# INDOOR CABLE ASSEMBLIES

**Amphenol's fiber optic cable assembly expertise dates back to 1976. As new fiber optic connectors have entered the industry, Amphenol Fiber Optic Products has carefully selected the most robust and reliable connectors to participate in their design and development. Our in-depth understanding of connector design, and the complete control of materials, make Amphenol cable assemblies one of the best in the industry.**

## Product Breadth

Amphenol Fiber Optic Products offers a comprehensive line of cable assemblies in a variety of cable configurations with SC, FC, LC, ST SMA, and MTP® (MPO) type connectors. Both standard and custom assemblies are available for a wide variety of applications. From simplex jumpers to multi-fiber drop cables to ribbon breakouts, Amphenol can design and supply all of your cable assembly needs.

## Consistent Quality

High quality polishing processes have been developed to meet and exceed industry standards specifications for insertion loss, return loss, and endface geometry. Attention to process control ensures high-yield processes and consistent quality. Additionally, all assemblies are designed to intermateability standards for optical and physical performance criteria, as dictated by EIA/TIA, IEC, JIS, NTT, ANSI, and Telcordia (where applicable).

## Complete Testing

Performance testing is one of Amphenol Fiber Optic Products' fundamental strengths. Connector and cable materials are extensively inspected prior to assembly. Every cable receives 100% inspection for both insertion loss and visual defects (under 1200X video magnification). Interferometers are used for accurate endface geometry testing.

## Manufacturing Expertise & Delivery Precision

Amphenol Fiber Optic Products delivers. Meticulous attention to capacity and material planning allow us to meet our committed ship dates on time. Every time. Amphenol Fiber Optic Products knows volume manufacturing. Rapid ramp-up of challenging new products is one of our strengths.

*MTP is a trademark of US Connect

## Creative and Functional Designs

You specify the functionality of the cable assembly, and our talented, enthusiastic, and friendly mechanical and optical engineers develop an "end-to-end" solution. Design creativity, experience and a deep understanding of your application ensure a functional and manufacturable design.

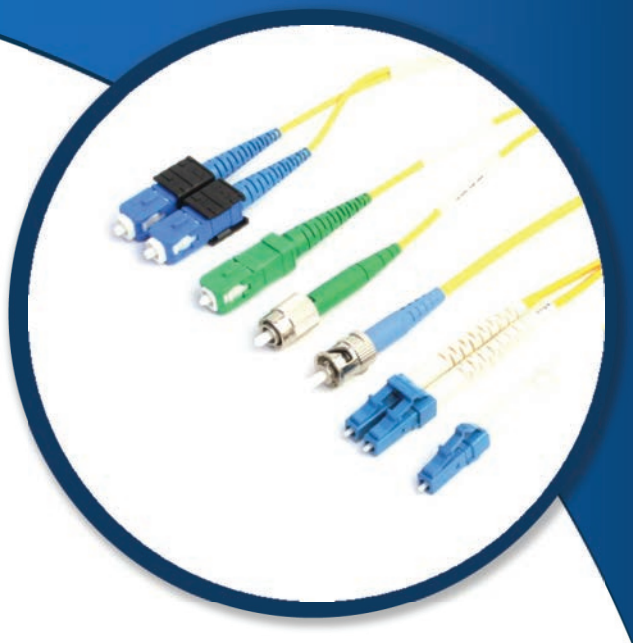
# PRODUCT TYPE





*High Performance Quality You Can Count On*

# Singlemode Assemblies



Amphenol is a premier manufacturer of singlemode patch cords in the telecommunications industry, meeting or exceeding many of the industry standard requirements for optical transmission loss, reflectance, visual endface specifications, and geometry.

Amphenol offers standard patch cords in a variety of configurations and connector types.

Both standard SMF-28e and bend reduced fiber types are available.

Custom options are available upon request.

