

Wireless Application Multifiber Indoor/Outdoor Cable Assemblies



Custom Fiber Indoor/Outdoor Assemblies

Our custom-built fiber assemblies are designed to meet the rapidly increasing demand for wireless communication. Suitable for use in wireless applications such as: fiber to the antenna (FTTA), fiber to the cell site (FTTCS), and Distributed Antenna Systems (DAS). We employ a wide range of components that will ensure compatibility with large scale equipment manufacturers. Let our knowledgeable staff assist in selecting a solution for you.

Built to meet the rigors of your system's requirements.

Features

FTTA / FTTCS

Assemblies are engineered for connecting Remote Radio Units (RRUs) and the Base Band Unit (BBU) in a wide range of antenna designs.

DAS

A key part of DAS antennas providing reliable wireless services in public spaces and buildings.

Ideally suited for DAS systems that are required by NFPA 72, IFC 510.1 Appendix J, and may be required by state and municipal fire codes for public safety.

Superior Design

Assembly built with OSP furcated breakouts and uses an impact resistant breakout knuckle design.

Designed to be used where outdoor rated connectivity is required.

Assembled in the USA.

Available Options

Connector Types:

Duplex LC, LC Uniboot*, MTP®/MPO, SC, FullAXS™ compatible cable glands, IP-Series Outdoor Connectors

- Design allows for reconfigurable polarity.

* Mounted directly onto the cable.

* Adhesive Heat Shrink applied to seal cable to connectors.

Connector Polish: UPC, APC, PC.

Application

For use in fiber optic network environments that require indoor/outdoor rated ruggedized materials:

- FTFA
- FTTCS
- DAS networks in campus, stadium, and other settings.

Durability

Indoor/Outdoor assemblies designed for both rigorous outdoor conditions and indoor routing.

Cable outer jacket UV resistant.

Water blocking aramid yarn strength members.

Connectors exceed industry standards for mechanical performance, optical performance, and reliability.

Selected connector designs meet IP waterproof rating standards.

Testing Limits

All assemblies tested to appropriate industry standards.



Example of an Indoor/Outdoor Duplex Assembly with applicable information below.

Parameter

Operating Temperature

Specification

- 40°C to + 70°C
(- 40°F to + 158°F)

Cable Outside Diameter:
Cable Bend Radius

4.4 mm (0.17 in)
4.4 mm (0.17 in) Operation
6.6 mm (0.26 in) Installation

Cable Jacket Color:
Cable Retention:

Black
less than 6.8 kg (15 lbs)

Agency / Standard Compliance

Cable:

- RoHS/REACH Compliant
- ANSI/TIA 568
- ITU-T G.657.A1
- UL Listed:
OFNP- NFPA262 Flame Rating
OFNR- UL1666 Flame Rating

Connector:

- RoHS/REACH Compliant
- ANSI/TIA 568
- TIA 604
- Telcordia GR-326

Customization

Requirements for wireless systems will vary. Reach out to our sales team to learn about additional components offered to fit your wireless needs.

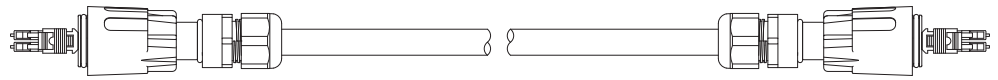
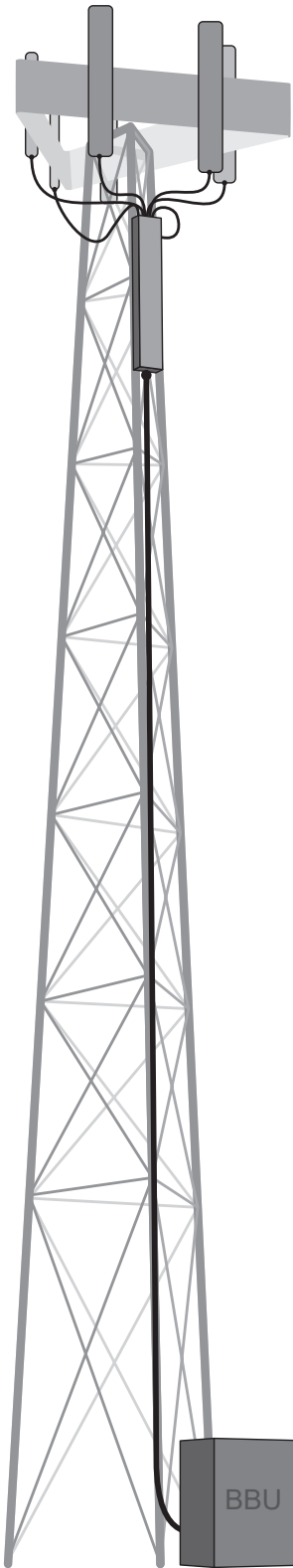
For full line-up see the next three pages



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Armored Duplex Indoor/Outdoor Assembly

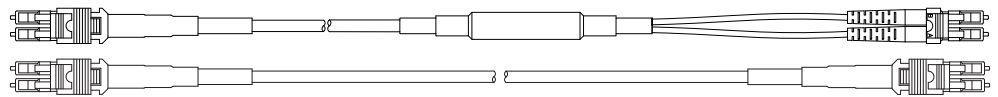
Assembly provides protection from harsh weather conditions as well as small animals. The cable is Indoor/Outdoor rated with water blocking elements to provide protection from the environment. Designed with interlocking armor and employing a rodent-detering agent in the outer jacket, the cable provides protection from rough handling and against rodent biting. Assembly depicted with duplex LC connectors in FullAXS™ compatible cable glands.

