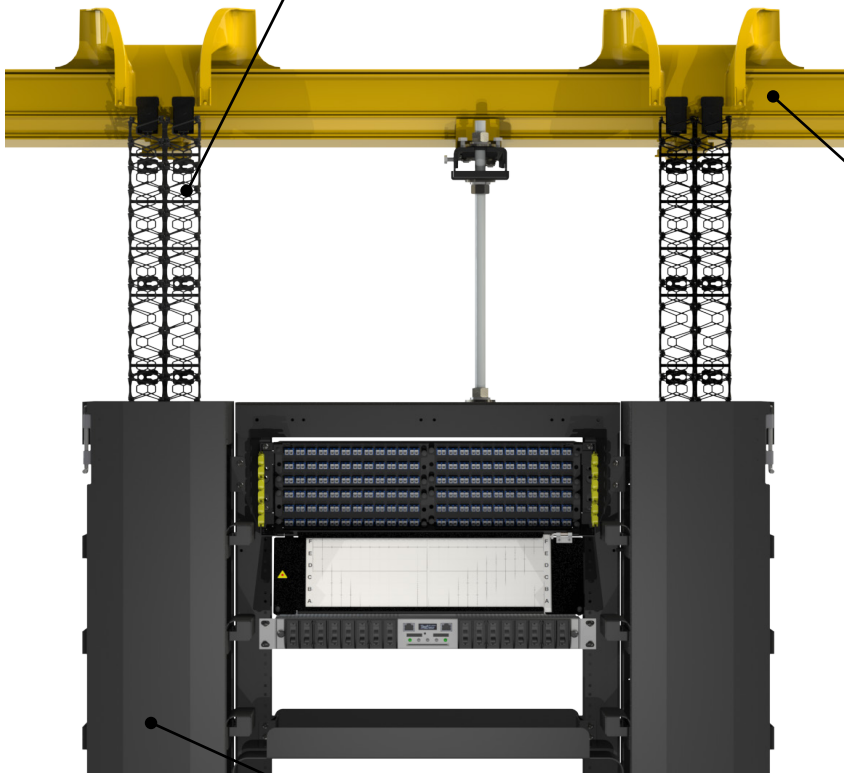
Layer one end-to-end network solutions  
that increase operation efficiency, speed of  
deployment, and profitability.

## Cable Management Solutions

Managing thousands and thousands of fiber strands is an ongoing challenge, and Amphenol Network Solutions brings you the latest in innovation to keep your optical performance at its best. Our WaveTrax line of products, as well as our newest addition, FlexTrax (ditch your slotted duct and split tube), protect and route your fiber while maintaining proper fiber bend radius. We have the highest quality cable management system out there, but we take it one step further to make your life easier.

### FlexTrax®

Introducing FlexTrax. With more flexibility, greater ease of access and better protection than any other product in the market



### Raceway – WaveTrax®

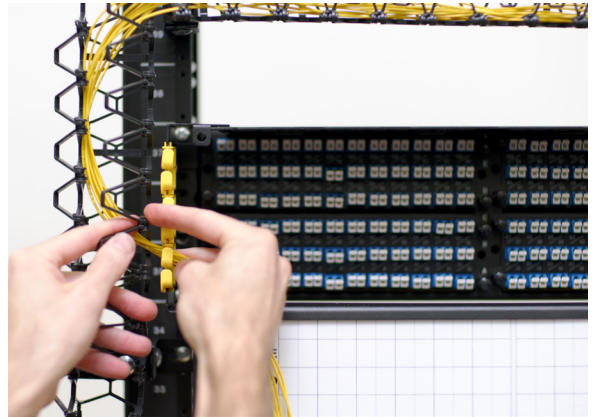
The Amphenol Network Solutions fiber raceway system is an end-to-end solution designed to deliver reliable fiber optic network performance and protection.

