

What is a port identification splitter



Summary of Content

A port identification splitter allows a network to determine which specific output port is connected to a device by using coded signals or power ratios.

Overview

A port identification splitter is an advanced type of optical or RF splitter that not only divides a signal into multiple outputs but also enables the network to identify which output port is connected to a particular device. This is particularly useful in Passive Optical Networks (PONs), fiber-to-the-home (FTTH) deployments, and RF systems where multiple endpoints share a single input signal .

How It Works

- **Signal Splitting:** Like a standard splitter, it divides an input signal into multiple output signals. For optical splitters, this can be done using Planar Lightwave Circuit (PLC) technology, which ensures precise and even splitting with minimal loss .
- **Port Identification Mechanism:** Each output port is assigned a unique coding combination based on power ratios or transmittance ratios of different wavelengths within the passband of a filter in the connected device (e.g., an Optical Network Unit, ONU). When a signal is received, the network can analyze the power code combination to determine which port the device is connected to .
- **Mapping Codes to Ports:** The system maintains a one-to-one mapping between the transmittance code combination and the power code combination. This allows the network to automatically identify the optical link output port without manual testing or labeling .

Applications

Article Content

The FOA Reference For Fiber Optics

With a 1:n device, in one direction they split the signal into n ports/fibers and into the other end they combine the signals into one

The best HDMI splitters of 2026: Expert recommended | ZDNET

We tested and researched the best HDMI splitters that provide a convenient and efficient way to distribute HDMI

DisplayPort 1.2a splitter

It consists of one dual mode input port and two dual mode output ports configurable as either DisplayPort or HDMI/DVI. STDP4320 is

Introduction to Passive Optical Network Splitter Architectures

Where splitters are placed in the network can make significant impacts on fiber counts, network cost and deployment time and

Ports in Networking

A port is a logical identifier used to distinguish different applications or services on a device, allowing network traffic to

Ethernet Splitter 101: Everything You Need to Know

As homes and offices grow more connected, running out of Ethernet ports becomes a common problem. This is

AN10-006

Since the 0° power splitter is a reciprocal passive device it may be used as a power combiner simply by applying each signal

Port Identification Method and Apparatus

To implement the fault locating, it is necessary to accurately identify a port of a splitter connected to the ONT in the ODN. In a related

WO/2025/119033 PORT IDENTIFICATION METHOD FOR

The present application belongs to the technical field of communications. Disclosed are a port identification method

Ethernet Splitter 101: Everything You Need to Know

Everything you need to know about Ethernet splitters, including types, factors to consider when choosing one, and

Ultimate Guide to Optical Splitters for FTTH & GPON

Master optical splitter selection for FTTH & GPON networks. Compare PLC vs FBT, analyze insertion loss charts, and

What Is Ethernet Splitter and How Does It Work

Ethernet splitter is one of common network devices. What does it do? How does it work? To

SoftPerfect Switch Port Mapper : network port identification tool

SoftPerfect Switch Port Mapper Easy network switch port identification for Windows, macOS and Linux The SoftPerfect Switch Port

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The present application belongs to the technical field of communications. Disclosed are a port identification method for a splitter, and

What is a Splitter? How does it work? Where do we use it?

Learn what a splitter is with this comprehensive guide, including how it works, where we can

Requirement for a Specific RF Splitter with Port Identification ...

I want to split RF Power to connect 2 antennas to the same port for RFID tag detection. Is there any splitter in the

Share COM port between apps. Serial Data Splitter.

This article describes how to share COM port between applications with Serial Port Splitter hardware and

Understanding Power Splitters

Since the 0° power splitter is a reciprocal passive device it may be used as a power combiner simply by applying each

Introduction to Passive Optical Network Splitter Architectures

A fiber broadband provider typically determines and overall split ratio for the network, such as 1x32 or 1x64, and uses combinations

Fiber Optic Splitter: How It Works & Types Guide

This guide demystifies fiber optic splitters, explaining their design, operating principles,

Optical Splitters: Split Ratios, Splitting Architectures & PON Network ...

A split ratio describes how many output ports a splitter has, and how evenly the input optical power is distributed

Fiber-optic splitter

Fiber-optic splitter A fiber-optic splitter, also known as a beam splitter, is based on a quartz substrate of an integrated waveguide

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