Are the fiber optic cable and router IP addresses the same

Overview

IP Address same when connecting using WIFI or network cable?

Your WiFi is 1 interface and your Ethernet is a different interface, so both will receive diffe.

Key Takeaways

A fiber optic cable and router appearing to share the same IP address usually indicates that the router is using the IP assigned to the Optical Network Terminal (ONT) or that NAT is in place, which is normal in many home setups.

Understanding the Setup

In a typical fiber optic installation, the fiber line terminates at an Optical Network Terminal (ONT), which converts the light signals into electrical signals for your router.

The ON

T may be assigned a public IP address by your ISP, and your router then uses Network Address Translation (NAT) to assign private IP addresses to devices on your local network. This can make it appear as if the fiber connection and the router share the same IP, but in reality, the router is managing multiple devices behind that single public IP.

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Multiple I

P Addresses on a Single Fiber LineIf your ISP provides multiple static IP addresses over a single fiber line, these addresses are bound to interfaces, not the physical cable itself. To use them separately: Use a router capable of multiple WAN IP assignments or a multi-WAN router. Some routers with DD-WRT or Linux-based firmware can handle multiple IPs on the same interface.

Alternatively, connect a switch after the ONT to distribute the IPs to multiple devices, but note that consumer-grade routers typically only support one WAN IP per interface. For more complex setups, you can configure two routers, each handling one of the static IPs, or use VLANs to separate traffic.

Best Practices

Ensure the ONT is properly connected to the router via Ethernet, and the router is configured with the correct WAN settings. Avoid assigning the same static IP to both the ONT and the router manually, as this can cause conflicts. If using multiple IPs, check whether your router supports multi-IP or bridge mode to prevent conflicts and allow proper routing.

In summary, sharing an IP between the fiber ONT and the router is common due to NAT, but if you need multiple IPs on the same fiber line, you should use a router that supports multiple WAN IPs or configure separate routers/interfaces to handle each IP properly.

Article Content

IP Address same when connecting using WIFI or network cable?

Your WiFi is 1 interface and your Ethernet is a different interface, so both will receive different IP addresses. Though this is a very basic explanation, more complex things are possible, but...

Confused about multiple IP addresses on one fibre connection

Ubiquiti Edge routers, for example, allow you to set multiple IPs per interface so you would just assign the other IPs and any traffic destined for those IPs will be routed correctly. Other

Fiber Cable Modem vs. Optical Router: Differences & Manufacturers

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Will our IP address change when we switch fibre provider ...

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The fixed public IP address associated with your fibre leased line is in most cases provided by your internet service provider, which owns certain blocks of addresses.

Optical Network Terminal vs Router Explained

Ultimately, an ONT and a router are not interchangeable—they are two distinct but equally vital components of a fiber optic network. The ONT serves as the specialized modem, translating the

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I''m confused about the MAC address and IP address of my ...

Now, Network+ doesn''t go this deep, but it''s good to know so I''ll break it down: When you send a packet over the internet, the IP Address stays the same (until it hits a NAT router). HOWEVER: the MAC

Find your IP address in the Google Fiber app

So the IP address of a particular device is not necessarily the same every time it connects. Generally, you do not need to know the IP address of a device. However, you can determine the IP address of

Does a cable modem have its own MAC and IP addresses or is it just ...

It''s definitely a separate entity, reached by a different IP than the router and returning very different screens than the router does. First of all, nowadays a "modem" frequently is a router,

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