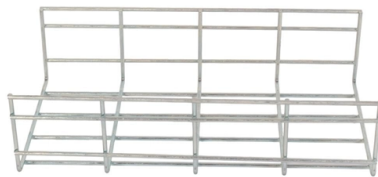


How to replace fiber optic cables inside the wall



Overview

To answer your question, 1/2 is what is needed to have my fiber ran (can vary with others as you've seen in the comments).

Key Takeaways

Replacing fiber optic cables inside a wall requires careful planning, protective conduit use, and strict adherence to minimum bend radius to prevent signal loss. Planning the Replacement

Before starting, map the existing cable route and determine the new termination points for the Optical Network Terminal (ONT) or patch panel. Identify any obstacles such as studs, electrical wiring, or HVAC ducts. Using the shortest and straightest path minimizes stress on the fiber and reduces signal attenuation. Prioritize existing conduits or abandoned cable runs to simplify the process and avoid unnecessary wall damage .

Removing the Old Cable

- Turn off network equipment connected to the fiber to prevent accidental damage.
- Carefully disconnect the fiber connectors from the ONT or patch panel.
- If the cable is inside a conduit, gently pull it out using a fish tape or similar tool, avoiding sharp bends or excessive force .



- For cables running through open wall cavities, ensure the path is clear of nails, screws, or rough edges that could damage the fiber jacket.

Installing the New Cable

- Use pre-terminated fiber cables (SC/APC or LC connectors) to avoid field splicing, which requires specialized tools .
- Protect the cable with flexible low-voltage conduit or innerduct when running through walls to prevent crushing, accidental cuts, or future damage .
- Maintain the minimum bend radius: typically 10 times the cable diameter during installation, and never less than 1.5 inches for standard indoor patch cables .
- Use soft Velcro ties to secure the cable instead of plastic zip ties, which can crush the fiber and increase signal loss .
- Attach the fish tape to a protective pulling boot on the connector end rather than the cable jacket to distribute tension evenly .

Testing and Finalizing

- After installation, clean the fiber connectors using a dry or wet-to-dry optical cleaning method to remove dust or oils .
- Verify continuity and signal quality using a Visual Fault Locator (VFL) or an optical loss test set to ensure there are no breaks, macrobends, or excessive attenuation .
- Once confirmed, connect the fiber to the ONT or patch panel and secure the cable in place.

Safety and Best Practices

- Avoid areas with temperature extremes or high foot traffic.
- Do not pull the fiber with excessive force to prevent microbends, which scatter light and degrade performance .
- Follow the manufacturer's instructions for the specific fiber type and connectors used . By carefully planning the route, protecting the cable, and maintaining proper handling techniques, you can safely replace fiber optic cables inside walls while preserving signal integrity and long-term reliability.

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The FOA Reference For Fiber Optics-Installing Fiber Optic Cable

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