

Silicon Photonics Selection Guide for Smart Building Aggregation Switches

In this paper, we present a review of optical switching techniques capable of meeting the requirements of the next generation of large-scale data center networks.

The handbook starts with the basics of silicon as an optical material. It then describes the building blocks needed to drive integrated silicon photonic circuits and explains how these building blocks are ...

We chart the generational trends in silicon photonics technology, drawing parallels from the generational definitions of CMOS technology. We identify the crucial challenges that must be ...

Short-reach optical interconnects using silicon photonics technology enable high-speed data transfer with low power consumption and improved thermal efficiency, making it ideal for real-time decision ...

This study, in contrast to prior assessment studies, discusses both plain silicon-embedded photonic switches as well as silicon-embedded optoelectronic devices utilising PCMs in a structured manner.

In this paper we discuss the general architecture of integrated silicon photonic switches by exploiting multi-dimensions in wavelength, polarization, and ...

In this paper, we systematically discuss the state of art of the silicon photonic switch engine, for example, MZI, MRR and MEMS waveguide coupler.

Silicon photonics offers a potential breakthrough in optical interconnection performance, not only for supercomputer applications, but also for data communication and other applications.

One such emerging technology is the optical circuit switch, which can increase the performance, flexibility, and power consumption of data centers. The optical circuit switch presented here is an ...

We will discuss possible solutions for future data centers involving cross-layer methods, new topologies, and innovative photonic switching technologies.

In this paper, we analyze the role of optical routing strategies for silicon photonic switch fabrics. We define and quantify the number of global switching states in various switching topologies and discuss ...

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