

Adding MSO/Logic Analyzer Capability to the SDS1004X-E Series of Oscilloscopes

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Mixed Signal Oscilloscopes (MSO's for short) feature the ability to show both analog and digital signals using the same timebase. This is essentially like adding a logic analyzer (LA) to the analog scope portion of the design.

The SIGLENT 4 channel SDS1004X-E series of oscilloscopes (currently the 100 MHz SDS1104X-E and 200 MHz SDS1204X-E models) can be upgraded to include the ability to measure up to 16 digital/logic channels. This allows the user to conveniently view up to 4 analog (8-bit resolution) and 16 digital (1-bit resolution) channels on the same timebase which can quickly correlate analog and digital events.

To add MSO capability to your SDS1004X-E:

1. Update the firmware of the oscilloscope to **version 7.6.1.20** or higher. You can find the latest version here on the [SDS1000X-E Firmware Page](#).
2. Purchase the SLA1016 hardware. This includes the wiring harnesses and modules to physically connect to the instrument and Device Under Test (DUT):



3. Purchase the SDS1000X-E-16LA activation license and follow the included instructions to generate the code. Enter it into the scope to unlock the MSO/LA features.

4. Power On the scope, connect the SBUS cable to the scope SBUS input and to the SLA module. Then, connect the ribbon cables and break-out box as shown:



Press the Digital button on the front panel to start using the MSO:



Here is a sample of all 20 channels (4 analog on the bottom, 16 digital on the top) activated:





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