

8-core fiber optic patch cord



Overview

10Gtek Fiber Optic Cable Patch Cord 10Gtek focuses on developing high performance cable and transceiver solutions for data center, HPC and AI applications.

Key Takeaways

An eight-core fiber optic patch cord is a high-density cable containing eight individual optical fibers, typically used for high-speed data transmission in QSFP transceivers and data center applications.

An eight-core fiber optic patch cord (often MPO/MTP type) contains eight optical fibers within a single jacket, allowing multiple channels of data to be transmitted simultaneously. These cords are commonly used in 40GBASE-SR4 links, connecting QSFP+ transceivers, and can support four duplex channels with four fibers for transmitting and four for receiving . The eight-core configuration is a subset of the standard 12-fiber MPO connector, where the center four fibers may remain unused to match specific applications .

Fiber Types and Performance

Eight-core patch cords are available in multimode fibers such as OM3 and OM4, which are optimized for high-speed, short-distance data center connections . They can also be configured in single-mode fibers for longer-distance applications. These fibers are designed for high-density cabling, offering excellent bending and compression resistance, making them suitable for tight spaces and complex routing .

Connector Types

The most common connectors for eight-core patch cords are:

- MPO/MTP connectors: High-density multi-fiber connectors that allow quick plug-and-play deployment.
- LC or SC breakout connectors: On the fan-out side, each fiber can terminate in individual LC or SC connectors for device connectivity . MPO connectors feature a push-pull release mechanism and a latch design to prevent snagging during installation .

Applications

Eight-core fiber optic patch cords are widely used in:

- Data centers with limited rack space, enabling high-capacity connections without excessive cabling .
- FTTH aggregation points and 5G fronthaul networks, where multiple channels are required in a compact form .
- High-speed backbone and network upgrades, supporting 40G and 100G links between QSFP transceivers .
- Industrial or harsh environments, where robust, high-density cabling is necessary .

Advantages

- High-density connectivity: Reduces cable clutter and maximizes port utilization.
- Scalability: Supports multiple channels in a single cable, simplifying network expansion.
- Ease of deployment: Pre-terminated MPO/MTP connectors allow rapid installation and maintenance.
- Durability: Kevlar reinforcement and robust jackets protect fibers from mechanical stress . Eight-core fiber optic patch cords are an ideal solution for modern high-speed networks, providing efficient, reliable, and scalable connectivity in data centers and enterprise environments.

Article Content

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10Gtek focuses on developing high performance cable and transceiver solutions for data center, HPC and AI applications. The main

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Understanding Fiber Patch Cord Types

A fiber optic patch cord —also known as a fiber jumper—is a fiber cable terminated with connectors on both ends. These connectors

MPO/MTP® Patch Cables Datasheet

The patch cord uses pre-terminated MTP® (registered by US Conec) or universal MPO connectors, which can achieve 8, 12, 16, 24,

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