Agency / Standard Compliance

- ANSI/TIA 568
- RoHS/REACH Compliant
- Core cable tested to Verizon TPR 9424, Issue 2
- ETL Listed Type OFCR
- Meets Telcordia GR-20

Parameters

- Operating Temp: -40°C to + 70°C (-40°F to +158°F)
- Cable Diameter: 13.3 mm (0.52 inches)
- Corning SMF-28 Bend Insensitive Fiber



Duplex Indoor/Outdoor Assembly

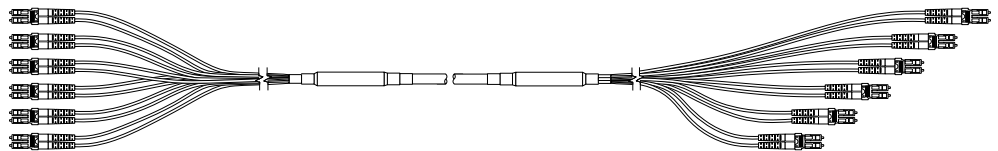
This assembly provides a connection between the BBU and the RRU. This can be a direct from the BBU to the RRU, or from a junction box to the RRU. Cables used are rated for the rigorous outdoor conditions of antenna systems. Solutions are available to accommodate the manufacturers of various antenna systems.

Connectors Available

- LC Clipped
- FullAXS™ Compatible Cable Glands
- IP-Series Connectors (ODVA)
- LC Uniboot with Heat Shrink
- and more

Breakout

- Furcated Tubing
- OSP Furcated Tubing



Multifiber Indoor/Outdoor Assembly

When a junction box is used, this trunk assembly provides an effective way to connect the BBU to a greater number of RRUs on the antenna. Junction boxes available will clamp either directly on to the cable, sealing and protecting the connection, or require the use of IP-Series connectors. Connectors and breakouts offered address the variety of junction box designs.

Connectors Available

- LC Clipped
- LC Uniboot
- MTP®/MPO
- SC Clipped

Breakout

- Furcated Tubing
- OSP Furcated Tubing
- Staggered Connectors
- Pulling Eyes

FullAXS™ Compatible Cable Gland



This robust outdoor cable gland is ideal for use with RRU such as the Ericsson RBS 6000, RRU11, RRU12, and Air lineups. A bayonet style locking system for easy and secure mating of the duplex LC connectors. The weather-proof sheath is waterproof, dust proof and corrosion resistant.

Agency / Standard Compliance

- RoHS/REACH Compliant
- IP 67 Rated
- Rated UL 94 V0
- Meets water resistance test method: IEC 60529:2001

Parameters

- Operating Temp: -40°C to + 80°C (-40°F to +176°F)
- Made of PPS Material

FullAXS™ Compatible Cable Shroud



It is critical to protect the fiber optic connection to the RRU. The FullAXS Style cable shroud provides a permanent, ruggedized, and waterproof connection to the RRU. The shroud is constructed specifically for the conditions of the last few feet to the radio equipment.

Agency / Standard Compliance

- RoHS/Reach Compliant
- IP 67 Rated
- Rated UL 94 V0
- Meets water resistance test method: IEC 60529:2001

Parameters

- Operating Temp: -40°C to +65°C (-40°F to +149°F)
- Made of PPS Material
- Length: 0.384 Meters (15. 11 inches)

IP-Series Waterproof Connectors



The connection from a BBU to the junction box may employ harsh environment connectors requiring water resistance and dust protection. We offer IP-rated, UV-resistant connectors to address this need. Installation is kept simple with factory terminated connectors and a bayonet style locking system.

Connectors Available

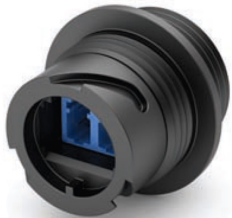
- LC Clipped
- LC Uniboot
- MPO 12 or 24 Fiber Array Connectors
- SC Connector

Standards / Parameters

- Operating Temperature: -40°C to +70°C (-40°F to +158°F)
- IP 68 Rated
- Rated UL 94 V0
- Pull Force: 45.36 kg (100 lbs)
- Durability: 50 matings

IP Series Connector Accessories

Bulkhead Adaptors



In-Line Adaptors



IP-Fan Out Kits



When dealing with multiple RRUs, IP-Fan Out Kits provide a robust alternative to using junction boxes. These kits are ideal for large scale installations as they require minimal installation activity on the antenna. The fan out units are both weather and dust proof, ensuring a long-term reliable junction. Connectors and fan out styles offered provide compatibility with a large range of antenna systems.

Agency / Standard Compliance

- RoHS/REACH Compliant
- IP 68 Rated
- Rated UL 94 V0

Parameters

- Operating Temp: -40°C to + 85°C (-40°F to +185°F)
- Accepts trunk cable diameters of 4.5 mm to 18 mm
- Fiber count: 2- 24
- Trunk side Tensile Rating: 450N (100 lbs)
- Fan out side Tensile Rating: 222N (50 lbs)

Contact the C Enterprises Sales Team for your wireless solutions.

Often fiber optic connections on Remote Radio Units are not compatible and interchangeable. Every manufacturer uses their own connection style and this can vary even between various generations of units from the same manufacturer. In addition to Remote Radio Unit connection method, cable diameter can play a role in determining the appropriate connection style. Let us simplify the process.