## Features and Benefits

Custom labeling available

Available in a wide variety of connector types, cable designs, and lengths

Duplex version utilizes a removable flexible clip providing a float between channels A and B

Multiple boot size, colors and angle options available

Assemblies are available in standard SMF-28e and Bend reduced fiber types

Custom configurations available upon request

## Specifications

Insertion Loss:
- ≤ 0.15dB typical, S/M
- ≤ 0.25dB typical, M/M
- ≤0.25dB typical, Angle

Return Loss:
- ≤-55dB SM Ultra Polish (UPC)
- ≤-65dB Angle Polish (APC)

Durability:
- <0.2dB change
- 500 mating cycles

Temperature:
- -20 to +75°C

## Applications

IT/Datacom

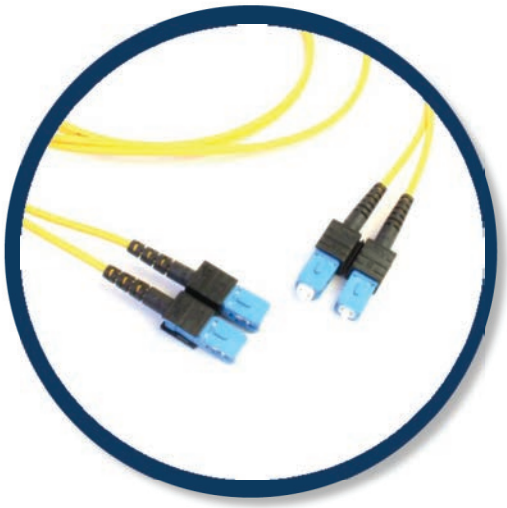
Wireless

Data Centers

## Industry Compliance

RoHS compliant

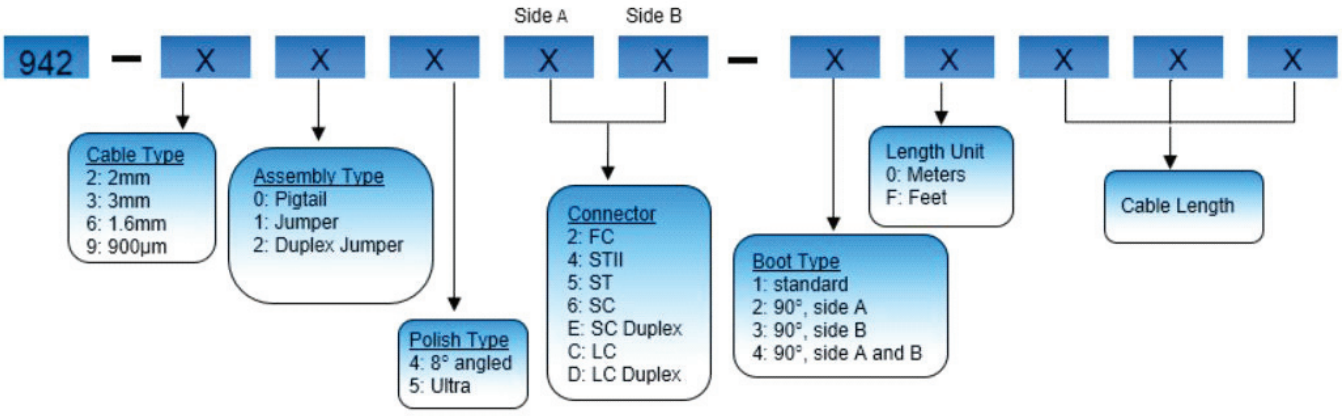
Connectors are mechanically and optically intermateable with industry standard connectors and adapters and conform to TIA/EIA, IEC, and Telcordia specifications



## Ordering Information

| Part Number | Description |
|---|---|
| 942-21566-10001 | JUMPER, SC/UPC, 2MM SIMPLEX, 1M |
| 942-215CC-10001 | JUMPER, LC/UPC, 2MM SIMPLEX, 1M |
| 942-225DE-10001 | JUMPER, LC/UPC(D)-SC/UPC(D), ZIP, 1M |

*Please call customer service for additional configurations



# Multimode Assemblies

Amphenol is a premier manufacturer of Multimode patch cords in the telecommunications industry, meeting or exceeding many of the industry standard requirements for optical transmission loss, reflectance, visual endface specifications, and geometry.

Amphenol offers standard patch cords in a variety of configurations and connector types.

Multimode assemblies are available in a variety of fiber types; 62.5/125, 50/125, OM3, OM4, and bend reduced OM3/ OM4.

Custom options are available upon request.

