

Fiber Optic APC Connector



AI Overview

An APC (Angled Physical Contact) fiber optic connector features an 8° angled ferrule end face that minimizes back reflection and provides high return loss, making it ideal for high-bandwidth and long-distance optical networks.

Overview APC connectors are designed to reduce back reflection by angling the fiber end face, typically at 8°, so that reflected light is directed into the fiber cladding rather than back to the source, resulting in a return loss of around 60 dB. This makes them superior to PC (Physical Contact) and UPC (Ultra Physical Contact) connectors, which have return losses of approximately 40 dB and 50 dB, respectively. APC connectors are commonly used in single-mode fiber networks where signal integrity is critical, such as CATV, FTTH, GPS, L-Band satellite, and high-frequency RF systems.

Technical Features

- Ferrule Angle:** 8° angled ceramic ferrule ensures minimal back reflection.
- Insertion Loss:** Typically low, around 0.2–0.3 dB per connection.
- Compatibility:** FC/APC connectors should only be mated with other FC/APC connectors to avoid significant insertion loss; hybrid patch cables are recommended if switching connector types.
- Durability:** Threaded FC/APC connectors are suitable for high-vibration environments.
- Protection:** Dust caps and strain relief boots are used to protect the fiber end face and maintain performance.

Applications APC connectors are essential in high-precision optical networks where minimal signal degradation is required. They are widely used in:

- Telecommunications and data centers for long-haul single-mode fiber connections.
- FTTH (Fiber to the Home) deployments for high-bandwidth services.
- RF and satellite communications where reflections can degrade signal quality.
- High-speed optical networks requiring low insertion loss and high return loss.

Summary The APC connector's angled polish is its defining feature, providing superior performance in terms of return loss and signal fidelity compared to PC and UPC connectors. Its low insertion loss, high repeatability, and suitability for high-frequency applications make it a critical component in mode...

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APC vs UPC: Key Differences, Use Cases, and How to Choose

Learn the key differences between APC vs UPC connectors, including performance, applications, and how to choose the right option for your fiber network.

APC, UPC, PC Fiber Connector Types Comparison and

What is an APC Connector? APC connector is the most widely used fiber connector type today. "APC" stands for Angled Physical Connect. The angle

Understanding SC/APC Fiber Optic Connectors: A

Discover everything you need to know about SC/APC fiber optic connectors in our comprehensive guide. Learn about their applications, benefits,

The FOA Reference For Fiber Optics

Fiber optic joints or terminations - where cables are terminated - are made two ways: 1) connectors that mate two fibers to create a temporary joint and/or

UPC vs APC Fiber Connectors - The Ultimate

Discover the key differences between UPC, and APC fiber connectors in this in-depth technical guide. Learn about return loss, insertion

Fiber Connectors

Fiber connectors are often used as the terminations of optical fiber cables to provide non-permanent connections between fiber-coupled devices (a kind of removable

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FC/APC Fiber Connectors: Single Mode

The "APC" stands for "angled physical contact" because these connectors allow the surfaces of two connected fibers to be in direct contact with each other and

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APC vs UPC Fiber Connectors: Differences, Performance, and How

Learn the key differences between APC and UPC fiber connectors—return loss, design, applications, and compatibility. Find out which polish type fits your network needs.

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DIGITUS Fttx installation kit, pre-assembled, 4-fiber, LC/APC connector ...

Fttx - Installation Kit, SM G657A2, 30 m LSZH CPR B2ca, One end 4F LC/APC, one end empty The compact FTTH kit with pre-assembled fiber optic installation cable on one side is ideal for installing

PC vs UPC vs APC Connector: Selecting the Right

This post introduces the three connector polish types: PC vs UPC vs APC and gives a comparison of the fiber connector types in terms of their

Optical fiber connector

Optical fiber connectors are used in telephone exchanges, for customer premises wiring, and in outside plant applications to connect equipment and fiber-optic

Pre-Terminated FTTH Flat Drop Cable | Manufacturer

Factory-assembled pre-terminated FTTH flat drop cable with SC/UPC or SC/APC connectors for fast plug. Wholesale from AIMIFIBER Fiber Optic Cable.

HOLIGHT Fiber Optic Manufacturer in China | Patch Cords

HOLIGHT is a global fiber optic manufacturer in China, providing patch cords, adapters, terminal boxes and FTTH solutions for worldwide telecom projects.

Everything you need to know about fiber optic termination

Different connectors and splice termination procedures are used for singlemode and multimode connectors, so make sure you know what the fiber will be before you

Best FC Fiber Optic Connectors of 2026

What are the best fc fiber optic connectors products in 2026? We analyzed 1,258 fc fiber optic connectors reviews to do the research for you.

Fiber Optic Patch Cord

Fiber Optic Patch Cord In this category, you will find various duplex and simplex LC/SC/FC/ST/Uniboot LC/MDC fiber optic patchcords, which are used to

Understanding Fiber Connector Types ST SC LC FC

Detailed illustration of APC (Angled Physical Contact) fiber optic connector structure, showing angled ferrule alignment for minimized back reflection in high-precision

Fiber Optic Connectors: Detailed Guide to Types and Uses

Fiber optic connectors might be small, but they play a big role in ensuring fast and reliable data transfers. They link fiber optic cables, allowing data to move quickly

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Fiber Connectors

Our selection includes PC, UPC, and APC Fiber Optic Connector polish types. Most Fiber Cable Connectors are spring loaded so that the fiber faces are pressed together when the connectors are

5 Best Fiber Optic Cable | Under 10ms Latency Data Lines

Connector Polish: APC vs. UPC Angle-polished connectors (APC, green boot) reduce back-reflection and are mandatory for passive optical networks like GPON and Verizon Fios. Ultra-physical contact

Contact Us

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