

How many fiber optic cores should be used for two switches



AI Overview

To connect two switches, you typically need 2 fiber cores (one for transmitting and one for receiving), with additional cores recommended for redundancy.

Basic Connection Requirement

Each fiber optic connection between two switches requires one pair of fibers: one strand for transmitting (TX) and one for receiving (RX) data . Therefore, for a single direct link between two switches, 2 cores are sufficient.

Redundancy Considerations

If you want to ensure network reliability and avoid downtime in case of a fiber failure, it is common to deploy extra cores for redundancy. For example, some designs use 4 cores: 2 for the active connection and 2 as backup . This is especially recommended in critical environments or when switches are part of a dual-core or high-availability setup.

Industry Standards and Future-Proofing

- Standard fiber cables often come in 12, 24, or 48 cores, which allows for future expansion without replacing the entire cable .
- Even if only 2 cores are used initially, having additional cores available can accommodate future switches, uplinks, or higher bandwidth requirements without a...

Article Content

Oct 20, 2025

Core Fiber????

Each link between switches will require two fibers (cores), one for transmit (Tx) and one for receive (Rx); two links

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How Many Cores Do You Need in Your Fiber Optic Cable?

One key factor is the number of cores, which impacts how much data you can transmit. This post will guide you

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Understanding Fiber Optic Cables and Connectors

Fiber Optic Cable Types and Attributes 2.2 Singlemode (SMF) vs. Multimode (MMF)
Fiber Optic Cables As

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Introduction to Optical Fibers, dB, Attenuation and Measurements

This document is a quick reference to some of the formulas and important information related to optical technologies.

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Topology for LAN switches using fiber

And also how many switches ? Personally if going to use “core switch”, then likely the practice would be to use

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Question about fiber optic cables and the number of cores

While looking for suitable single mode fiber optic cables for my project, I came across fiber optic cables with 4-cores/8-cores/12

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Fiber Optic Cable Buying Guide

Fiber optic cables transmit data using pulses of light instead of electrical signals. Inside the cable you can find a glass or plastic core

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How Many Core In Fiber Optic Cable Do I Need

According to the IBDN standard, we generally recommend using 12 cores for the communication room in each building,

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How to choose the right fiber cores

Fiber jumpers (1 or 2 cores): Used for connecting switches, routers, and servers to ensure stable and high-speed data transmission.

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How to Choose the Suitable Number of Fiber Cores for Your Network

Fiber optic cables are essential to modern networks, enabling high-speed and reliable data transmission. Among their

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Choosing the Right Fiber Optic to Connect Two Switches

If you want to achieve the highest speed and distance in the cabling between two or more switches, without a doubt,

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Solved: Fiber cores

Solved: Hi all, If i need to connect 2 cisco 2960S switch over fiber with over a distance of 200m, i know if have to use

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Fiber Optic Ring Network Design Explained:

Learn how to design a fiber optic ring network with practical diagrams, topologies, and

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Fiber Optic Cable Core: Understanding Its Types and Uses

In today's world, fiber optic cables are commonly used in almost every sector as they help

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Fiber Optic Cable Types Explained: Choosing the Right Fiber Cable

With so many types available, choosing the right one for your application can feel overwhelming. This guide breaks

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Selection of Fiber Type and Number of Cores

The specification's minimum configuration is 2 cores per 48 points. Of course, 4 cores can be

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How to choose the number of fiber cores?

Common fiber cores include 1 core, 2 cores, 6 cores, 8 cores, etc., and there are many types.

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How to calculate number of fiber optic strand for backbone?

My understanding is, for one rack minimum requirement is 2 strand (2 core).these strand will be multiply with number

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Fiber Optic Basics

Fiber Optic Basics Optical fibers are circular dielectric wave-guides that can transport optical energy and information. They have a

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Multi-mode optical fiber

Multi-mode links can be used for data rates up to 800 Gbit/s. Multi-mode fiber has a fairly large core diameter that enables multiple

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How to Choose the Suitable Number of Fiber Cores for Your Network:

Multi-core fibers can be more efficient in reducing attenuation by distributing the data over multiple paths. In some

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How to Choose the Suitable Number of Fiber Cores for Your Network

A simple rule is that each device needs two cores—one for sending and one for receiving data. Start by counting how many devices

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How to Choose the Suitable Number of Fiber Cores for Your Network

How to Select the Suitable Number of Fiber Cores After covering the basic concepts of fiber cores, the next focus is to clarify the

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What type of fiber optic cable should be used to connect 2 switches

So I have a business that is in a huge warehouse with 2 data closets, and large POE switches at each location. They

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fiber optic cable multimode versus singlemode duplex vs simplex

Multimode fiber optic cable can be used for most general fiber applications. Use multimode fiber for bringing fiber to the desktop, for

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How Many Cores Do You Need in Your Fiber Optic Cable?

Fiber optic cables are the backbone of modern internet infrastructure, but choosing the right one can be tricky. One

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How to determine the number of cores required when using fiber optic?

Generally speaking, the number of optical cores in an optical fiber is the total number of device interfaces multiplied by 2, plus 10% to

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How to determine the number of cores required when using fiber optic?

If the cost is considered, the entire line can also be redundant with 1-2 cores. For example, if you have three optical fiber access

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SFP Selection Simplified | Westermo

When it comes to fibre optic, most cables use two cores. One of those cores is used transmit (TX) and receive (RX), in one direction,

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Solved: Fiber cores

No sure what you mean by core, but usually the fiber count is by strands or pair. So to connect 2 switches together

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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

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How to Connect Multiple Ethernet Switches Using Fiber Optic Cables ...

To connect multiple Ethernet switches, the best way is to use a multi-strand fiber cable. The 4-strand pre-terminated

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How Many Fibers Do You Need? Guide to Choosing Fiber Count

Learn how to choose the right fiber count for data centers, campuses, FTTH and backbone projects. Practical rules, sizing tips, and

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How Many Core In Fiber Optic Cable Do I Need

The number of optical cores in an optical fiber is the total number of equipment interfaces multiplied by 2, plus 10% to

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How to Connect Multiple Ethernet Switches Using Fiber Optic Cables ...

If you have multiple Ethernet switches that need to be connected over long distances, fiber is obviously a preferred

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How to Choose the Suitable Number of Fiber Cores for

When designing or upgrading your network infrastructure, one of the most important

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Fiber Optic Cable Sizes: A Comprehensive Analysis

Figure no 1 Guide to Fiber Optic Cable Sizes 1) fiber Optic Sizes A fiber optic cable consists of many components that

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