## Features and Benefits

Custom labeling available

Available in a wide variety of connector types, cable designs, and lengths

Duplex version utilizes a removable flexible clip providing a float between channels A and B

Multiple boot size, colors and angle options available

Assemblies are available in OM1, OM2, OM3, and OM4 fiber types

Custom configurations available upon request

## Specifications

Insertion Loss:
≤ 0.35dB typical

Durability:
<0.2dB change
500 mating cycles

Temperature:
-20 to +75°C

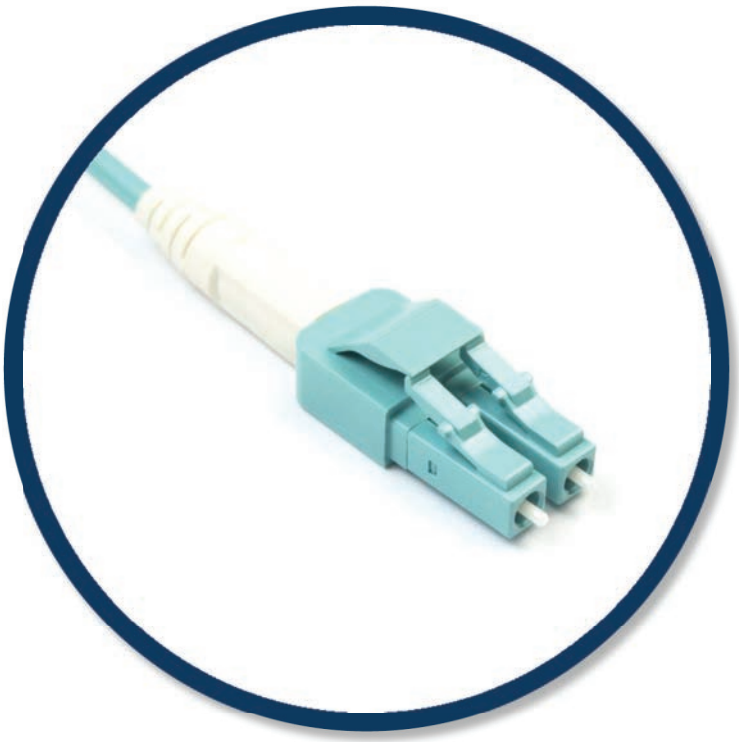
## Applications

Data Centers
IT/Datacom
Wireless

## Industry Compliance

RoHS compliant

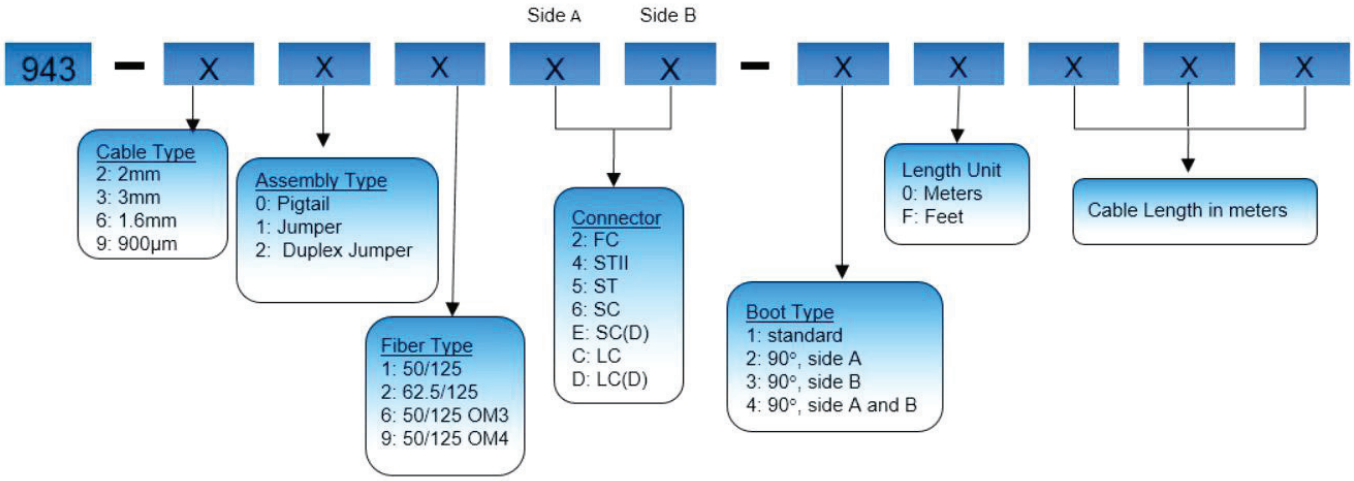
Connectors are mechanically and optically intermateable with industry standard connectors and adapters and conform to TIA/EIA, IEC, and Telcordia specifications



