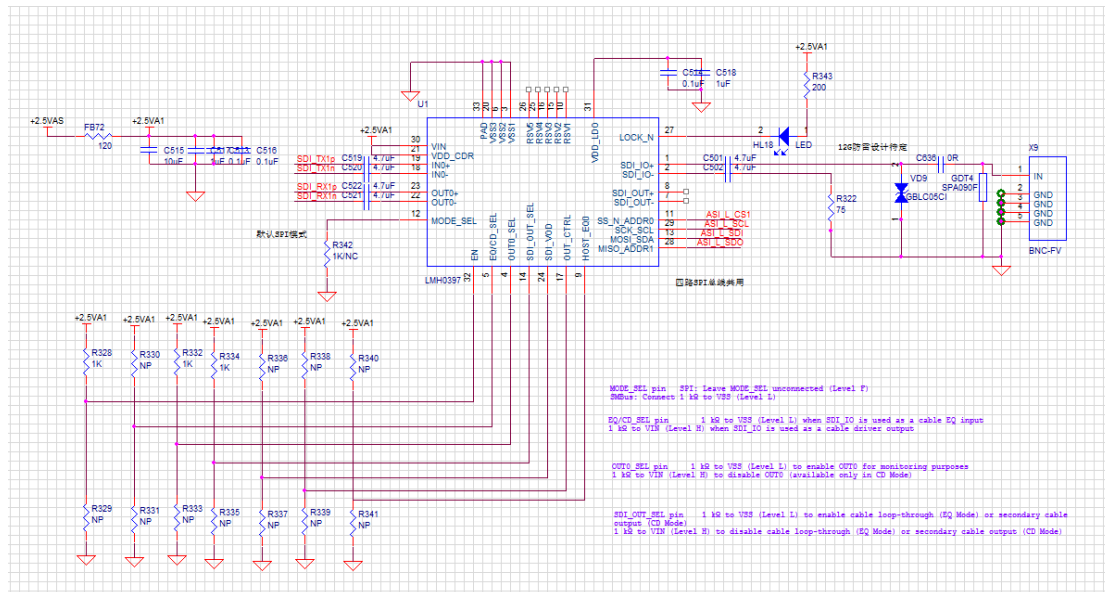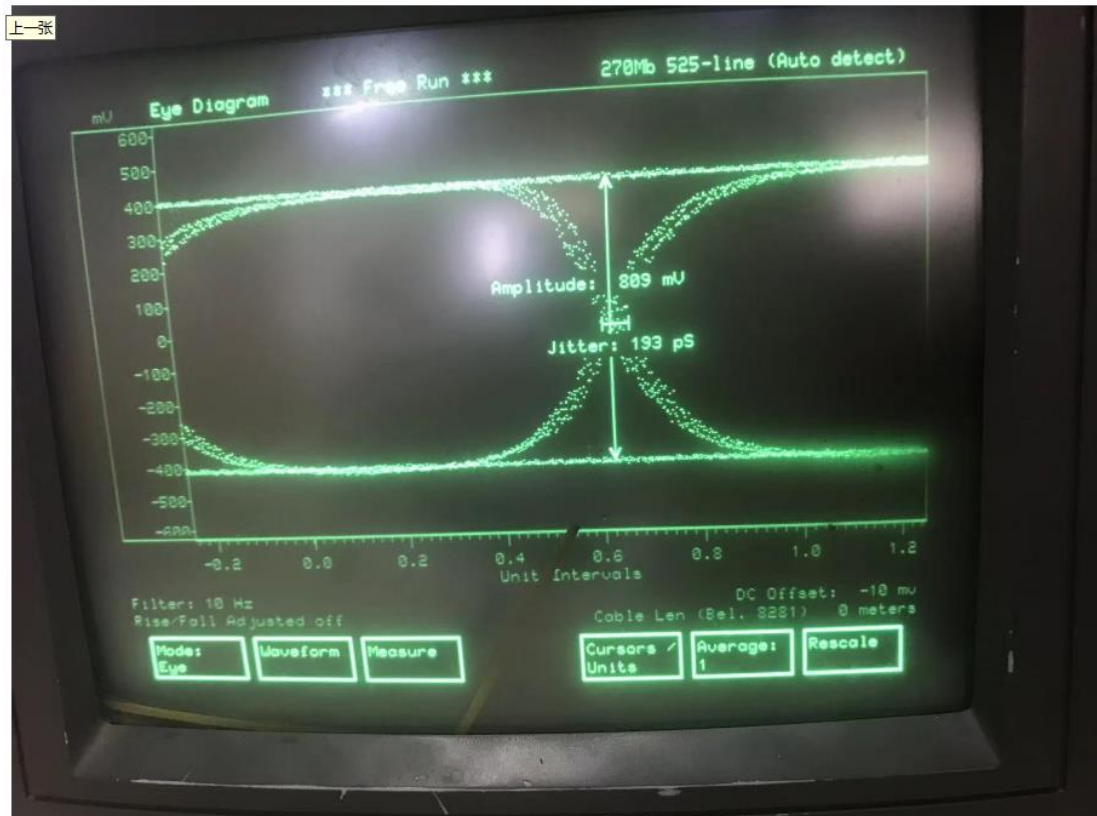1. On our board,we use eight LMH0397 for ASI/SDI/3G-SDI application,the IN0± and OUT0± connect to FPGA(Intel 10AX027H3F34)'s transceiver.All LMH0397 have same schematics,one of them as below:
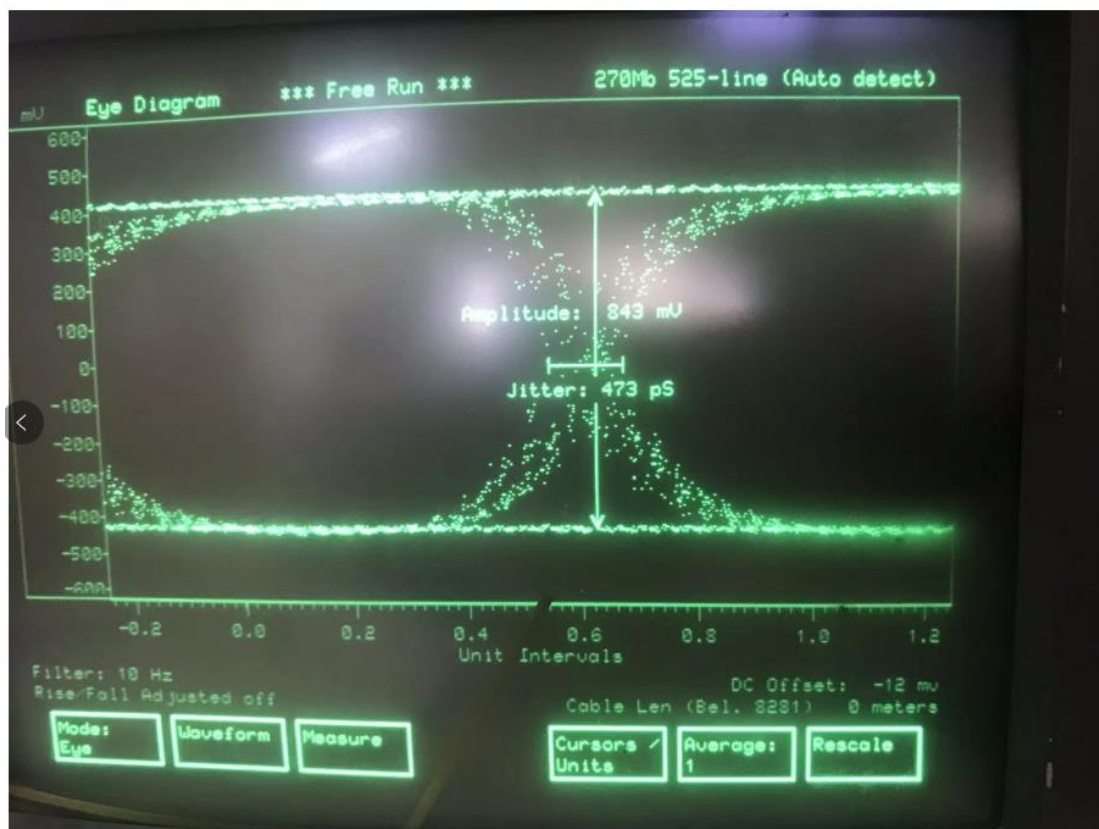

2. During our test ,we configured all eight ports as input,and connected them to same ASI sources.Then we found port2 and port4 have "No Input" alarm,while other six ports are good.We conducted the following analysis:

(1) We checked software version and system setup files to confirm all eight ports are configured correct and same.

(2) Each port has a led connected to LMH0397's LOCK_N pin.The good port's LED is on,but the failed port's led is blinking,so we think the lock condition of failed port's LMH0397 is not stable.

(3) We check and replace the peripheral components of failed port's LMH0397,but still have the same failure.

(4) We swap port2's LMH0397 to port1,and port4's LMH0397 to port3,then it works.The alarm port becames 1 and 3,while port2 and 4 works good.

(5) We configure all ports to output,and measure them eye diagrams via Tektronix's VM700.The good port's jitter is about 200ps,and the failed port is near 500ps,more than twice of the normal port.Pictures of eye diagram measurement as below:

The good port:

The failed port:

(6) At last,we removed the failed port's LMH0397 and soldered a new one,then this port works good.