### Rack Cable Managers

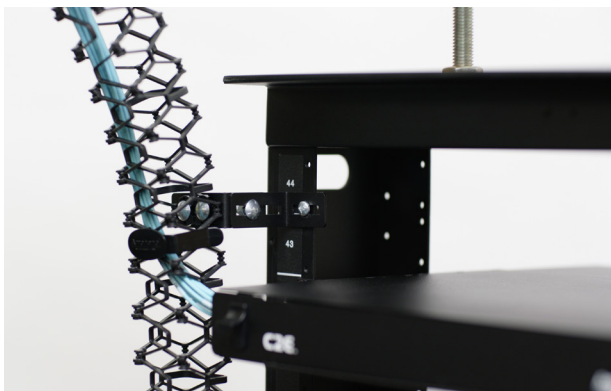
Our rack cable managers (horizontal and vertical) help keep your data centers and telecommunication closets organized.

## FlexTrax®

A cable management strategy provides network-wide standards for how the fiber is managed. It helps ensure fiber performance, accelerate the speed and accuracy of any adds, moves, or changes. Typical routing options today include low-end split tube or more costly slotted duct. Although split tube provides cost savings, installation can be cumbersome, creating the potential for fiber damage during the installation process. Plus, the level of actual fiber protection is minimal.



With slotted duct, the challenges are different yet just as significant. A rigid, non-flexible design limits capability. Adding or removing fiber typically requires removing the slotted duct cover, a labor-intensive process that creates an additional opportunity for cable damage. And generally, costs can be high. Introducing FlexTrax. And we know. Cable managers should not look this cool. With more flexibility and better protection than split tube and greater ease of access than slotted duct, FlexTrax essentially replaces both. Traditional installations often combine tube and duct, with adapters required to transition between the two. FlexTrax eliminates all of this, reducing overall costs while enhancing flexibility and protection.



**FlexTrax with Rack and C2E**



**FlexTrax with WaveTrax**

WaveTrax, the Amphenol Network Solutions fiber raceway system, is an end-to-end solution designed to help engineers deliver reliable fiber optic network performance. When it's time to add more fiber cable to support user demand, an optical fiber raceway that's easy to modify and scale makes retrofit easy and less expensive.

## Straight Sections

WaveTrax Horizontal Trough comes in standard six-foot lengths, available in 2", 4", 6", 12" and 24" width. The trough can easily be cut to fit your network's specific application. Trough may be ordered in multiples of two. Matching trough covers (up to 12" in width) protect cable in the trough and snap on for simple installation.

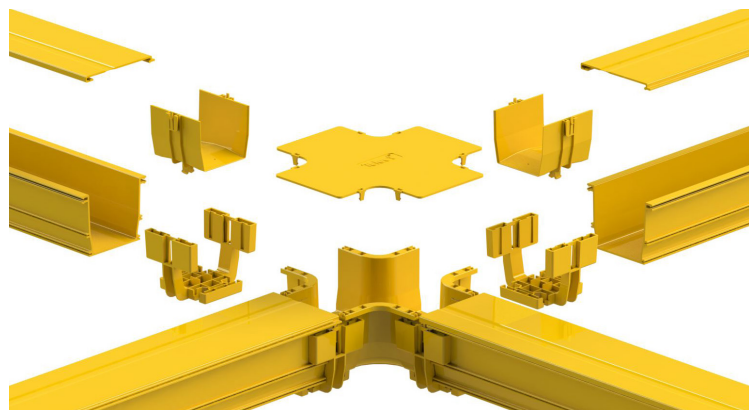


**Trough and Cover**

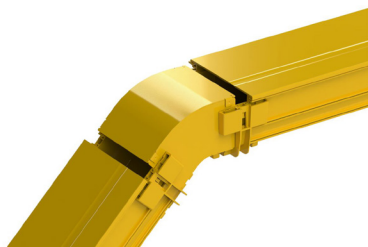
## Transitional Sections

Multiple pieces with shapes and forms required for an installation:

- ▶ WaveTrax Coupler
- ▶ "X" Intersections
- ▶ "T" Intersections
- ▶ Elbow Intersections
  - ▶ 90° Horizontal/Vertical
  - ▶ 45° Horizontal/Vertical
- ▶ Reducers
- ▶ End caps
- ▶ Covers
- ▶ Adapters that connect to other systems



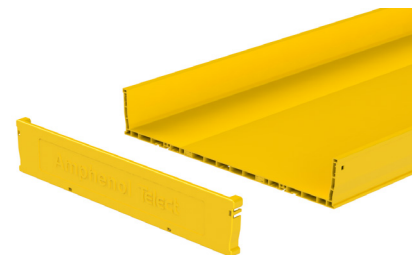
**WaveTrax "X" intersection, couplers, 4" trough and covers**



