

Low-loss Industrial Ethernet Reconfigurable Optical Add-Drop Multiplexer



Overview

The Reconfigurable Optical Add/Drop Multiplexer (ROADM) switch is built on a proprietary micro-optics and micro-actuator platform with athermal grating packaging for stable wavelength performance. An Optical Add/Drop Multiplexer (OADM) is a Wavelength Division Multiplexing (WDM) networking device that has access to all wavelengths on a fiber and allows for specific wavelengths to be dropped or added at a location while also allowing other wavelengths to optically pass through the site. In optical communication, a reconfigurable optical add-drop multiplexer (ROADM) is a form of optical add-drop multiplexer that adds the ability to remotely switch traffic from a wavelength-division multiplexing (WDM) system at the wavelength layer. With ongoing advancements, OADMs have evolved from FOADMs.



Article Content

Aug 03, 2025

Opto-VLSI-based integrated reconfigurable optical add-drop multiplexer ...

Abstract In this paper, we propose a novel integrated reconfigurable optical add-drop multiplexer (RODAM) structure based on using an Opto-VLSI processor and a 4-f imaging system.

May 01, 2026

Silicon-based Low-Power Reconfigurable Optical Add-Drop Multiplexer

The wavelengths of the demonstrated concave grating multiplexer align well with the ITU-T standard. We demonstrate a prototype of ROADM comprising two such concave gratings and four wide-band

Jan 14, 2026

OADM optical add drop multiplexer

Reconfigurable Optical Add-Drop Multiplexers ROADMs were developed to provide flexibility in rerouting optical streams, bypassing faulty

Mar 31, 2026

Datasheet

The Reconfigurable Optical Add/Drop Multiplexer (ROADM) switch is built on a proprietary micro-optics and micro-actuator platform with athermal grating packaging for stable wavelength performance.

Mar 22, 2026

Design and evaluation of a reconfigurable optical add-drop multiplexer ...

Space-division multiplexing (SDM) is expected to increase the capacity of photonic networks. Reconfigurable optical add-drop multiplexers (ROADMs) for SDM-based networks must

Oct 03, 2025

Optimizing performance in elastic optical networks using advanced ...

Scalable and Economically Efficient Design for Elastic optical networks. Network operators diversify service offerings and enhance network efficiency by leveraging bandwidth-variable

Dec 08, 2025

Implementation of an Elastic Reconfigurable Optical Add/Drop ...

Abstract- We designed a Reconfigurable Optical Add/Drop Multiplexer (ROADM) based on a subcarrier add/drop node in an optical communication system that is suitable for all kinds of optical multiplexing

Apr 05, 2026

Dynamically Reconfigurable Optical Add-Drop Multiplexer/ Filter

Product Description Agiltron reconfigurable Add/Drop Multiplexer (ROADM) is designed dynamically reconfigurable switching and routing applications in next generation optical

Oct 26, 2025

A Flexible and Reconfigurable Optical Add-Drop Multiplexer for Mode ...

Reconfigurable optical add-drop multiplexer (ROADM) is one of the key building blocks for on-chip optical networks, which can download the desired signals from the bus waveguide to the

Feb 13, 2026

An integrated reconfigurable optical add-drop multiplexer ...

A novel integrated reconfigurable optical add-drop multiplexer (ROADM) structure is proposed and demonstrated experimentally. The ROADM employs an interface substrate that

Nov 09, 2025

Battle of the OADMs: FOADM vs TOADM vs ROADM

The Tunable Optical Add-Drop Multiplexer (TOADM), compared to FOADM, enables dynamic wavelength adjustments during runtime without

Apr 08, 2026

Performance optimization of reconfigurable optical add-drop ...

A reconfigurable optical add-drop multiplexer structure based on the use of Opto-VLSI in conjunction with arrayed waveguide gratings and an off-axis 4-f imaging system has been optimized and

Jan 17, 2026

What Is OADM (Optical Add Drop Multiplexer)?

