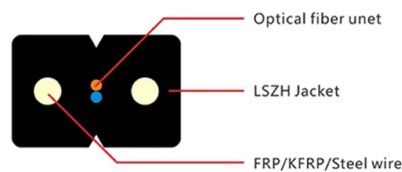


The optical modules between the two FPGA boards are not linked



Overview

Inspect and clean SFP+ modules and fiber connectors regularly to prevent common issues like link failure and high error rates. Use vendor-approved SFP+ Optical Transceivers and keep your switch firmware updated to ensure compatibility and stable connections. Failed data write operation between two FPGA boards of the same model using IP cores Both of my FPGA boards are XCZU15EG-FFVB1156i-2, and then I have been unsuccessfully writing data from one of the FPGA boards with PS to the BRAM of the other FPGA board using an SFP+ interface connecting a fiber. When the TX and RX of the 10Gbps SFP+ optical module in the picture above are looped back through the optical fiber, there is no bit error or packet loss. The IP core presents a bidirectional, error-free and multi-channel communication framework between two FPGAs that are physically connected through a Multi-Gigabit Transceiver (MGT, GTX) or some. In modern Ethernet and fiber networks, Small Form-Factor Pluggable (SFP) transceivers play a critical role in enabling flexible optical connectivity between switches, routers, and servers. However, even in well-designed infrastructures, engineers frequently encounter issues such as SFP modules not. I want to connect to fpga boards by the fiber-optic cable, the first board send the data from the output of OSERDES and the second board receive the data from the input of its ISRERDES. The problem that i want to solve is how i can implement this think and recover my data and clock at the same time. Check for common connection problems, such as link failures or modules not recognized. Inspect the sfp module and cables.

Article Content

Small Form-factor Pluggable

Small Form-factor Pluggable Small Form-factor Pluggable connected to a pair of fiber-optic cables Small Form-factor Pluggable (SFP) is a compact, hot-pluggable network interface module format used for

Optical Module Application: Common Problems & Troubleshooting

Based on typical issues encountered with optical modules in daily switch applications, this document summarizes basic troubleshooting steps for resolving common faults:

SFP Troubleshooting: Fix No Link, Detection and Fiber Issues

Step-by-step SFP troubleshooting guide to fix no link, module detection failures, and fiber connectivity issues. Includes diagnostics commands and best practices.

Xillyp2p: Connecting FPGAs with each other easily | xillybus

The IP core presents a bidirectional, error-free and multi-channel communication framework between two FPGAs that are physically connected through a Multi-Gigabit Transceiver (MGT, GTX) or some

Using the 7 series GTX transceiver IP, the single-board fiber loopback ...

When the TX and RX of the 10Gbps SFP+ optical module in the picture above are looped back through the optical fiber, there is no bit error or packet loss. B. Use IBERT to test that there are

Optical module common faults and solutions

In this article, we will focus on teaching you how to troubleshoot and solve the common three categories of optical module failure. First, the transmission class of the optical module fault

Troubleshooting SFP+ Module Link Issues in 10G Networks

Learn how to diagnose and resolve common SFP+ link issues—covering module compatibility, cabling, configuration, diagnostics, and environmental factors.

Connect two fpga by optical-fiber : r/FPGA

Connect two fpga by optical-fiber Hello everyone ! I want to connect to fpga boards by the fiber-optic cable, the first board send the data from the output of OSERDES and the second board receive the

Connect two fpga by optical-fiber : r/FPGA

The simplest (and least efficient) encoding to use would be Manchester encoding, as used for 10 Mb/s Ethernet. You can certainly run this at a higher rate with modern FPGAs and optics. Using a more

Altera FPGA (Intel): Product Lines, Features

Complete guide to Altera FPGA technology covering product lines (Agilex, Stratix, Arria, Cyclone), features, PCB design tips, Quartus Prime tools, and real-world

Communication Between multiple FPGAs

Communication Between multiple FPGAs Hi, I am working on a multi-FPGA design. For now i am using two virtex-7 vc707 FPGA boards, i think i can make use of GTX transceiver with Aurora logicore in

Pluggables, Power, and Geopolitics: Mapping the 800G

As of December 5, 2025, the market for high-speed datacom optical transceivers, specifically at the 800G and nascent 1.6T nodes, has been split into two distinct,

hARMS: A Hardware Acceleration Architecture for Real-Time Event

A block-matching optical ow algorithm for event-based sensors was implemented on an FPGA by Liu and Del-bruck . This implementation, however, was found to per-form poorly in real-world scenes

Datacenter / HPC Semiconductors — Sector Supply Chain

CXL Memory — The Emerging Supply Chain Compute Express Link (CXL) is a cache-coherent interconnect standard built on top of PCIe 5.0 physical layer that enables direct memory sharing and

Powering AI: The Semiconductor Ecosystem at the Foundation of

Compute board Each compute tray houses one to two compute boards where AI computation is coordinated and executed. Each compute board serves as a high-density processing module within

Supply Chain & Distribution Archives

Today''s semiconductor component landscape is more complex than ever. Obsolescence has shifted from an occasional disruption to a persistent operational risk. As product lifecycles

How to connect two FPGA boards?

This thread is simply about passing information between two FPGA devices on two different boards. There are a lot of use cases where this is nice if one board has hardware resources

How to connect two FPGA boards?

Two must-check items (people get these wrong a lot) A) Voltage standards & pin types Ensure both boards use the same I/O voltage (e.g., 3.3V LVCMOS, 1.8V, LVDS). Never connect an

Missing connection for optical transmission paths between several ...

When establishing an optical connection, the core diameters on the transceiver of both communication partners must match. If two different fiber diameters are used, communication

How should I connect 2 FPGA boards for communication?

I was wondering how clock synchronization between the two boards over PMOD pins should be dealt with? PMOD pins are obviously not automatically synced, which I think is necessary.

Failed data write operation between two FPGA boards of the same

Both of my FPGA boards are XCZU15EG-FFVB1156i-2, and then I have been unsuccessfully writing data from one of the FPGA boards with PS to the BRAM of the other FPGA board using an SFP+

Data Communication Among Multiple FPGA Boards with GTP

This research work is to design a optical digital communication system with multiple FPGA boards, which can transmitted serially. In order to enable high-speed and reliable transmission

Optical communication between two FPGA boards -

I am working on something where I will have optical communication between two boards. One board will generate specific pulse, another will receive it. To simplify things, I will have same

How to achieve wireless communication between two FPGA development boards?

Achieving wireless communication between two FPGA development boards requires integrating a wireless module or transceiver that can interface with the FPGA. Here's a step-by-step

Contact Us

For more information, pricing, or custom solutions, please contact us:

Website: <https://umele-pestovani.eu>

Email: info@umele-pestovani.eu

Phone: +49 152 287 6349

Address: Neue Mainzer Straße 66-68, 60311 Frankfurt am Main, Germany

This document is for informational purposes only. Specifications subject to change without notice.

