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## **Preliminary Design of Data Exchange Module with USB and QSFP Interface for Test of Readout Electronics**

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The amount of data generated by modern large-scale scientific instruments is tremendously vast, and the efficiency of data retrieval is of utmost importance. The FT601 is a high-performance USB3.0 to FIFO bridge chip, which can be utilized in applications that require high data throughput, such as multi-channel FIFO ADC or DAC devices. This paper presents the design of a circuit board that enables the transmission of data from a QSFP interface to a PC via a Type-C interface, based on the FT601 and Xilinx Artix-XC7A35T FPGA. The Type-C interface adheres to the USB3.0 protocol, with a data throughput of up to 5Gbps. The design of the data transmission board and its performance test results are discussed in this paper.

### **Minioral**

No

### **IEEE Member**

No

### **Are you a student?**

Yes

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