SCAPC Fiber Pigtail

Article Overview

A SC/APC fiber optic pigtail is a short single-mode fiber cable with a factory-terminated SC/APC connector on one end and a bare fiber on the other, designed for low-loss fusion splicing in FTTH and PON networks.

What is a Fiber Optic Pigtail?

A fiber optic pigtail is a short length of optical fiber with a pre-terminated connector on one end and a bare, exposed fiber on the other for field termination. Unlike patch cords, which have connectors on both ends, pigtails are intended to be fusion-spliced to incoming fiber cables, providing a permanent, low-loss connection to active equipment, optical distribution frames, or splice trays . This design ensures consistent optical performance and reduces insertion loss compared to field-terminated connectors.

SC/APC Connector Features

o SC/APC stands for Subscriber Connector / Angled Physical Contact.
o The connector has an 8-degree angled polish, which minimizes back-reflection and ensures high return loss (typically >=60 dB), critical for PON and FTTH networks .
o The green housing is standard for SC/APC connectors, and the ferrule is usually made of zirconia for durability and precision .
o SC connectors use a push-pull design, making them suitable for high-density rack or wall-mount applications, while the angled polish prevents signal degradation in upstream transmissions .

Fiber Specifications

o Commonly used with single-mode OS2 9/125um fiber, including G.652D or G.657A types .
o Available in tight-buffered 0.9mm, 2.0mm, or 3.0mm outer diameters, with options for standard or bend-insensitive glass .
o Bend-insensitive fibers allow routing in tight spaces with a minimum bend radius of 7.5mm, ideal for splice closures, terminal boxes, and wall outlets .

Applications

o FTTH (Fiber-to-the-Home): Used at OLT, splitter, and ONU splice points in passive optical networks.
o PON networks: Ensures clean optical performance across GPON, XGS-PON, and EPON links.
o Data centers and telecom rooms: Provides reliable connections between trunk cables and active equipment.
o Splice closures and ODF frames: Acts as the last fixed link between factory-polished connectors and field-spliced cables .

Installation and Splicing

o The bare fiber end is stripped, cleaved, and fusion-spliced to the incoming fiber.
o Proper cleaning and inspection of the fiber end-face are critical to minimize insertion loss and maintain high return loss .
o Pigtails are available in simplex or duplex configurations, with various fiber counts (1, 6, 12 strands) and jacket types (PVC, LSZH, armored, outdoor) to match deployment requirements .

Advantages

o Factory-terminated connectors ensure consistent geometry and optical performance.
o Reduces field termination errors and signal loss compared to mechanical connectors.
o Flexible for custom-length splicing in the field while maintaining high reliability.
o Standardized for FTTH and PON deployments, making them the preferred choice for modern optical networks . In summary, SC/APC fiber optic pigtails are essential components for high-performance single-mode networks, providing a reliable, low-loss interface between field-installed fiber and active network equipment. They are widely used in FTTH, PON, and data center applications due to their angled polish, high return loss, and durable construction.

CommScope engineers and manufactures a complete line of high quality fiber pigtails

The SC/APC Fiber optic pigtails are available in individual packs, 6 packs or 12 packs and use a Green SC/APC connector. Jacket

FS 12 fibers pigtails with LC SC connectors feature color-coded or bunch design for various fiber splicing

Fiber Optic Pigtails The Fiber Optic Pigtail is normally a tight buffered fiber cable with a connector pre

Fiber Pigtails The fiber pigtails are designed to support fusion and mechanical splicing for fiber cabling systems. They are available

FS fibre optic pigtails offer a fast way to make fibre optic communication devices in the field by fibre

Premium Plus Fiber Optic Pigtails and Pigtail Kits are ideal for fusion splicing the required fiber connectivity for structured cabling

Overview of Fiber Optic Pigtails Fiber optic pigtails are essential components in optical communication systems, providing a reliable

SCAPC Fiber Pigtail

Get Professional 3M SC APC 12 Fiber Single Mode Pigtail, jacketed for fusion splicing in enclosures. SC connectors ensure reliable

The SC/APC Singlemode Fiber Pigtail is a critical component in any modern fiber optic infrastructure. By

We have in stock the ST fiber optic adapters with good prices and fast delivery. SC Fiber Optic Pigtail We supply SC PC, SC UPC

TeraSPEED® LC APC to Unconnectorized, Fiber Pigtail, 0.9 mm Tight Buffer

Available in a range of multimode and single-mode fibers with SC, ST or LC connectors. Our premium

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These SC APC 12 Fiber multi-color pigtails assemblies kits are typically used to terminate fiber optic cables

Confused about fiber optic pigtails--which connector type, which polish, fusion or

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