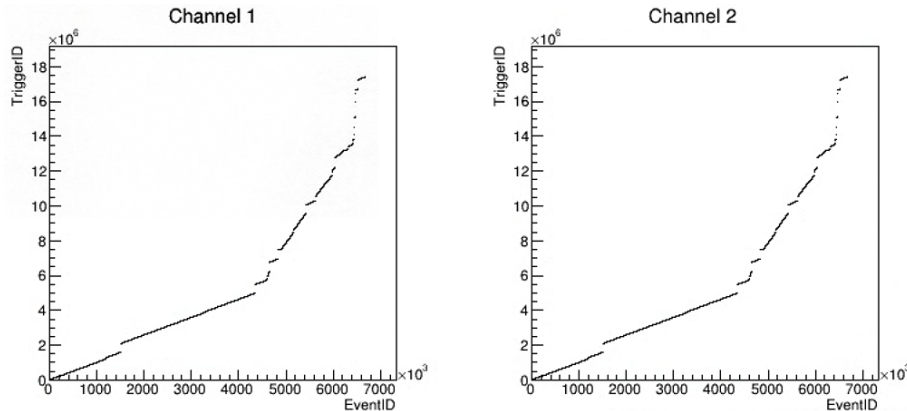


Event length = 120ns



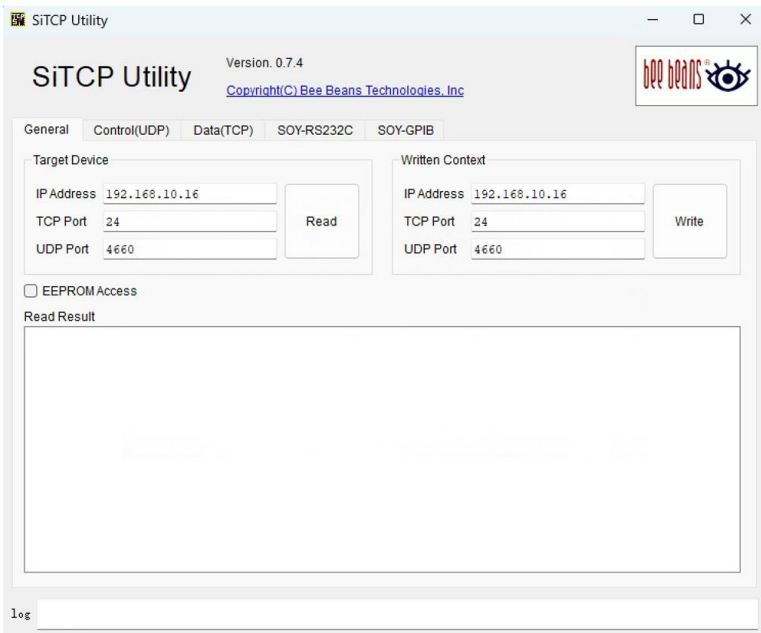
- Even though the data length has been reduced to **120 ns**, when the data transmission rate has not yet reached the upper limit of the optical port's capacity, there is still **event loss**.
- Limited by **FPGA, NIC, PC or software?**

- We should quickly identify which stage is causing the data loss. I can start by checking **if the issue lies in the PC or the host software**:
  - **Change data storage location**: from D drive (HDD) to C drive (SSD)
  - **Further reduce event length**:
    - 120 ns ~ 100Mbps to 2Gbps
    - Reduce the event length to keep the data transfer rate within Gbps and check if there's still data loss
  - **Operate on a Linux system**: Write data directly to memory while running on Linux, avoiding interference from other processes during data transfer.
  - **Try different host software**: Test alternative host software as well as our own custom-written host software.

# Three Host Software to be Further Test

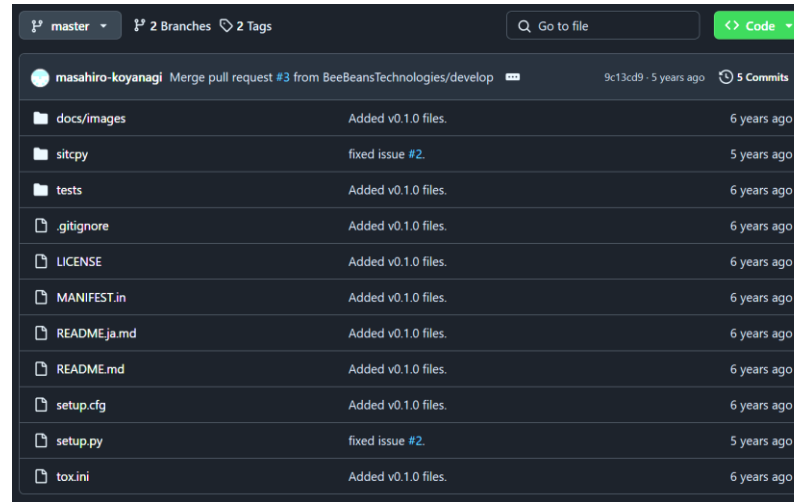


## SiTCP Utility - Current software

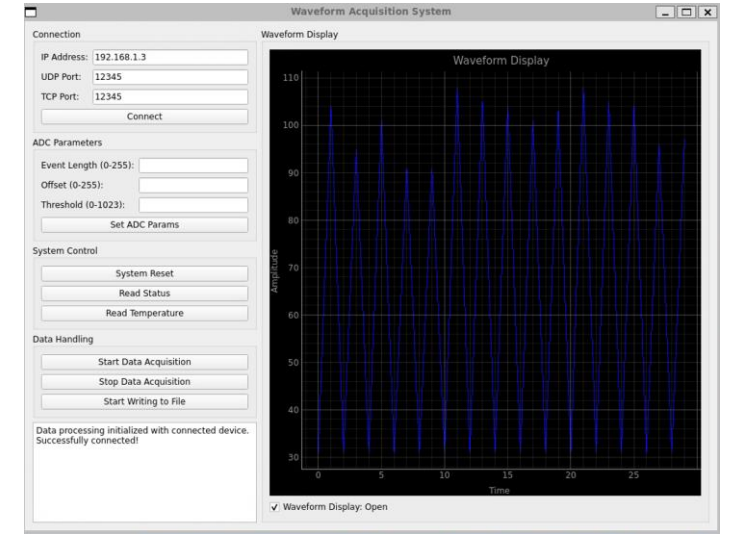


## SiTCP Python Library

GitHub - BeeBeansTechnologies/sitcpy



## Own design



### 3. 性能

本ソフトウェアの通信性能を以下に示します。なおこれらの値はテスト時のものであり、環境により変動があります。

項目	性能
RBCP 最小ターンアラウンドタイム	50us
TCP 最大通信速度	650Mbps
SOY-RS232c 最大通信速度	460.8Kbps
SOY-GPIB 最小ターンアラウンドタイム	45μs

