

Connecting the SFP optical module to the STM32



Overview

Plug the SFP module into the host board connector and connect the laser to the optical plug-in of the scope. As there is only very little data to be transferred (actually no real need for gigabit), a Cortex-M microcontroller would probably do the job. What would be the best approach to adapt the fiber. Could someone explain to me how to drive a SFP from a microcontroller?

Either (a) a UART-over-fiber using SFP and microcontrollers on both ends, or (b) ethernet using SFP from a microcontroller and regular SFP ethernet device on the other end?

P. If it matters, the microcontroller is a STM32F446;. This evaluation board is a complete SFP+ module as defined in the SFP+ MSA document. The design uses Micrel's MIC3003 controller, the 10G DFB/FP laser driver SY88022AL, and any of the following 10G limiting amplifiers: SY88053C/073L. This content is available for download via your institution's subscription.

Article Content

How to connect SFP module

The PoE switch with SFP can be linked together by using the fiber optical cable. The advantages of fiber optical connection are high speed, long distance, low latency.

UART keep alive signal for SFP fiber

All STM32 devices have DMA. You can keep the DMA feeding whatever data to UART with no CPU intervention. You can setup it in circular mode with, say, 1-byte long buffer, and just ...

How to adapt SFP modul with Cortex-M microcontroller?

Our customer wants to use SFP modules (1000 Base-SX standard) to send some data to a remote computer. As there is only very little data to be transferred (actually no real need for ...

Experiment With SFP Modules With This Handy Breakout

The board design comes complete with an SFP receptacle, allowing a variety of compatible receivers to be plugged in for experimentation.

SFP+ Module Reference Design

Connect the 3.3V red post on the host board to the output of the 3.3V power supply and the black post to the GND and install a jumper between pin 2 and pin 3 of SW1. Plug the SFP module into the host ...

How to Install an SFP Module: Step-by-Step Guide

Learn how to install an SFP module correctly with step-by-step instructions, safety tips, hot-swap rules, and troubleshooting for reliable network links.

Design and implementation scheme of evaluation board based on ...

This paper proposes and implements an evaluation board that can be used to enhance the experimental platform for the SFP sensitivity test to address these issues.

Support

To meet different transmission distance requirements, choose optical transceiver modules according to actual networking conditions. Central wavelength represents the wave band used for optical signal ...

SimpliPHY Dual Media Copper/Fiber/SFP

Connect the PHY's TXVPA and TXVNA pins to the TD input pins of the SFP connector. Connect the PHY's TXVPB and TXVNB pins to the RD output pins of the SFP connector.

Contact Us

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