

Australian Solution SFP Optical Module QSFP-DD



Overview

OptiModule — High-Performance Optical Transceivers 10G to 800G. OptiModule by eSeeSky Inc. — Enterprise optical transceivers from 10G to 800G. SFP+, QSFP.

Key Takeaways

QSFP-DD modules support ultra-high-speed 200G–400G networks, while SFP modules are compact, single-channel transceivers for lower-speed applications, with both available from Australian suppliers.

Overview of SF

P and QSFP-DDSFP (Small Form-factor Pluggable) modules are widely used for legacy and low-bandwidth networks, supporting speeds up to 4.25 Gbps, with SFP+ extending this to 10G Ethernet. They are compact, cost-effective, and ideal for enterprise LANs, security camera networks, and access networks.

QSFP-DD (Quad Small Form-factor Pluggable Double Density) is a next-generation optical module designed for high-speed data centers, supporting 200G and 400G networks. It doubles the electrical lanes compared to QSFP28, enabling 100G per lane on server ports while maintaining the same physical footprint as legacy SFP cables. QSFP-DD is backward compatible with QSFP28 and QSFP+ optics, allowing gradual network upgrades.



Key Differences	Feature	SFP/SFP+	QSFP-DD
Channels	Single	8 lanes (double density)	
Typical Speeds	1G–10G (SFP+), 25G (SFP28)	200G–400G	
Form Factor	Compact, single-port	Larger, multi-lane, backward compatible with QSFP28	
Applications	Enterprise LAN, access networks, low-speed server links	Data center core, high-performance computing, hyperscale cloud networks	
Upgrade Path	Limited to 10G–25G	Smooth transition to ultra-high-speed networks without changing rack architecture	

Australian Availability: Australian suppliers such as FS Australia provide a range of QSFP28 and QSFP-DD modules suitable for data centers, enterprise core networks, and service provider applications.

These modules offer high-density, low-power 100G–400G connectivity options, compatible with mainstream networking equipment. When selecting modules in Australia, consider: Network Requirements – Determine the required speed and distance (e.g., 100G short-reach vs 400G long-reach). Compatibility – Verify that the module matches your switch or server port specifications.

QSFP-DD supports backward compatibility with QSFP28, but SFP56 or SFP28 may require host support for PAM4 decoding. Deployment Scenario – QSFP-DD is ideal for high-density data centers, while SFP/SFP+ suits smaller enterprise networks. Cost vs Performance – QSFP-DD modules are higher cost but provide future-proof scalability, whereas SFP modules are more economical for low-speed applications.

Conclusion

For Australian network deployments, SFP modules remain the standard for low-speed, cost-sensitive applications, while QSFP-DD modules are the preferred choice for high-speed, scalable data center networks. Both types are available locally, with QSFP-DD offering backward compatibility and a smooth upgrade path to 400G networks, making it suitable for modern enterprise and hyperscale environments.

Article Content

OptiModule — High-Performance Optical Transceivers 10G to 800G ...

OptiModule by eSeeSky Inc. — Enterprise optical transceivers from 10G to 800G. SFP+, QSFP28, QSFP-DD, OSFP. MSA compatible, RoHS certified, ships worldwide.

QSFP-DD Product Family » Acacia

Powered by Greylock and Delphi DSP ASICs, and silicon photonic integrated circuits (PICs) for an optimized co-packaged design with 3D Siliconization.

400GbE QSFP-DD Transceiver Modules | Optical

FS 400G QSFP-DD module solutions featuring high-performance, high-bandwidth, and cost-effectiveness, are ideal for 400GbE and data centres.

Main Home

Fiber2C has a variety of optical transceiver solutions designed for general purpose as well as tailored to specific needs of telecom carriers and data center operators.

Fibre Optic Transceivers Australia – SFP, SFP+, QSFP

This guide explains the most common transceiver types — SFP, SFP+, QSFP, QSFP28, QSFP56 and QSFP-DD — and how to choose the right module for your fibre type, speed and application.

Cisco 400G QSFP-DD Cable and Transceiver Modules

The Cisco® family of QSFP-DD modules provide the industry's highest bandwidth density while leveraging the backward compatibility to lower

QSFP-DD Optical Transceivers for High-Speed Connections

QSFP-DD ports incorporate a riding heatsink that can be sized independently of the optical module, added on top of the module, or placed between modules. This flexibility enables switch and routing

QSFP-DD Optical Transceivers – MapYourTech

QSFP-DD is an advanced hot-pluggable optical transceiver form factor that doubles the bandwidth density of traditional QSFP28 modules by

Specification – QSFP-DD

July 11, 2019 – QSFP-DD Hardware Specification for QSFP DOUBLE DENSITY 8X PLUGGABLE TRANSCEIVER – Rev 5.0 May 8, 2019 – Common Management Interface

100G QSFP28 Optical Transceiver Modules

FS 100G QSFP28 module solutions provide various high-density, low-power 100 Gigabit Ethernet connectivity options for data centre, high-performance

SFP SFP+ QSFP Modules: Speed, Distance & Network

SFP SFP+ QSFP Modules: Which Optical Module Is Right for Your Network? In a world where bandwidth demands continue to rise, choosing the right optical

Optical Transceiver: SFP vs SFP+ vs QSFP28 vs QSFP-DD

This article provides a comprehensive comparison of mainstream optical transceivers, including SFP, SFP+, QSFP+, QSFP28, and QSFP-DD. It explains their technical differences,

The Big Differences Between SFP, SFP+, SFP28,

Delve deep into the world of optical modules. From SFP to the latest QSFP-DD, explore their differences, applications, and what to consider for your

Networking Solutions for the Era of AI | NVIDIA

Networking Purpose-Built for the Era of AI Factories AI factories now span tens of thousands of GPUs—and soon, millions—operating as a single distributed computing engine. To keep

QSFP-DD Optical Module Overview: What is the differ?

This article will introduce the next generation optical module in detail, QSFP-DD, also known as quad small factor pluggable, and this article will also introduce the difference between

Connectivity in the Era of Big Data: Adapting with QSFP28, SFP-DD,

This compatibility ensures that DSFP offers highly dense, cost-effective optical module solutions that are particularly advantageous for the emerging 5G networks. Notably, DSFP modules

100G SFP-DD Transceivers: Form Factor Guide & Comparison

A 100G SFP-DD (Small Form-Factor Pluggable Double Density) transceiver is a next-generation optical module designed to support 100 Gbps data rates while maintaining the same

Comprehensive Guide to QSFP-DD, QSFP28, QSFP56,

Complete Guide to QSFP-DD, QSFP28, QSFP56, SFP56, and SFP28 Optical Modules As high-speed networks continue to evolve, optical transceivers like

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