## Ordering Information

| Part Number | Description |
|---|---|
| 943-21666-10001 | JUMPER, SC, 2MM OM3, 1M |
| 943-229DD-10001 | JUMPER, LC(D), 2MM OM4 ZIPCORD, 1M |
| 943-226DE-10001 | JUMPER, LC(D)-SC(D), 2MM OM3 ZIP, 1M |

*Please call customer service for additional configurations



# MPO QSFP Assemblies

Amphenol's QSFP (Quad Small Form-factor Pluggable) with 4 TX and 4 RX channels meets QSFP requirements up to 10Gb/s per channel for a 40G interface.

The MPO QSFP assemblies are available in both MPO to MPO or MPO to LC breakout configurations.

## Features and Benefits

Assemblies are available in OM3 and OM4 fiber types

Optional Amphenol Push/Pull tab for installation in tighter spaces

Assemblies wired for QSFP applications

Customized breakout lengths and fan-out sizes available

Custom configurations available upon request

## Specifications

Insertion Loss:
MPO: 0.75dB max

LC: 0.3dB max

Fiber Count: 4Rx, 4Tx

Operating Temperature:
0° to +70°C

Cable Flammability Rating: OFNP

## Applications

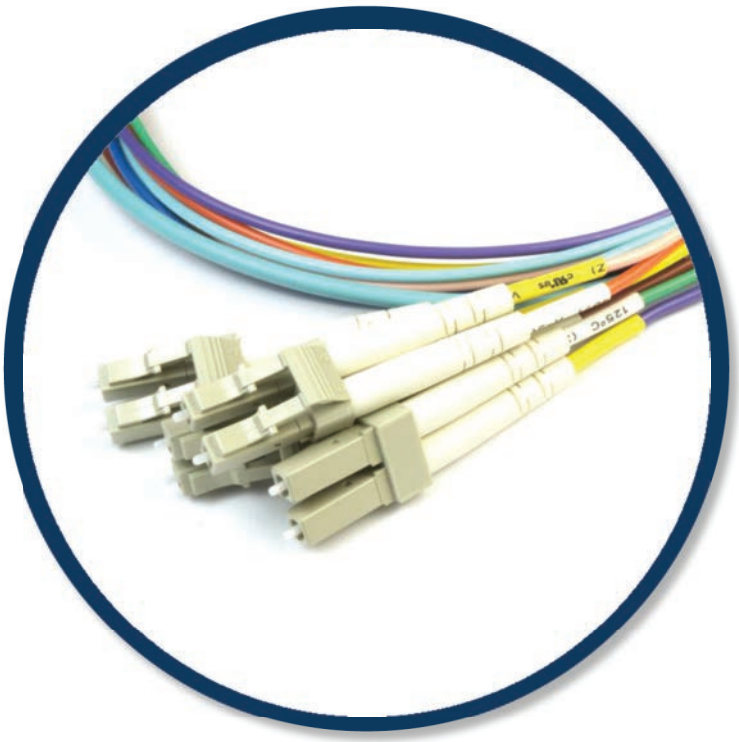
Data Centers

IT/Datacom

## Industry Compliance

RoHS compliant

Connectors comply to applicable TIA/EIA and IEC intermateability standards



## Ordering Information

| Part Number | Description |
|---|---|
| 942-98241-10001 | JUMPER, MPO/APC(F), 3MM ROUND, QSFP, 1M |
| 942-98203-10001 | JUMPER, MPO/APC(F)-LC/UPC(D) 4X, 12F 3MM SM ROUND, 2MM FANOUT, QSFP |
| 943-99383-10001 | JUMPER, MPO(F), 3MM ROUND, OM3, QSFP, 1M |
| 943-99354-10005 | JUMPER, MPO(F)-LC(D) 4X, 12F 3MM ROUND, OM3, 2MM FANOUT, QSFP |

*Please call customer service for additional configurations

# MPO Cable Assemblies

MPO assemblies are becoming increasingly popular due to the high density applications in the marketplace.

MPO connectors offer a higher density than standard connectors providing space and cost savings for the network.

Amphenol's MPO assemblies are offered with 8, 12, and 24 fiber connector options and straight, crossed or custom pin outs.

