`TIDA-00131
High-Def (HD) Digital Video Over Twisted Pair for Automotive TFT LCD Displays- Test Data

This document shares the test result of the DS90UB928QEVM and DS90UB927QEVM serializer and deserializer. The test data shown in figure 1 illustrates the quality of the differential signal received by the FPD-Link III deserializer. The FPD-Link III signal is transmitted by the serializer over the shielded twisted pair cable, and the signal quality enhanced by the built-in adaptive equalizer within the deserializer. The eye diagram is measured at the CMLOUT test-point offering a view of the internally equalized differential signal. The CMLOUT test point should always be used to measure the quality of the differential signal for two reasons:

1) This includes the effect of the adaptive equalizer. For high speed data transfer over a regular cable, the signal quality deteriorates quickly with distance. On the deserializer side, there is an adaptive equalizer which tunes to the incoming frequency and refreshes signal quality to compensate for cable loss and noise picked up during transmission.

2) Since FPD-Link III includes a bi-directional control channel, the quality of the differential signal cannot be measured directly on the input pins of the deserializer.

The CMLOUT is enabled via I2C register control.

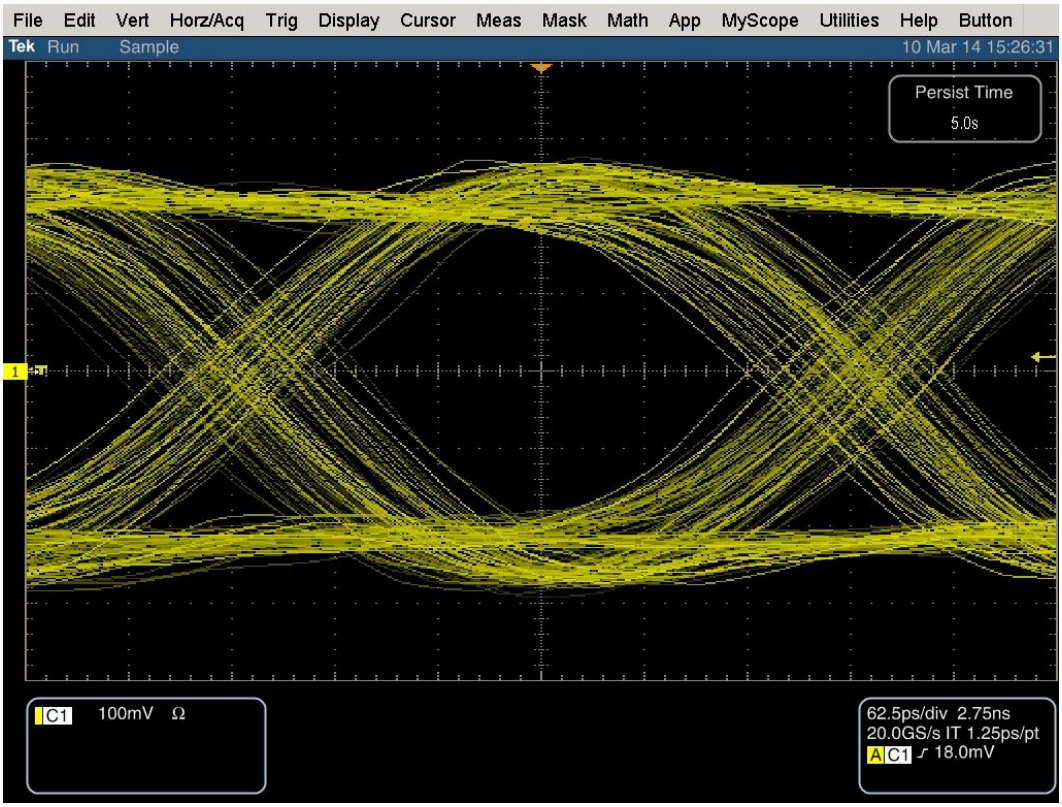

Figure 1: Eye diagram of DS90UB928QEVM and DS90UB927QEVM

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Test Data taken Jan 2014

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