

Article Overview

An SC-FC fiber optic patch cord is a cable with an SC connector on one end and an FC connector on the other, used to link devices in telecom, data, and optical networks.

Overview

A fiber optic patch cord is a short optical cable with connectors at both ends, designed to connect network devices, optical equipment, or patch panels, enabling data transmission via light signals with minimal loss . The SC-FC configuration combines two common connector types:

- o SC (Subscriber Connector): Square body with a push-pull latch, widely used in switches, routers, and general networking. It is easy to insert and remove, providing good mechanical stability .
- o FC (Ferrule Connector): Round, metal body with a screw-threaded connection, ideal for high-vibration or telecom environments. It is rugged, dust-resistant, and ensures precise alignment for long-haul or high-precision applications .

Structure

A typical SC-FC patch cord consists of:

- o Optical Fiber Core: Glass core (single-mode or multimode) that carries the light signal. Single-mode fibers (SM) are used for long-distance, high-bandwidth applications, while multimode fibers (MM) are suitable for shorter distances .
- o Cladding: Surrounds the core with a lower refractive index to keep light within the core.
- o Protective Coating: Resin layer around the cladding for durability.
- o Strength Member: Kevlar or aramid yarn under the jacket to prevent breakage.
- o Outer Jacket: Plastic sheath for environmental protection and color coding .

Applications

SC-FC patch cords are commonly used in:

- o Telecom systems and optical distribution frames (ODFs)
- o Data centers and network switches
- o Cable TV networks and optical test equipment
- o Long-haul or high-vibration environments where FC connectors provide secure connections

Advantages



Fiber optic patch cord SC-FC connector

- o Reliable signal transmission with low insertion and return loss
- o Durable and dust-resistant due to FC's threaded design
- o Easy plug-and-play on the SC end for general networking
- o Customizable for length, fiber type, and jacket material to suit installation environments

Considerations

- o SC-FC patch cords are not interchangeable with other connector types without adapters.
- o Proper cleaning of ferrule ends is essential to maintain signal quality.
- o Choose single-mode or multimode based on distance and bandwidth requirements.
- o Can be simplex (single fiber) or duplex (two fibers) depending on the network setup . In summary, an SC-FC fiber optic patch cord provides a versatile solution for connecting devices with different connector types, combining the ease of SC with the precision and durability of FC, suitable for both telecom and data network applications.

We make custom SC FC multimode simplex fiber optic patch cables at customer request and the delivery is fast. Single mode

A comprehensive guide to fiber optic connectors including FC, SC, LC, ST, and MPO/MTP

Learn about SC, LC, FC, and ST fiber optic patch cords, their uses in FTTH, telecom, and

The optical fiber patch cords are suitable for data communication, telecommunication applications. The terminated connectors in

What is Fiber Optic Patch Cord? Fiber optic patch cord refers to the connecting cables used

This SC To FC fiber patch cord is a single mode cable with SC and FC connector on each end. Fiber patch

A fiber optic patch cord is a fiber optic cable that has connectors at both ends that allow it to be quickly and

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Strong compatibility, Compatible with all standard fibre optic equipment and connectors, plug and play, can

Compare SC, LC, and FC fiber optic connector types in this comprehensive patch cable guide. Learn the

differences

Find high-quality fiber patch cords from Zion Communication - SC/LC/FC/ST types with APC/UPC polish,

Not sure which fiber optic patch cable to buy? This practical guide breaks down FC, SC, ST, and LC connectors--with

1. Overview This specification applies to 3.0mm Single Mode simplex & duplex patch cords. SC, LC and FC connectors are optional

An optical fiber connector is a device used to link optical fibers, facilitating the efficient transmission of light signals. An optical fiber

Confused by LC, SC, MPO, UPC, and APC? This complete fiber optic patch cable guide

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