Amphenol's MPO assemblies are available with ribbon, round, and trunk cable types. Various connector options on the breakout side available.

## Features and Benefits

Angled boots also available (50 degree, 90 degree, and flexible boot from 0 to 90 degree)

Optional Amphenol Push/Pull tab for installation in tighter spaces

Available in a wide variety of connector types, cable designs, and lengths

Customized breakout lengths and fan-out sizes available

Singlemode and Multimode versions

Straight, crossed, and QSFP pinouts available

## Specifications

Insertion Loss:
- ≤0.75dB typical, Angle
- ≤0.5dB typical, M/M
- ≤0.35dB typical, Low Loss

Return Loss:
- ≤-55dB S/M Angle (APC)

## Applications

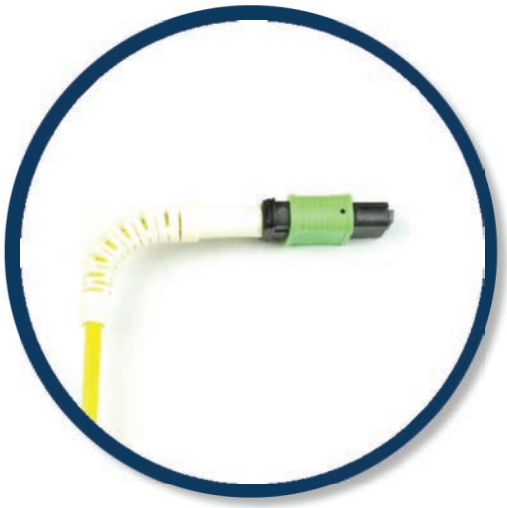
Data Centers

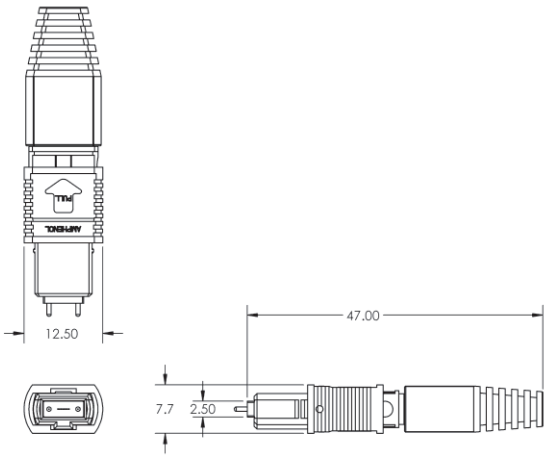
IT/Datacom

## Industry Compliance

RoHS compliant

Connectors comply to applicable TIA/EIA and IEC intermateability standards






## Ordering Information

| Part Number | Description |
|---|---|
| 942-98667-10001 | JUMPER, MPO/APC(F), 12F 3mm SM ROUND, TYPE A, 1M |
| 942-98668-10001 | JUMPER, MPO/APC(F), 12F 3mm SM ROUND, TYPE B, 1M |
| 943-99791-10001 | JUMPER, MPO(F), 12F 3MM OM4 ROUND, TYPE A, 1M |
| 943-99792-10001 | JUMPER, MPO(F), 12F 3MM OM4 ROUND, TYPE B, 1M |

*Please call customer service for additional configurations

# LC Flippable Uniboot

Amphenol's Flippable Uniboot assemblies simplifies cable router in high density panels.The compact design allows for greater density and reduces congestion in racks and trays due to the one boot, one cable design.The flippable style Uniboot allows for swapping polarity without the need for any special tools or removal of any components. Swapped connectors can be identified by an indicator on the rear body.

In addition, Amphenol's flippable Uniboot has a unique feature that allows for the pitch to be changed to a mSFP 5.25mm pitch if necessary.

## Features and Benefits

Swappable polarity provides a way to switch between channel A and B

Easiest swappable connector on the market without the need to remove the LC connectors from the rear body

Connectors can be polarity swapped without the use of any special tools

Clip allows for shrinking to a mini 5.25mm pitch from the standard 6.25mm pitch

Indicator allows for identifying if connectors have been switched

Small form factor LC connector enables high panel densities

Smaller Diameter Cable allows for better airflow

## Specifications

Return Loss:
≤-55dB SM Ultra Polish (UPC)

Singlemode IL:
≤0.14dB Typical
<0.30dB Max.

