Syropy AI Connectivity

Columbia AI Server QSFP

Overview

The AX93331 is a dual-port 40 GbE QSFP+ module with Intel® XL710 Ethernet controller. This is a great option for virtualized servers, providing advanced features including Virtual Machine Device Queues (VMDq) and Single Root I/O Virtualization (SR-IOV) to deliver amazing. Executive Summary: In modern AI cluster deployments, the 800G OSFP to 2x400G QSFP112 breakout architecture is the most efficient method for scaling bandwidth while maximizing rack density. By splitting a single 800G switch port into two high-speed 400G connections, data center architects can double. This guide explores key technical features for GPU clusters, examines spine-leaf architectures for distributed AI applications, and evaluates whether QSFP-DD or OSFP is better suited for future AI data centers. This article explores the characteristics of OSFP and QSFP-DD form factors and practical solutions for interconnecting devices with different ports, enabling a more flexible and scalable network architecture. Choosing SFP, SFP+, and QSFP for a server network should not be based on the connector name, but on five things at once: speed, distance, transmission medium, port mode, and confirmed hardware compatibility.

Columbia AI Server QSFP

QSFP-400G-DR4 Transceiver in AI Applications

The QSFP-400G-DR4 transceiver plays a crucial role in AI data centers, GPU clusters, and large-scale computing environments.

2-port 40GbE QSFP+ LAN Module With Intel® XL710 Ethernet Controller

The AX93331 is a dual-port 40 GbE QSFP+ module with Intel® XL710 Ethernet controller. This is a great option for virtualized servers, providing advanced features including Virtual Machine Device Queues

How to Achieve Interconnection Between OSFP and QSFP-DD Ports?

This article outlines key OSFP and QSFP-DD differences and offers four practical interconnection solutions to support scalable 400G/800G data center networks.

The Ultimate Guide to QSFP Cable: Everything You

Introduction Quad Small Form-factor Pluggable (QSFP) cables are essential in modern data centers and network environments. They can support

AI Data Center Networking: QSFP-DD Guide for GPU Clusters

Deploy QSFP-DD for AI clusters with confidence. Learn bandwidth requirements, QSFP-DD vs OSFP for AI, and GPU cluster sizing.

AI Services

Participants will build practical AI skills in prompt engineering, security, and workflow integration, with office hours and cross-campus Lunch & Learn sessions available for deeper engagement.

The Ultimate Guide to QSFP Cables

Explore the ultimate guide to QSFP cables. Learn QSFP types, differences from SFP, installation methods, and benefits for high-speed data

About Columbia AI

The initiative enables Columbia's schools, institutes, centers, and affiliates to lead and contribute to the future of AI--through coordinated, distinct efforts, supported

SFP vs SFP+ vs QSFP: How to Choose the Right Module in 2026

Learn how to choose SFP, SFP+, and QSFP modules correctly: speed, distance, DAC vs AOC vs fiber, compatibility, and common pitfalls in server networks.

What is QSFP & QSFP+ Transceiver: An Ultimate Guide

What is a QSFP & QSFP+ Transceiver? QSFP stands for Quad Small Form-factor Pluggable. By integrating four-lane signals into a single module, it

Columbia University Data Science Institute

The Columbia University Data Science Institute leads the forefront of data science research and education.

40G QSFP: The Core of Optical Network Interconnection

QSFP (Quad Small Form-factor Pluggable) has emerged as a key enabler of this transformation, offering a balance between performance, density,

QSFP-DD vs. OSFP: From 400G to 800G and Beyond

400G isn't just for hyperscale data centers anymore. With new Intel and AMD products on the market, it is common for each server to push beyond 10G.

QSFP-DD for AI Data Centers: 400G/800G GPU Interconnect Guide

This guide explores key technical features for GPU clusters, examines spine-leaf architectures for distributed AI applications, and evaluates whether QSFP-DD or OSFP is better

Microsoft Word

2024 Columbia & RFS AI in Finance Conference Artificial Intelligence and Finance: Opportunities and Risks Call for Papers Artificial intelligence (AI) techniques have rapidly developed alongside a sharp

QSFP+ Optical Fiber Cable, 10m

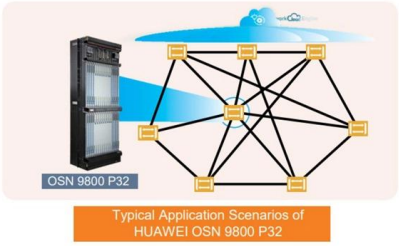
Cables QSFP+ Optical Fiber Cable, 10m 10-32 Coaxial Male to 10-32 Coaxial Male, 50 Ohm, 10 ft. cable 10-32 Coaxial Male to BNC Female, 50 Ohm, 3 ft. cable 10RJ11-DB25M Serial Cable for 4-Port

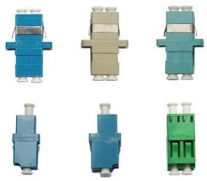
Optimizing AI Networks: Connecting 400G Ports with

This article explores how to connect 400G ports with backward compatible QSFP-DD modules while leveraging QSFP112 transceivers for AI

How 400G QSFP-DD AOC is Driving the Development

Conclusion As AI and HPC applications continue to drive the need for faster, more efficient computing infrastructure, 400G QSFP-DD AOC technology





Columbia AI

As AI raises the bar for MBAs, Columbia Business School is exploring how students can build AI fluency and prepare for the roles that are

Understanding QSFP+ and its applications in your

Understanding QSFP+ and its applications in your network QSFP+ is a type of pluggable transceiver used to connect a network device to a copper or

Artificial Intelligence

Artificial Intelligence (AI) is concerned with the development of systems that exhibit behavior typically associated with human cognition, such as perceiving, learning,

Scaling AI Clusters: How 800G OSFP to 2x400G QSFP112 Breakout

Learn how 800G OSFP to 2x400G QSFP112 breakout architecture optimizes rack density in AI clusters. Technical insights on 112G SerDes and cabling efficiency.

AI in Research , Columbia Business School

Google Gemini Google Gemini is now available to the Columbia University community. This service provides access to Google's most advanced AI models

Ginsburg HPC Cluster User Documentation

Welcome to Ginsburg Cluster User Documentation The Ginsburg High Performance Computing (HPC) Cluster is a service supporting research at Columbia. Getting Support For

QSFP-DD

Systems designed with QSFP-DD modules will be backwards compatible, allowing them to support existing QSFP-DD or QSFP modules and provide flexibility for

Compatibility and difference between QSFP+ and QSFP 40Gb/s

Is this just sloppy naming and are these QSFP 40Gb/s actually QSFP+? Is there a difference in the physical connections between QSFP and QSFP+? Or are just the cables of a

Contact Us

For datasheets, pricing, or custom high-speed optical interconnect solutions, please visit:
https://www.syropy.com.pl