

The AP panel can be directly connected to fiber optic cable



Overview

They make it easy to terminate fiber optic cables and provide access to the cable's individual fibers for cross connection.

Key Takeaways

Some access points can be directly connected to fiber optic cables, while others require a media converter or SFP module to interface with fiber. Direct Fiber Connection

Certain AP models, such as the Huawei AirEngine 5773-23H and 5573-23H, allow direct connection of optical fiber to their optical ports without the need for an additional optical module. These APs are designed to handle fiber input natively, simplifying installation and reducing the need for extra hardware.

APs Requiring Media Converters

For APs without built-in fiber ports, a fiber media converter is necessary. The converter transforms electrical signals from the AP into optical signals suitable for fiber transmission. For example, Wi-Fi 7 APs can use a 10G fiber media converter with SFP+ ports to connect to fiber backbones, supporting distances up to 20 km and data rates up to 10 Gbps. This setup ensures high-speed, long-distance connectivity while maintaining signal integrity.



Advantages of Fiber-Connected APs

- Long-distance transmission: Fiber allows APs to connect over hundreds of meters to several kilometers, far exceeding the 100-meter limit of copper Ethernet .
- Electromagnetic isolation: Fiber provides natural protection against surges, lightning, and ground loops, making it ideal for industrial or outdoor environments .
- High bandwidth: Fiber supports multi-gigabit uplinks, essential for Wi-Fi 6/7 APs handling high-density traffic .

Considerations

- Ensure the AP supports fiber connectivity either natively or via a compatible media converter.
- Use pre-terminated fiber cables to reduce insertion loss and simplify installation .
- Verify the type of fiber (single-mode or multi-mode) and the SFP module compatibility if using a media converter.
- For APs with multiple RF ports, ensure antennas are properly configured and powered off during installation to avoid damage . In summary, direct fiber connection is possible for APs with optical ports, while other APs require a media converter or SFP module to interface with fiber. This approach provides long-distance, high-speed, and interference-resistant network connectivity.

Article Content

The FOA Reference For Fiber Optics

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