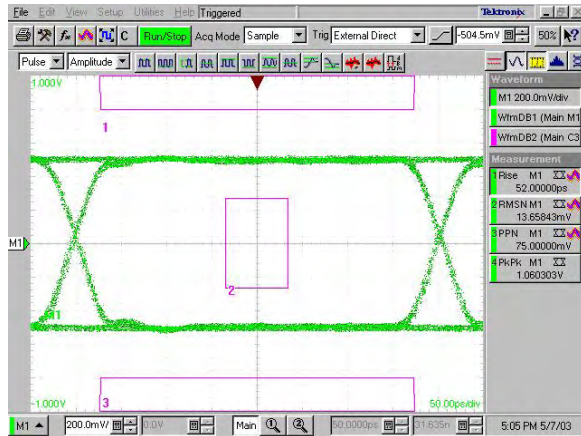


Tektronix

Competitive Eye Diagrams - Probe and Scope Response Tektronix P7350 vs. Agilent 1134A vs. LeCroy D600 w/D600-AT



Reference (SMA cabled, Differential Math)
Rise Time (10-90%) **52ps**

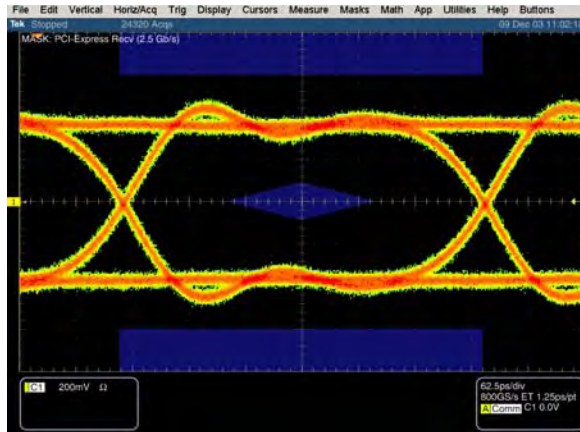
An Advantest Model D3186 BERT was used as signal source to drive the probes under test with a differential 2.5Gb/s PRBS7 signal. This signal has risetime of approximately 50ps, as seen in the reference picture taken with a Tektronix CSA8000 sampling scope. The BERT output was coupled through a precision differential test fixture which offers a controlled 50-ohm path and allows access for signal pickoff with either hand-held probe tips or solder-down probe tips. The test fixture features low VSWR and relatively flat response up to 18 GHz.



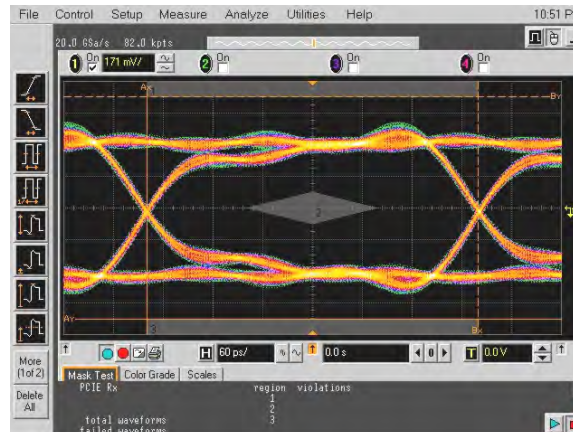
Differential Test Board

Each probe was placed on the test point and scope software was used to automatically display the eye diagrams. In each case we used the “fastest” probe configuration available from each company.

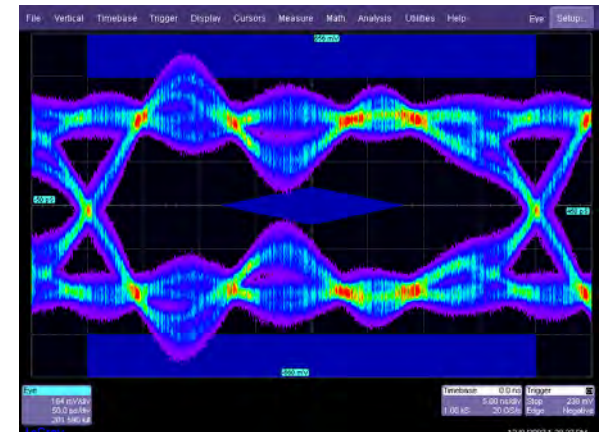
Probe+ Scope Response (probing the same 50-ohm test fixture)



**Tektronix P7350 Probe +
TDS7704B Oscilloscope**



**Agilent 1134A Differential Solder Tip +
Infiniium 54855A Oscilloscope**



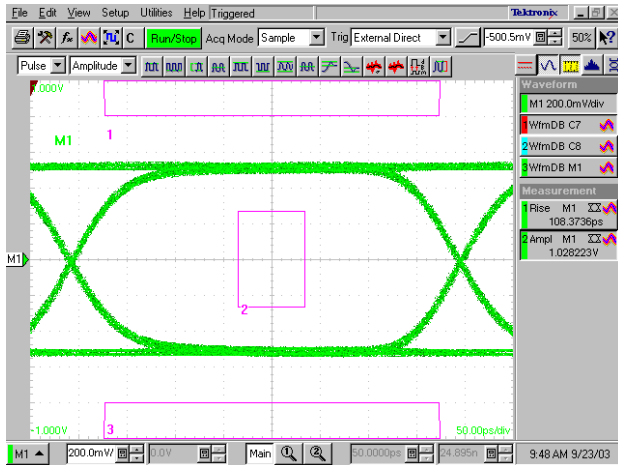
**LeCroy D600 w/ D600-AT Probe +
SDA6020 Oscilloscope**

