



**Adam Tas Corridor Energy**

# **I2C Standard for QSFP Optical Modules**





## Overview

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SFF-8636 is a widely adopted specification that defines: Management Interface: A two-wire serial communication protocol (similar to I<sup>2</sup>C), allowing hosts to monitor module parameters and issue control commands. SFF-8635 QSFP+ 4X 10 Gb/s Pluggable Transceiver Solution (QSFP10) SFF-8685 QSFP+ 4X 14 Gb/s Pluggable Transceiver Solution (QSFP14). SFF-8024 SFF Module Management Reference Code Tables : This specification provides codes for module identifiers, encoding values, connector types, extended compliance codes, host electrical interfaces and module media interfaces. Additional Documentation The following links provide additional documentation, including simulation and HW Manager support. As shown in the following figure, the card uses a combination of I2C multiplexers (PCA9545A) and I/O expanders (TCA6408A) to access and control power and sideband signals for all four QSFP56 modules. The sideband signals include: The power signals include: The other QSFP56 I/O expanders have. The FS® 50GBASE Quad Small Form-Factor Pluggable (QSFP28/SFP56) portfolio offers customers a wide variety of high-density and low-power 50 Gigabit Ethernet connectivity options for data center, high-performance computing networks, enterprise core and distribution layers, and service provider.



## I2C Standard for QSFP Optical Modules

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### QSFP-DD TRANSCEIVERS for 400G and 800G

Rigorously tested for thermal, electrical and optical reliability Enhanced digital diagnostic information via I2C interface Many network operators compare QSFP

### What are I2C, MDIO and CMIS Access in Optical

Refer to the memory map standards for the meaning of each byte and their appropriate values. Modern QSFP-DDx and CFP2-DCO transceivers may



### Cisco 40GBASE QSFP Modules Data Sheet

The Cisco 40GBASE-LR4 QSFP module supports link lengths of up to 10 kilometers over a standard pair of G.652 single-mode fiber with duplex LC connectors. The 40 Gigabit Ethernet

### Comprehensive Guide to QSFP - MapYourTech

QSFP modules implement a 2-wire serial interface based on I2C protocol for configuration,



monitoring, and diagnostic functions. This interface



Focus creates quality products



### QSFP56 I2C Access

As shown in the following figure, the card uses a combination of I2C multiplexers (PCA9545A) and I/O expanders (TCA6408A) to access and control power and sideband signals for all four QSFP56

### Strategic Validation: The Critical Role of 800G QSFP-DD Loopback

High-performance 800G QSFP-DD loopback module for transceiver and network validation. Passive design, MTP/MPO-12 connector, compliant with QSFP-DD MSA standards.



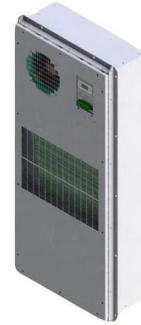
### Intel® Ethernet QSFP28 Optic

Module Form Factor QSFP28 Network Standards Physical Layer Interface 100GBASE-SR4 100GBASE-LR4 Airflow and Temperature Guidelines Refer to adapter product brief for specific airflow and



## SFF-8636: The Management Interface Behind

The SFF-8636 standard, developed by the Small Form Factor (SFF) Committee, defines the management interface and electrical behavior for QSFP



## How to Read SFP & QSFP EEPROM Data -- Practical Guide

Practical, step-by-step guide to reading and interpreting SFP/QSFP EEPROM and DDM data (A0/A2), with commands, standards notes, and troubleshooting.

