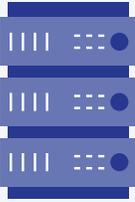# Fiber Optic Patching:
Open or Closed Environments?

When it comes to choosing fiber patching in a structured cabling system, there are a variety of product options available, but they all fall under two general categories: open or closed. Open patching typically means that connectivity is installed in a standard 19" or 23" patch panel, with patch cords, trunks, and cables easily accessible from the front and the rear. Closed patching involves an enclosure that provides extra protection and security at the connection point.

When it comes to rack-mount patching, which do you choose: open design patch panels or enclosures with a closed design? This largely depends on the type of environment or network application. Here are suggestions:

CLOSED

Patching in Open Frame Racks - Enclosures

As racks leave mounted equipment more exposed and accessible, it may be prudent to install fiber enclosures in racks. Enclosures provide extra protection, preventing fiber connections from bumping or jostling. They keep out potential dust or debris, and locking options are usually available for extra security, if necessary.

OPEN

Patching in Rack Cabinets - Panels

Unlike racks, network cabinets provide more protection from the elements and added security. While the protection enclosures provide makes sense for open racks, that protection becomes redundant in a cabinet with doors. For this reason, panels may make more sense for cabinets.

CLOSED
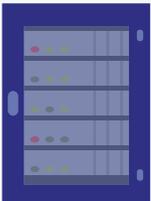
Additional Security - Enclosures

Most enclosures offer doors with a locking feature, limiting access to only those who are authorized, giving them an advantage over panels. However, there are cases where this added security might be redundant, such as in a high-security data center where access is already limited to a few network managers or technicians.

OPEN
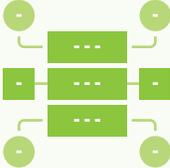
Networks Requiring Fast Deployment or Frequent MACs - Panels

Patch panels allow for faster installations, especially when deploying panels with snap-in fiber cassettes. That said, some manufacturers — including Leviton — offer preloaded enclosures to help speed up deployment and installation. The open nature of patch panels also make them easier and faster to access during network maintenance. However, there is also a case to be made for enclosures in high activity areas, as the extra protection they provide can eliminate the potential for accidental bumping or mashing of connection ports and patch cables.

CLOSED

Splicing - Enclosures

Field splicing creates a more fragile environment for the fiber, and it usually results in a length of loose fiber slack that is better tucked away. While splices are often housed in modules, cassettes, or trays, they are best housed in an enclosure for additional protection.

CLOSED

Field Terminations - Enclosures

As with field splicing, field terminations of fiber connectors require careful installation and handling, and are better maintained in the protection of an enclosure instead of an open patching field.

OPEN

Pre-terminated Connectivity - Panels

Pre-terminated plug-and-play trunks, harnesses, and patch cords come with the assurance of high-quality factory assembly, and are ideal for those who need fast deployment. For these reasons they are a strong fit for a more accessible open patching environment.

Leviton's popular fiber patching systems serve all types of customers and applications, with a wide range of open and closed patching.

CLOSED

2RU UHDX Enclosure

OPEN

1RU UHDX Angled Panel

The **HDX platform** alleviates network growing pains faced by large enterprises and data centers. The compact cassettes and adapter plates help IT managers use existing rack space more efficiently, creating room for future growth. The cassettes and plates work with high-density HDX and UHDX enclosures and panels, allowing up to 144 LC fibers per rack unit. End-of-row and middle-of-row data center architectures especially benefit from these higher densities.

OPEN

1RU e2XHD Angled High-Density Panel and 24-fiber e2XHD MTP-LC Cassette,

The **e2XHD Snap-In Cassette Patching System** is an easy-to-connect, high-density open patching solution for enterprise and data center applications, where fast deployment and simple maintenance are critical. e2XHD cassettes quickly snap in and pull out of flat or angled panels, making installation, moves, adds, and changes easier than ever. Panel covers and rear managers offer extra protection and cable routing.

CLOSED

1RU 2000i SDX Enclosure

OPEN

2RU 500i SDX Enclosure

The **SDX platform** serves small-to-medium data centers and enterprise applications where network space is less of an issue. It's ideal for maintaining pre-existing infrastructure that requires easy cable management. The cassettes and plates work with SDX rack-mount enclosures and panels, wall-mount enclosures, and zero-U enclosures that can be mounted outside of the rack — creating an incredibly versatile platform. SDX connectivity and enclosures also offer the working space needed for field-terminated and pre-terminated connections, as well as splicing applications.

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