Multimode IL:
≤0.35dB Typical
<0.50dB Max.

## Applications

Data Centers

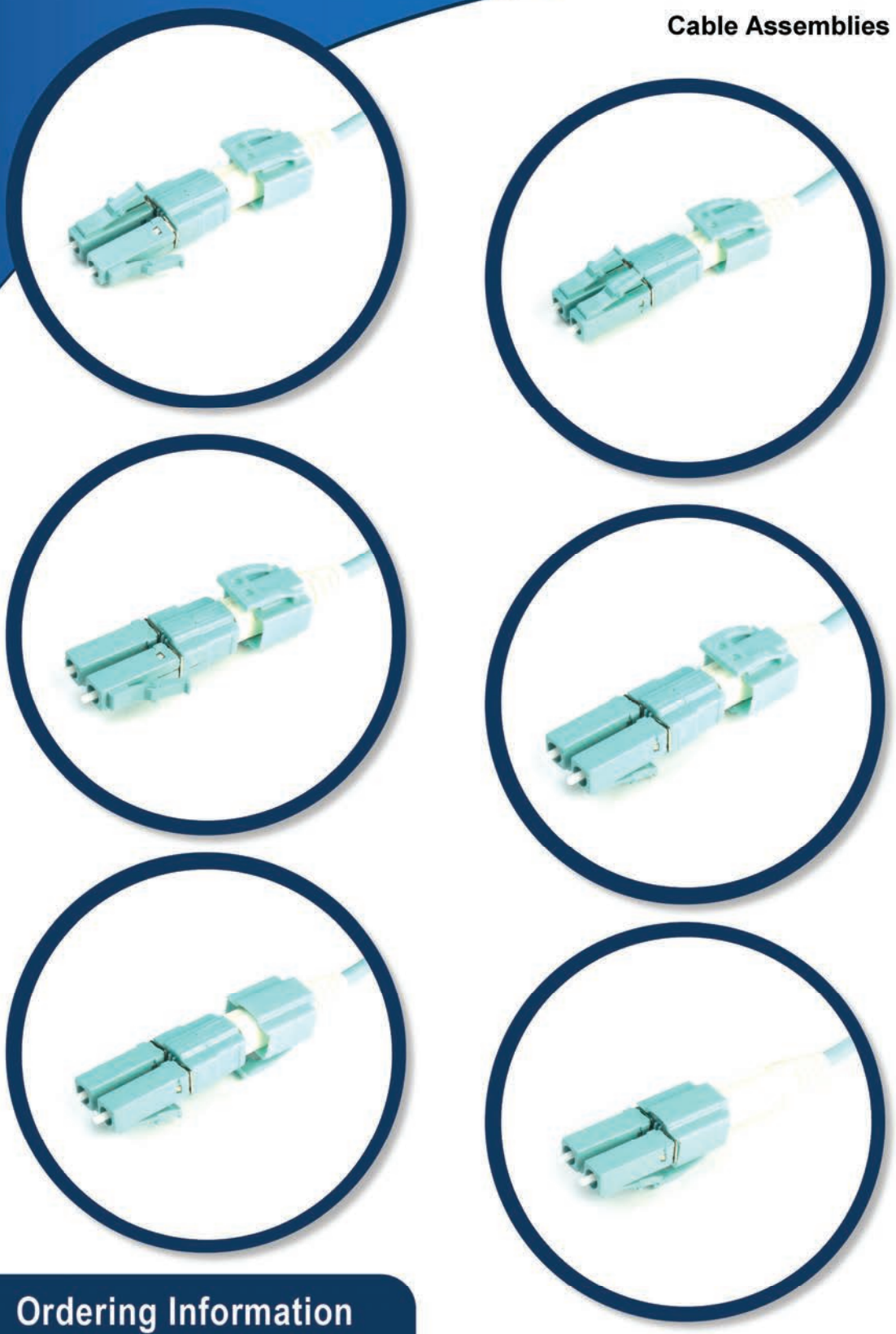
IT/Datacom

## Industry Compliance

RoHS compliant

Meets IEC 61754-20 intermateability standards

Meets TIA/EIA 604-10 intermateability standards

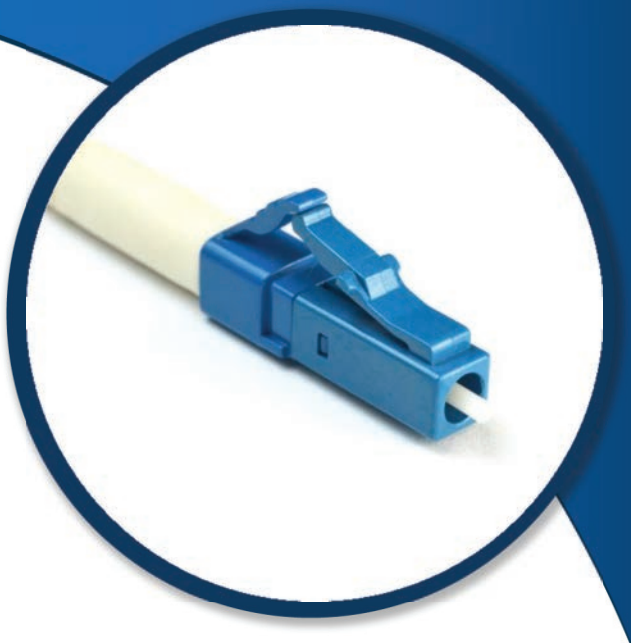


## Ordering Information

| Part Number | Description |
|---|---|
| 942-98669-10001 | JUMPER, LC-X, 3MM DPLX RD, SM, 1M |
| 943-99793-10001 | JUMPER, LC-X, 3MM DPLX RD, OM3, 1M |
| 943-99794-10001 | JUMPER, LC-X, 3MM DPLX RD, OM4, 1M |

*Please call customer service for additional configurations

# 1.2mm Assemblies



Amphenol's 1.2mm assemblies simplifies cable router in high density panels.

The compact design allows for greater density and reduces congestion in racks and trays.

Available in LC and SC connector options, the 1.2mm assemblies utilizes Amphenol's connector with a compact boot.

## Features and Benefits

Small form factor size enables increased density

Duplex version utilizes a removable flexible clip providing a float between channels A and B

Smaller Diameter cable allows for better airflow

Assemblies reduce congestion in trays and racks

## Specifications

Insertion Loss:
≤ 0.15dB typical, S/M
≤ 0.25dB typical, M/M