## Reading QSFP module information - GitHub

SFF-8679 QSFP+ 4X Hardware and Electrical Specification : This specification defines the contact pads, the electrical, power supply, ESD and



## Arista QSFP-40G-LRL4-Arista , 40G QSFP+ Transceiver, Single

The Arista QSFP-40G-LRL4 is a 40GBASE-LRL4 QSFP+ optical transceiver designed for 40 Gigabit Ethernet connectivity over single-mode fiber. With a wavelength of 1310nm and support for distances



Network Cabinet & Rack

## 40G QSFP Modules-Optical Transceivers

QSFP 40G LR4 The QSFP+ optical module is specifically designed for 40GBASE Ethernet, supporting a throughput of up to 10km over single-mode fiber (SMF) with a wavelength of 1310nm through duplex



## CMIS Explained , Common Management Interface for

What Is CMIS? CMIS --the Common Management Interface Specification --is a standard developed under the Optical Internetworking Forum

## Unlocking Hyperscale Potential: The Strategic Evolution of 800G QSFP

The 800G QSFP-DD DR8 (Quad Small Form-factor Pluggable Double Density) is a hot-pluggable, parallel fiber-optic module engineered for 800 Gigabit Ethernet applications. To define it



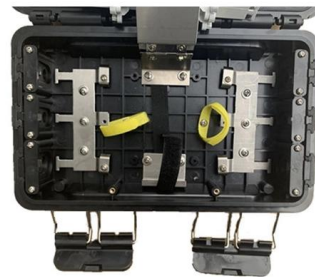


## Passive vs. Active: Selecting the Right 800G QSFP-DD Loopback Module

Discover the details of Passive vs. Active: Selecting the Right 800G QSFP-DD Loopback Module for Next-Generation Data Center Diagnostic Testing at LonRise Equipment Co. Ltd., a

## 50G QSFP28/SFP56 Cable and Transceiver Modules Data Sheet

QSFP28-ER-50G The QSFP28-ER-50G Module supports up to 40km link lengths over OS2 SMF via a LC duplex connector. The built-in digital diagnostics monitoring (DDM) allows access



## QSFP Optical Module Wiki

QSFP, full name Quad Small Form-factor Pluggable, four-channel small form-factor pluggable optical module with four independent full-duplex

## Arista QSFP-40G-XSR4-Arista , 40G QSFP+ Transceiver, Multi

Q: Does this module support Digital Optical Monitoring? A: Yes, the QSFP-40G-XSR4 includes DDM/DOM functionality accessible via the I2C interface. This allows real-time monitoring of optical



## QSFP

The QSFP I2C control is available via the I2C-1 bus on the processing system. It is connected to channel 6 of an TCA9548A multiplexer (address 0x74). See the I2C-1 section in the user guide.



## direcXource Check Point CPAC-TR-40IR-SSM160-QSFP-C

Check Point CPAC-TR-40IR-SSM160-QSFP-C compatible optical transceiver is a parallel 41.2Gbps Quad Small Form-factor Pluggable QSFP+ module for use in 40GBASE Ethernet. QSFP+ LR4L



## Understanding the SFF-8636 Standard: The Universal Management

SFF-8636 defines a common management interface for 4-lane pluggable transceiver modules and direct-attach cables, covering products such as QSFP, QSFP28, and QSFP-DD. It

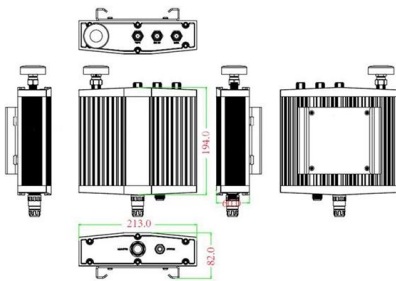


## QSFP I2C Reference Design

As shown in the following figure, the card uses a combination of I2C switches (PCA9545A) and I/O expanders (TCA6408A) to access and control power and



Mechanical drawing



## Understanding the SFF-8636 Standard: The Universal Management

Comprehensive guide to the SFF-8636 standard and its implementation in QSFP, QSFP28, and QSFP-DD optical modules. Discover how LINK-PP optical modules achieve cross

## Cisco 40GBASE QSFP Modules Data Sheet

The Cisco® 40GBASE QSFP (Quad Small Form-Factor Pluggable) portfolio offers customers a wide variety of high-density and low-power 40 Gigabit Ethernet connectivity options for



## Intel® Ethernet QSFP28 Optic

Intel® Ethernet QSFP28 Optics are an excellent choice for fiber systems in high-speed communications equipment. Both short range and long-range transceiver modules are available for maximum



## Contact Us

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<https://www.koskolong.co.za>