**WaveTrax 45° Vertical Elbow, couplers, 4" trough and covers**



**WaveTrax T Intersection, couplers, 2" trough and covers**



**WaveTrax 24" End Cap and trough**

## WaveTrax Express

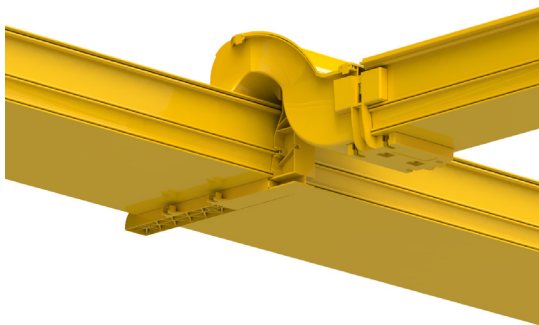
The WaveTrax Express product family provides a modular exit or drop that snaps onto the side of an existing 4", 6", 12" or 24" trough run. The Express T allows to add an intersection without the need of cutting or notching the existing trough and having the risk of handling fiber already installed. The Express Off-ramp guides cable up and over the sidewall of the trough, then down into the desired rack with a 30 mm cable bend radius throughout the transition. Installation is simplified by our patented ratcheting bracket. Express options attach to WaveTrax and other systems. The snap-together WaveTrax raceway system from Amphenol Network Solutions reduces time spent on installations and retrofits.

WaveTrax Express options:

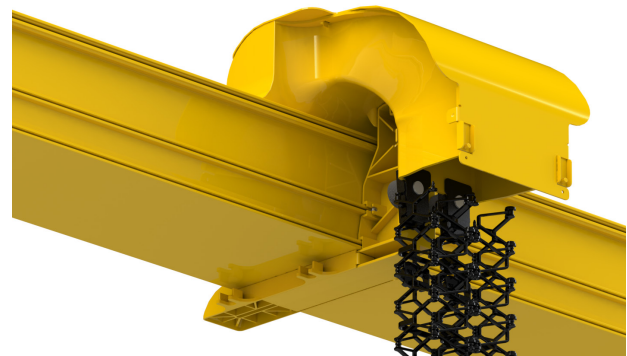
- ▶ Express T
- ▶ Express Off-ramp
- ▶ Covers
- ▶ Competitor adapters (T or Drop)



**WaveTrax Express Off-Ramp, with FlexTrax, connected to CommScope's FiberGuide® Fiber Management System**



**WaveTrax Express T 6" exit for 12" trough**

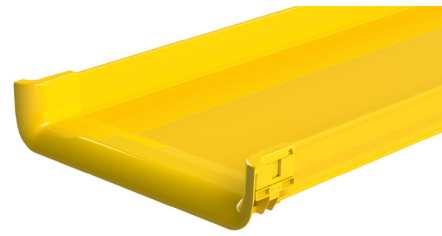


**WaveTrax Express Off-ramp 4" exit for 6" trough**

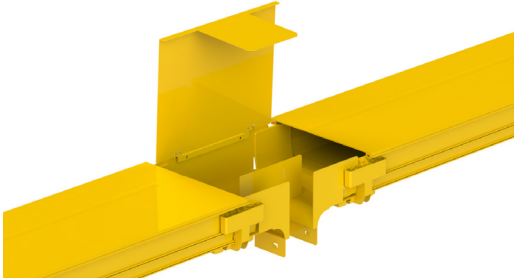


## WaveTrax Drops

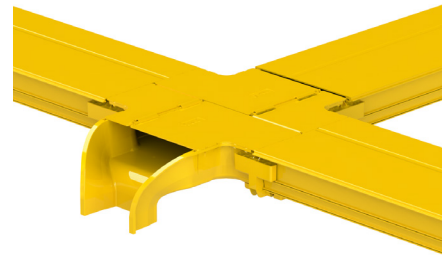
- ▶ Center Drops
- ▶ Attachment Drop
- ▶ Trumpets
- ▶ Covers
- ▶ Slotted Duct, Flexible tube and accessories



