EpiPhotonics

# PLZT Ultra-High Speed Optical Switching System

The PLZT Ultra-high Speed Optical Switching System with an internal FPGA controller enables high-speed optical switching networks easily and quickly.

The system has a PLZT optical switch subsystem with a internal FPGA control unit which is connected to a external PC controller via a serial cable, and the system does not require any additional device such as a multi-channel pulse generator to activate the optical switch. The switching patterns can be stored in 2 memory banks. The memory bank can store 4,000 switch control signals each and can be switched within 1 clock. Therefore, the optical switch can be configured at less than 10 ns speed without a high-speed pulse generator.

Features:

- Connect a PC to the optical switch unit with serial communication (No pulse generator needed).

- Control the optical switch by PC command lines (Easy to control).

- Read and write memory banks at the same time due to dual memory banks (Seamless control).

- Support high-speed switching (Switch each bank in 1 clock).

- Control the optical switch directly by external signals from a maintenance input without writing the memory banks (Direct Input).

- Automatic synchronization among several switching systems (System synchronization).

This system consists of a internal control unit and an optical switch unit. The external control unit (Controller) is a PC and is connected to the internal control unit via a serial link. The optical switch unit consists of a high-speed optical switch module and a high-speed driver. The internal controller board includes an FPGA which has dual 4,000 pattern memory banks. It reads and writes the banks based on signals from the controller and sends the appropriate switching pattern signals to the optical switch. The fast driver sends switch signals to the switch module upon receiving signals from the controller board. various switch arrangements, 1x2, 1x4, 1x8, 1x16, 2x2, 4x4, ... can be supported.
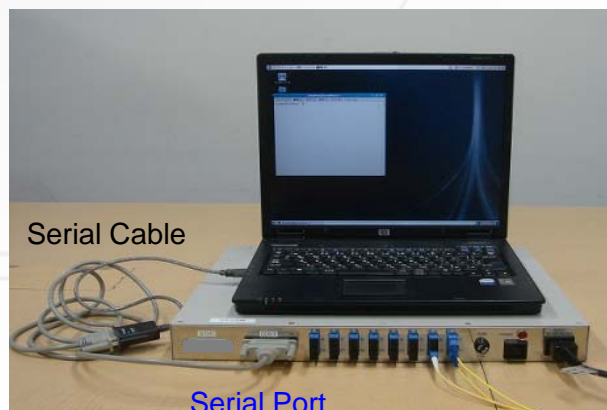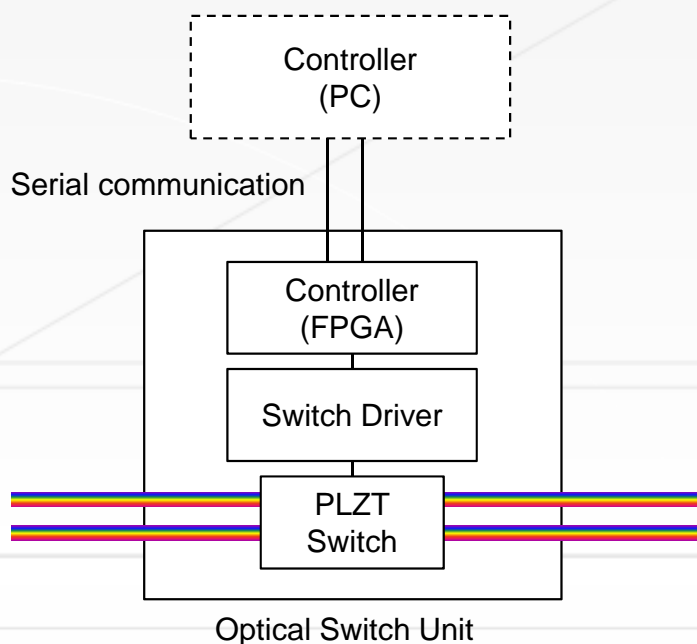
Major Specifications	
Port size	Up to 1x16 or 4x4
Switching speed	< 10 ns
Configuration	4,000
Memory bank	2 banks (switch in one clock)
Interface	Serial communication (9 pins out of 25 pins)
Bit rate	9,600 bps
Data bit	7 bits
Stop bit	1 bit
Parity bit	Even
Flow control	None
OS	Red Hat Enterprise Linux

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