

Can a fiber optic patch cord with a UPC replace a PC



Equipped with a removable **Mounting Plate** inside the enclosure, enabling customized drilling and secure component mounting.

Article Overview

A UPC fiber optic patch cord can generally replace a PC connector, but it offers improved performance and is fully compatible in most applications.

Key Differences Between PC and UPC

- Polish Type: PC (Physical Contact) connectors have a slightly convex end-face to reduce air gaps, while UPC (Ultra Physical Contact) connectors have a more precisely polished, smoother convex end-face for tighter contact .
- Insertion Loss (IL): PC connectors typically have an $IL \leq 0.25$ dB, whereas UPC connectors achieve lower IL, around ≤ 0.15 dB, reducing signal attenuation .
- Return Loss (RL): PC connectors usually provide $RL \geq 35$ dB, while UPC improves this to ≥ 40 dB, minimizing back reflection .

Compatibility Considerations

- Mechanical Fit: Both PC and UPC connectors share the same ferrule dimensions (2.5 mm for SC, FC, ST; 1.25 mm for LC), so a UPC patch cord can physically mate with a PC connector .
- Performance Improvement: Replacing a PC with a UPC connector generally improves signal quality due to lower insertion loss and higher return loss, making it suitable for high-speed or high-bandwidth networks .
- Caution: While UPC can replace PC, it is important not to mix APC connectors with PC or UPC, as the angled end-face of APC can damage flat or convex surfaces, causing high insertion loss and poor return loss .

Article Content

PC vs UPC vs APC Connectors: ORL, Geometry and System-Level

PC, UPC, and APC connectors differ not only in appearance but also in back reflection, insertion loss, long-distance performance,

Differences Between PC, APC and UPC Connectors

UPC is an acronym for Ultra Physical Contact. This is an improvement over PC fiber optic connectors, with better surface finish after

APC vs UPC vs PC Fiber Connector, What is the Difference?

If you look at your fiber cabling systems, you may find essential gear like fiber connectors and fiber optic cables. They

What are the Differences of PC, APC, UPC Interface Fiber Patchcords

In order to make the end faces of the two optical fiber better connect, the ferrule end face of the fiber optic jumper is usually ground

Differences Between PC, UPC, and APC Interface Fiber Patch Cords

In fiber optic communication systems, the polishing type of fiber patch cord interfaces directly affects key performance

A Comprehensive Guide to APC, UPC, and PC Connectors in Fibre Optics

Norden Communication offers a range of fibre optic adaptors, pigtails, and patch cords with APC polishing, which are extensively

Fiber Polish Types: PC, UPC, APC, SPC Differences

Modern fiber connectors are virtually all UPC or APC for single-mode applications, and PC for multimode. You may encounter SPC

PC vs UPC vs APC Fiber Optic Connectors: What's the Difference?

UPC fiber optic connectors will directly reflect any reflected light back to the light source, but APC fiber optic connectors

APC Vs. PC Vs. UPC - What's the Difference?

APC, PC, and UPC all these terms refer to the polish style of the ferrules that are found inside fiber optic connectors.

Explanation of PC, UPC, APC Polish of Fiber Optic Products

Single mode fiber optic cables can be with PC, UPC or APC polished connectors, while multimode there is no APC ones. Our fiber

APC, UPC, PC Fiber Connector Types Comparison and Selection

UPC connector is an upgraded version of PC. "UPC" stands for Ultra Physical Contact.
UPC fiber connector evolved

APC vs UPC vs PC: Fiber Connector End Face & Polishing Guide

If you need to connect an APC port to a UPC port, the solution is a hybrid fiber patch cord with an APC connector on one end and a

Contact Us

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