**WaveTrax 24" trumpet**



**WaveTrax Center Drop, 12" trough to 4" with covers**



**WaveTrax Attachment Drop, 12" trough**

## Adapters to Connect with Other Systems

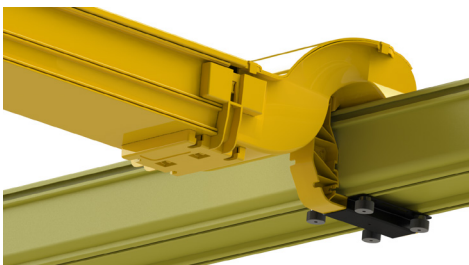
WaveTrax is a universal fiber trough solution, it is compatible with CommScope's FiberGuide® Fiber Management System and Panduit's FiberRunner® Cable Routing System. Adapters allow our products to interact and retrofit your current solution to enjoy the benefits of WaveTrax, FlexTrax and Cablelinks.

Adapter options available:

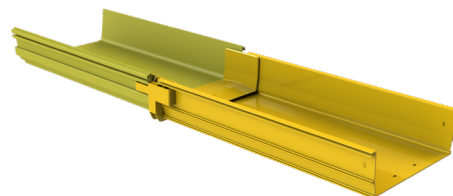
- ▶ Express T
- ▶ Express Drop
- ▶ Trough to trough



**WaveTrax 4" Express Drop with FlexTrax, connected to CommScope's FiberGuide® Fiber Management System**



**WaveTrax 4" Express T with adapter to connect with other systems**



**WaveTrax 12" trough to trough adapter to connect with other systems**

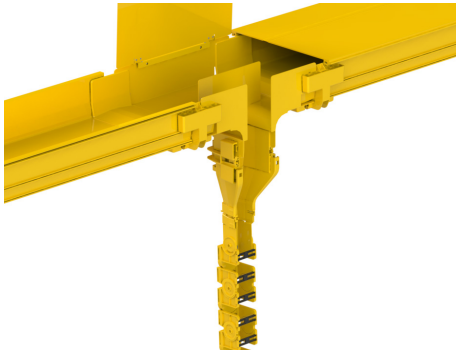
## Cablelinks®

The snap-together Cablelinks system makes drop sections a breeze. Our links are ideal for negotiating horizontal and vertical runs in tight areas. They articulate front to back and side to side, requiring 4 Cablelinks to make a 90° turn.

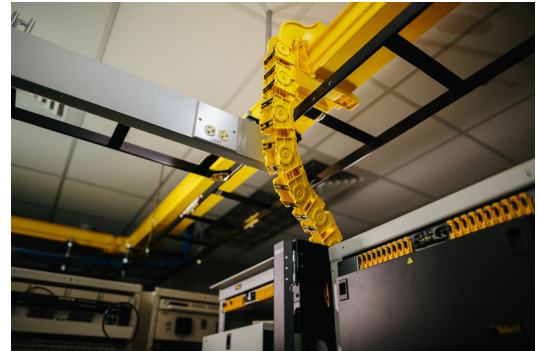
- ▶ 2" Width
- ▶ 4" Width
- ▶ 6" Width
- ▶ Adapters and Mounting hardware



**Cablelinks flexes both horizontally and vertically**



**WaveTrax Center Drop, 12" trough to 4" with covers, reducer 4" to 2" and 2" Cablelinks**



**Data Center Installation**

## Mounting Accessories

- ▶ WaveTrax notching tool
- ▶ Support brackets for the raceway
- ▶ Threaded 5/8" rods (18" and 40" length)
- ▶ Clamshell kits for ladder rack
- ▶ Vertical mounting brackets



**Clamshell kit with WaveTrax**



**WaveTrax notching tool**



**WaveTrax with horizontal support racks**

## Rack Cable Managers

Our rack cable managers (horizontal and vertical) help to keep your data centers and telecommunication closets organized. Our sturdy but lightweight structures reside next to your racks and provide the troughs, spools and trays to secure and protect your patch cables.