July, 2004

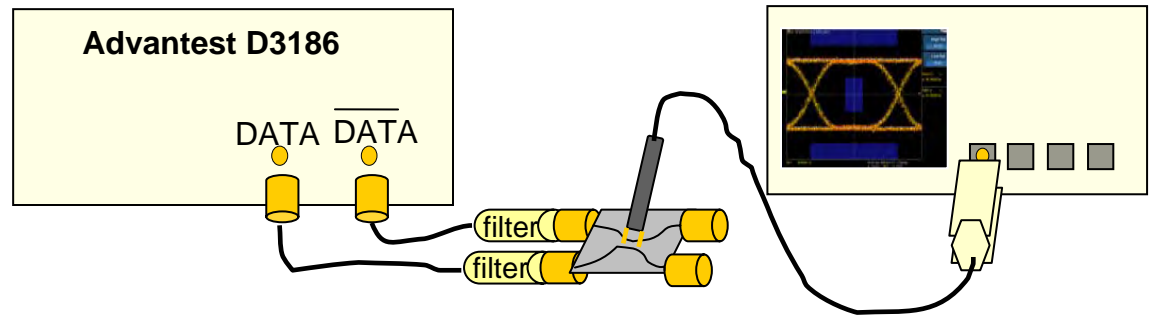
Tektronix

Probe and Scope Response with Filtering

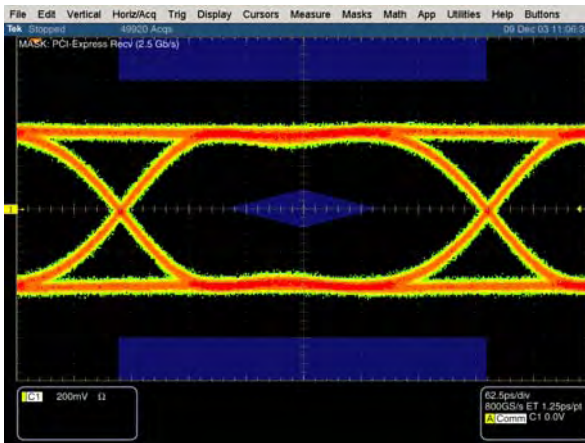
Inline hardware filters were added to the signal path to compare probe response to slower risetimes which are more representative of many of today's devices under test such as new serial buses which include PCI-x and Serial ATA. The filters slow the risetime to about 100ps, as shown in the reference picture taken with a Tektronix CSA8000 sampling scope.



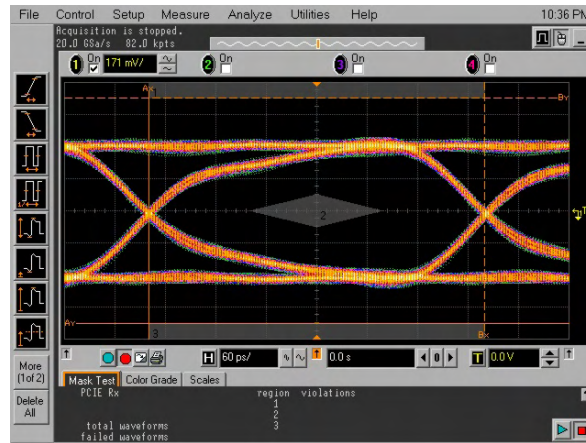
Reference (SMA cabled)
Rise Time (10-90%) 108ps



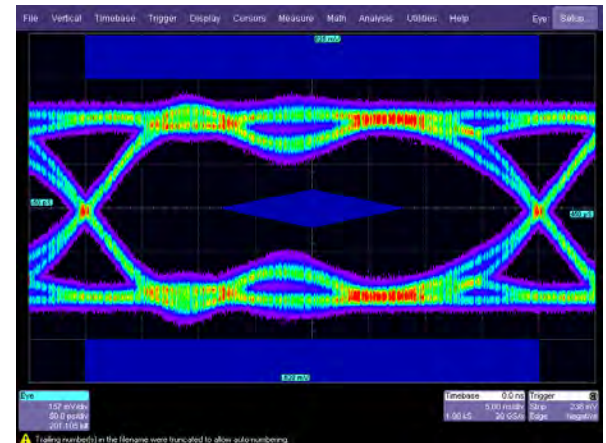
Probe+ Scope Response (probing the same 50-ohm test fixture)



Tektronix P7350 Probe +
TDS7704B Oscilloscope



Agilent 1134A Differential Solder Tip +
Infiniium 54855A Oscilloscope



LeCroy D600 w/ D600-AT Probe
+ SDA6020 Oscilloscope