OADM is used in metro/access networks to enable the selective add and drop of optical channels. It is a low-loss, low-cost passive device that offers a

Sep 08, 2025

printmgr file

Our optics are shaped by precision surfacing techniques and functionalized with smooth or structured surfaces or patterned metallization. Proprietary processes developed at our global optical coating

Oct 14, 2025

WHITE PAPER

How Does the ROADM Network Work? In optical networks, multiple signals are transmitted simultaneously over different wavelengths (colors) using WDM, where each wavelength represents a

Apr 19, 2026

Reconfigurable Add/Drop Multiplexer Design to Implement

Reconfigurable optical add-drop multiplexer (ROADM) is a key network element enabling flexible handling of wavelengths. Its architecture allows for remote traffic provisioning at the

May 30, 2026

Low-loss and polarization insensitive 32 × 4 optical switch ...

In this paper, we propose and demonstrate a 32 × 4 optical switch using high-index doped silica glass (HDSG) for ROADM applications.

Jul 02, 2025

4-Port Reconfigurable Optical Add-Drop Multiplexer (ROADM)

Optical Specifications of a C-or L-band, 4-Port Reconfigurable Optical Add-Drop Multiplexer (ROADM). Parameters are specified for End-of-Life(EOL), over passband, over all channels, over operating

Mar 02, 2026

192-channel silicon Reconfigurable Optical Add-Drop Multiplexer

We have designed and demonstrated a 192-channel silicon Reconfigurable Optical Add-Drop Multiplexer (ROADM) for multi-dimensional multiplexing systems. The proposed ROADM accommodates a total

Jun 04, 2026

Optimal placement of reconfigurable optical add/drop multiplexers with ...

A Reconfigurable Optical Add/Drop Multiplexer (ROADM) can automatically terminate wavelengths from one optical cable to another (see Fig. 2). Wavelengths can be routed across the

Feb 27, 2026

Reconfigurable Optical Add/Drop Multiplexer

The Reconfigurable Optical Add/Drop Multiplexer (ROADM) switch is built on a proprietary micro-optics and micro-actuator platform with athermal grating

Oct 11, 2025

Optimizing performance in elastic optical networks using advanced ...

Hence, a finer granularity that aligns seamlessly with the reconfigurable optical add-drop multiplexer (ROADM) hardware requirements is proposed. The wavelength-selective switch (WSS) is crucial in

Dec 06, 2025

Reconfigurable Optical Add/Drop Multiplexer Wavelength Switch

The Reconfigurable Optical Add/Drop Multiplexer (ROADM) switch is built on a proprietary micro-optics and micro-actuator platform with athermal grating packaging for stable wavelength performance.

Dec 21, 2025

Optical add drop multiplexer in Optical Fiber

The document presents an overview of Optical Add-Drop Multiplexers (OADMs), detailing their components, types, configurations, functions, and applications in

Jun 22, 2026

OPN04-5: Hybrid Low Loss Architecture for Reconfigurable Optical Add ...

Reconfigurable optical add/drop multiplexers (ROADMs) manufactured with different designs and technologies are soon going to be available in the market. Unfortunately, the latest

Mar 28, 2026

Reconfigurable optical add-drop multiplexer

This allows individual or multiple wavelengths carrying data channels to be added and/or dropped from a transport fiber without the need to convert the signals on all of the WDM channels to electronic

Sep 17, 2025

Low-loss and polarization insensitive 32 × 4 optical switch ...

Integrated switches play a crucial role in the development of reconfigurable optical add-drop multiplexers (ROADMs) that have greater flexibility and compactness, ultimately leading to

Sep 30, 2025

What is ROADM?

To easily adjust to changing traffic demands, the Reconfigurable Optical Add/Drop Multiplexer (ROADM) was introduced in the early 2000s. ROADMs enable remote configuration (and reconfiguration) of A

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