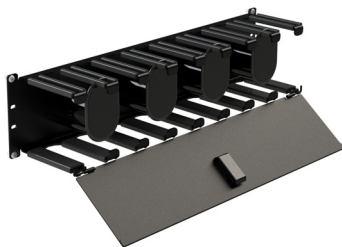
### Horizontal Cable Managers (HCM)

Horizontal cable managers are an essential part of protecting and routing fibers in equipment and cross-connect racks. 0RU options for mounting in front of equipment are available, as well as a full line of cable-management choices up to 3RU. These are available in 19" and 23" versions.

Tie bars are lightweight but very sturdy and hard to bend, they can be used to route fiber and power cables as well, 19" and 23" wide compatible and multiple offsets available (4", 5", 6", 8" and 10").



**0RU Horizontal CM**



**3RU Horizontal CM**



**Tie Down Bar 19" and 23"**

### Vertical Cable Managers (VCM)

Sturdy but lightweight vertical cable managers are key components to protect and organize the fiber cables in overcrowded network environments such as data centers, hubs, central offices, etc. Our VCMs are easy to install in any standard rack.

The ACCE is our most popular VCM, it is available in 3 different widths: 4", 6" and 10" with multiple options:

- ▶ Single sided
- ▶ Double sided
- ▶ Black only
- ▶ Standard spools and no spools options for internal cable management
- ▶ With or without doors



**4" Vertical Cable Manager**



# Amphenol

## Our Parent Company

Amphenol is one of the largest manufacturers of interconnect products in the world with a global vision to connect people with technology. Our goal is simple - develop leading technologies that enhance the performance of our customers' products, systems, and networks.



**NYSE: APH**  
Fortune 500  
9+ Billion in Sales



**100+ Businesses**  
As diverse as the  
customers we serve,  
all are united by one  
Amphenol culture.



**89-year history**



**82K employees**

## Amphenol Markets



**IT DATACOM**

**MOBILE  
DEVICES**



**MOBILE  
NETWORKS**

**BROADBAND**



**AUTOMOTIVE**

**COMMERCIAL  
AEROSPACE**



**MILITARY**

**INDUSTRIAL**



### Fun Fact

Amphenol connectors are on Mars! Our connectors enable the ability to capture clear images during the exploration program.

## Our Story

Amphenol Network Solutions is a global innovative original equipment manufacturer that serves the data and communications markets. Leading the industry with a high-quality, seamless product portfolio of fiber distribution, cable management, DC power, racks, passives, and enclosures.

★ **38+ YEAR** history as an industry thought leader in cable management.

## Our Locations



### Where We Are

**Liberty Lake, Washington :** Global Headquarters, Customer Support, Product Development, Application Engineering (CCS Team), Manufacturing

**Raleigh, North Carolina:** Product Management

**Livermore, California:** Supply Chain Management

**Guadalajara, Mexico:** Manufacturing



### Facility Standards

- ▶ Facilities are certified to ISO9001, ISO14001, and TL9000 standards
- ▶ 99.91% quality score for fiber products
- ▶ UL/NEBS certified



With integrity at the core of our business, we adhere to the highest ethical standards in relationships with our customers, suppliers, and partners.

## Our Markets



IT DATACOM

MOBILE  
DEVICES



MOBILE  
NETWORKS

BROADBAND



## CCS (Custom Configured Solutions)

Whether you are responsible for the layer one infrastructure of a Data Center, a C-Ran Hub, Central Office, Head end or a different area of the network, our CCS application engineering team can support your latest project by developing a complete solution that is future proof. Our industry experts create:

- ▶ Custom configurations to meet the specific requirements of your network locations
- ▶ Solutions: fiber management, DC power, optical passives, cable management, and racks
- ▶ Drawings and a complete bill of materials ready to order
- ▶ Detailed fiber raceway layouts for each network location
- ▶ Pre-terminated solutions that save time and money on installations



## Robust Distribution Channel



Our distribution partner programs offer global channel support to provide product availability when and where you need us.

Our end-to-end quality fiber solutions, combined with availability across our partner networks, helps you deploy faster, meet your deadlines, all while minimizing your costs. Whether you purchase our products directly from us, or through our partner network, we care about your success and provide full support from network planning to installation.

# Amphenol

NETWORK SOLUTIONS

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**Together, we are working for a brighter, safer, and more connected future.**

Contact us today | 509.926.6000 | [getinfo@amphenol-ns.com](mailto:getinfo@amphenol-ns.com)