Return Loss:
≤-55dB SM Ultra Polish (UPC)

## Applications

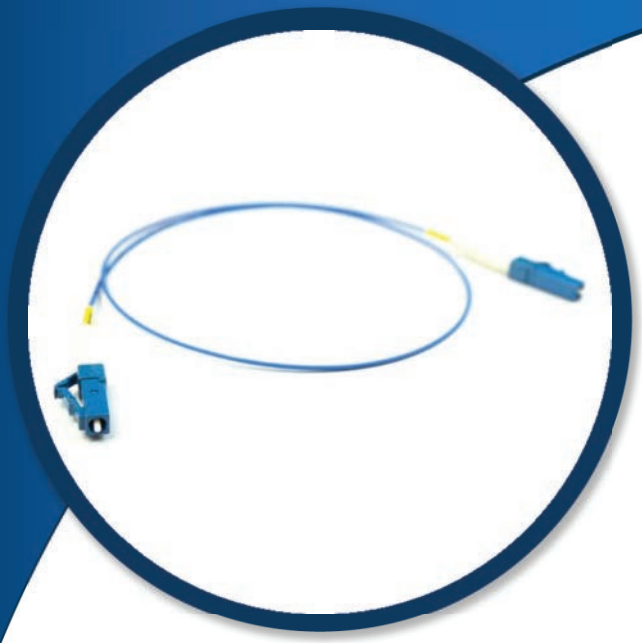
IT/Datacom

Data Centers

## Industry Compliance

RoHS compliant

Connectors comply to applicable TIA/EIA and IEC intermateability standards



## Ordering Information

| Part Number | Description |
|---|---|
| 942-98345-10001 | JUMPER, LC/UPC, 1.2mm, 1M |
| 942-98670-10001 | JUMPER, LC/UPC(D), 1.2mm ZIP, 1M |
| 943-99795-10001 | JUMPER, LC(D), 1.2mm OM3 ZIP, 1M |
| 942-98671-10001 | JUMPER, SC/UPC, 1.2mm, 1M |

*Please call customer service for additional configurations

# Traceable Patch Cords

The Traceable Fiber Patch Cord (TPC) product line is an effective solution for eliminating interconnect errors in dense interconnect environments by adding functionality into a simple patch cord to be able to trace the other end of a connection. From the back of the equipment, to the front of dense frames, or cross room interconnect, the TPC product utilizes a positive light indication to identify the other side of the patch.
The Traceable Patch Cord is targeted toward high density and high congestion areas of the telecommunication fiber optic network. Areas of use span across the network where passive and active fiber management elements are located.

