ZITHA TECH SPECIALTY CABLES (Pty) Ltd

Certified DAC High-Speed Cable SFP



Overview

Direct Attach Copper (DAC) Cables High-speed Volex Direct Attach Copper (DAC) cables deliver reliable, energy-efficient data transfer for data Direct Attac.

Key Takeaways

Certified DAC High-Speed SFP cables are factory-terminated copper assemblies designed for short-range, high-speed connections, available in passive and active versions supporting data rates from 1Gbps up to 1.6Tbps.Overview

Direct Attach Copper (DAC) cables with SFP connectors are high-speed twinax copper cables with SFP modules permanently attached at both ends, used to connect servers, switches, and storage devices in data centers . They are plug-and-play, requiring no additional transceivers, and are highly cost-effective compared to fiber optic solutions . DAC cables are ideal for short-range connections, typically within the same rack or between adjacent racks.

Types of DAC Cables

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Passive DAC: Contains no electronics, relies solely on copper for signal transmission. Typical reach is 1–5 meters, offering low latency, zero power consumption, and minimal heat generation. Passive DACs are the most economical option for in-rack connections .

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Active DAC: Includes embedded electronics such as retimers or redrivers to maintain signal integrity over longer distances, extending reach up to 9–15 meters. Active DACs are slightly more expensive and consume less than 1W per cable, making them suitable for inter-rack connections or high-density deployments .

Performance and Specifications

• Data Rates: DAC cables support a wide range of speeds, including 1Gbps, 10Gbps, 25Gbps, 40Gbps, 50Gbps, 100Gbps, 200Gbps, 400Gbps, 800Gbps, and 1.6Tbps depending on the cable type and form factor .

• Form Factors: Available in SFP, SFP+, QSFP, QSFP+, OSFP, and SFP-DD modules, supporting single and double density configurations .

• Cable Lengths: Typically range from 0.5m to 5m for passive DACs, with active DACs extending up to 10–15m .

• Customization: Options include wire gauge (AWG), breakout configurations, low-smoke zero-halogen jackets, pull-tab colors, and EEPROM programming for traceability and performance optimization .

Applications

• Data Centers: High-speed interconnects between servers, switches, and storage arrays.

• High-Performance Computing (HPC): Low-latency connections for compute clusters.

• Ethernet Networks: Compatible with 1000BASE-X, 10GBASE-R, and 100G Ethernet ports .

• Cost-Effective Alternative: Provides a reliable, low-cost solution compared to optical SFP modules and fiber patch cables.

Advantages

• Low Latency: Electrical transmission over copper introduces minimal delay.

• High Reliability: Factory-terminated and 100% tested for signal integrity.

• Energy Efficient: Passive DACs consume no power; active DACs consume minimal power.

• Ease of Installation: Plug-and-play design simplifies deployment and maintenance.

• Certification and Traceability: Many manufacturers provide CE, FCC, RoHS, and ISO9001 certifications, ensuring compliance and quality . Certified DAC High-Speed SFP cables are therefore an efficient, reliable, and scalable solution for modern data center and networking environments, offering flexibility in speed, length, and form factor to meet diverse infrastructure needs.

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Article Content

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Direct Attach Cables DAC SFP QSFP 10G 25G 100G 400G Copper

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SFP+ DAC Explained: Passive vs Active, Lengths, and

An SFP+ Direct Attach Copper (DAC) is a twinax copper cable with SFP+ connectors

SFP-DD DAC Cable Assemblies | High Speed Input

Amphenol''s SFP-DD cable assemblies are designed to support applications for Ethernet.

FAQs on Deploying SFP+ DAC High-Speed Cables

The SFP DAC high-speed cable can be plugged into the SFP+ port, but not for the 10G data

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The Amphenol SFP-DD products offer an ultra-high-performance, cost-effective solution for

QSFPTEK 10G SFP+ DAC Cable, 0.5m (2ft) 10gbe SFP Passive

SFP+ copper modules allow hardware manufactures to achieve high port density, configurability and utilization at a very low cast and

Cisco Direct Attach Cables Guide | Benefits and Uses

Direct Attach Copper (DAC) is a type of cable that enables high-speed connections over short distances. Specifically, these cables

9 common DAC Cables that Make Your Networking

DAC cable is a high-speed copper twin-ax assembly with pluggable connectors on either

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SFP+ DAC CABLE

The AXC763 is a 3m passive SFP+ Direct Attach Cable offering ultra-low latency 10 Gigabit connectivity

10G SFP+ DAC Twinax Cable,Direct Attach Copper Passive Cable

10G SFP+ DAC passive direct-connect cable uses shielded high-speed differential cable and is suitable for 10GBASE-SR Ethernet.

Get reliable 10G SFP+ cables from US stock with fast shipping ...

10G SFP+ cables Dramatically reducing 10G interconnectivity costs, the 10G cables can provide inexpensive and reliable 10G speed

High-Speed Networking Interconnects: Choosing the SFP or

3. Achieve a Low Latency Any network that has intricate cable setups can experience major latency delays because of the multitude

What is DAC Cable? The Definitive Guide

DAC Cable vs. Fiber Fiber is a critical component of modern networks. Combined with fiber transceivers, it delivers a

SFP+ DAC Explained: Passive vs Active, Lengths, and Buying Guide

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SFP+, XFP, QSFP+, DAC Twinax Cable 10Gtek Transceivers Co., Ltd

DAC Twinax Cable Maker. CE, FCC, RoHS, ISO9001 Certified. Professional Manufacturer focusing on SFP+ Cables, QSFP+

High-Speed Direct Attached Cable (DAC) Assemblies

Molex High-Speed DAC Assemblies deliver a complete zSFP+and zQSFP+interconnect solution across multiple industry standards

SFP+ Direct Attach Cables (10G DAC)

Our best-in-class SFP+ Direct Attach Copper (DAC) Cable products are a high performance, cost effective

25G/10G/1G DAC/AOC | FS Cables

FS 25G/10G/1G DAC/AOC cables are compliant with MSA and IEEE standards for guaranteed

SFP+ DAC CABLE

These reliable and flexible cables offer ultra-low latency for Servers, Storage and Switches short 10 Gigabit

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OSFP Direct Attach Cables (200G/400G/800G DAC)

Our OSFP Cable line-up is OSFP MSA compliant and protocol agnostic for worry-free integration into

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This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.

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