## Features and Benefits

Duplex version utilizes a removable flexible clip providing a float between channels A and B

Singlemode, Multimode and Bend Insensitive versions available

Light and compact power source

LED indicator at both ends of jumper

Available in a wide variety of connector types, cable designs, and lengths

## Specifications

Insertion Loss:
≤ 0.15dB typical, S/M
≤ 0.25dB typical, M/M

≤0.25dB typical, Angle

≤0.35dB typical, M/M

Return Loss:
≤-55dB SM Ultra Polish (UPC)

≤-65dB S/M Angle Polish (APC)

## Applications

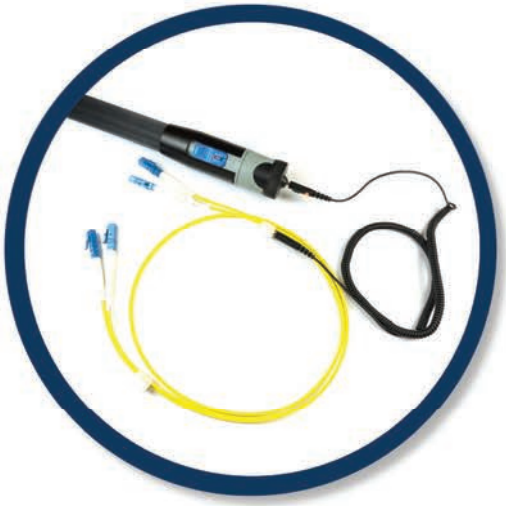
IT/Datacom

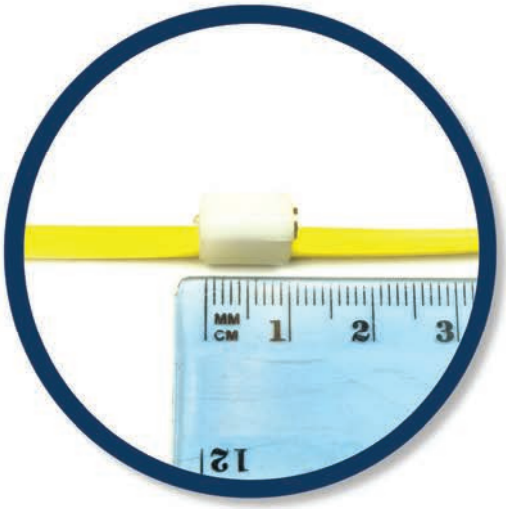
Data Centers

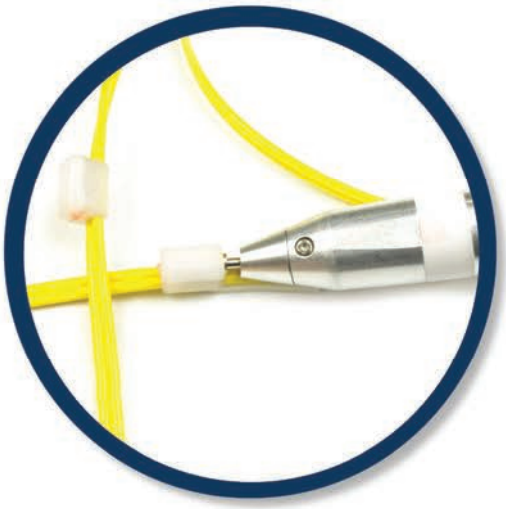
## Industry Compliance

RoHS compliant

Connectors comply to applicable TIA/EIA and IEC intermateability standards






## Ordering Information

| Part Number | Description |
|---|---|
| 943-99665-10003 | JUMPER, LC(D), 2mm TRACEABLE ZIP, OM3, 3M |
| 942-98500-10007 | JUMPER, LC/UPC(D)-SC/UPC(D), 2mm TRACEABLE ZIP, SM, 7M |
| 942-98501-10001 | JUMPER, LC/UPC(D), 2mm TRACEABLE ZIP, SM, 7M |

*Please call customer service for additional configurations