PRODUCT BRIEF

E SERIES

PurVue Analyzer®

Embedded Real-Time Oscilloscope With I3C Protocol-Based Hardware Triggers

Real-Time, High-Resolution, Single-Shot View of I3C Signals

The PurVue Analyzer® is an embedded 500 MHz, 12-bit I3C protocol-triggered real-time oscilloscope with two simultaneous channels. It provides internal probing of SCL and SDA signals within the SV6E-X Mid-Frequency Digital Test Module, thus eliminating the need for external active probes or benchtop oscilloscopes. Additionally, it contains advanced protocol-based trigger options, thus providing completely seamless debugging capability. Whereas conventional oscilloscopes are often retrofitted with "protocol-decode" features, the PurVue Analyzer® is the complete opposite – it can be triggered by the full protocol analyzer core within the SV6E-X.

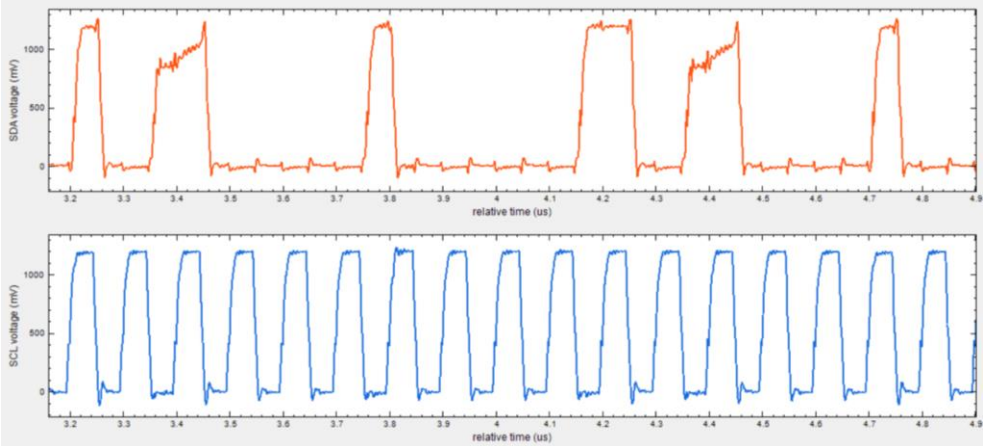
KEY FEATURES:

- **Bandwidth, Sampling Rate, and Resolution:** achieves 500 MHz bandwidth, 1 Gsps sampling rate, 12-bit resolution on 2 simultaneous channels (one for SCL and one for SDA)
- **Protocol-Based Hardware Triggers:** works in tandem with the SV6E-X Mid-Frequency Digital Test Module and leverages the entire list of event triggers
- **Easy to Use:** completely integrated with the Pinetree software and enables interactive operation or full automation

KEY BENEFITS:

- **Exact Time Correlation Between Analog and Digital:** eliminates the need for a conventional benchtop oscilloscope and external active probes
- **Complex Testing and Characterization:** provides complete protocol-based control on when to capture a real-time oscilloscope waveform
- **Unlimited Mathematical Processing:** leverages the Python libraries within the Pinetree software to provide complete control on the types of measurements that are performed

Typical Application: Identify Subtle Single-Shot Signal Artefacts



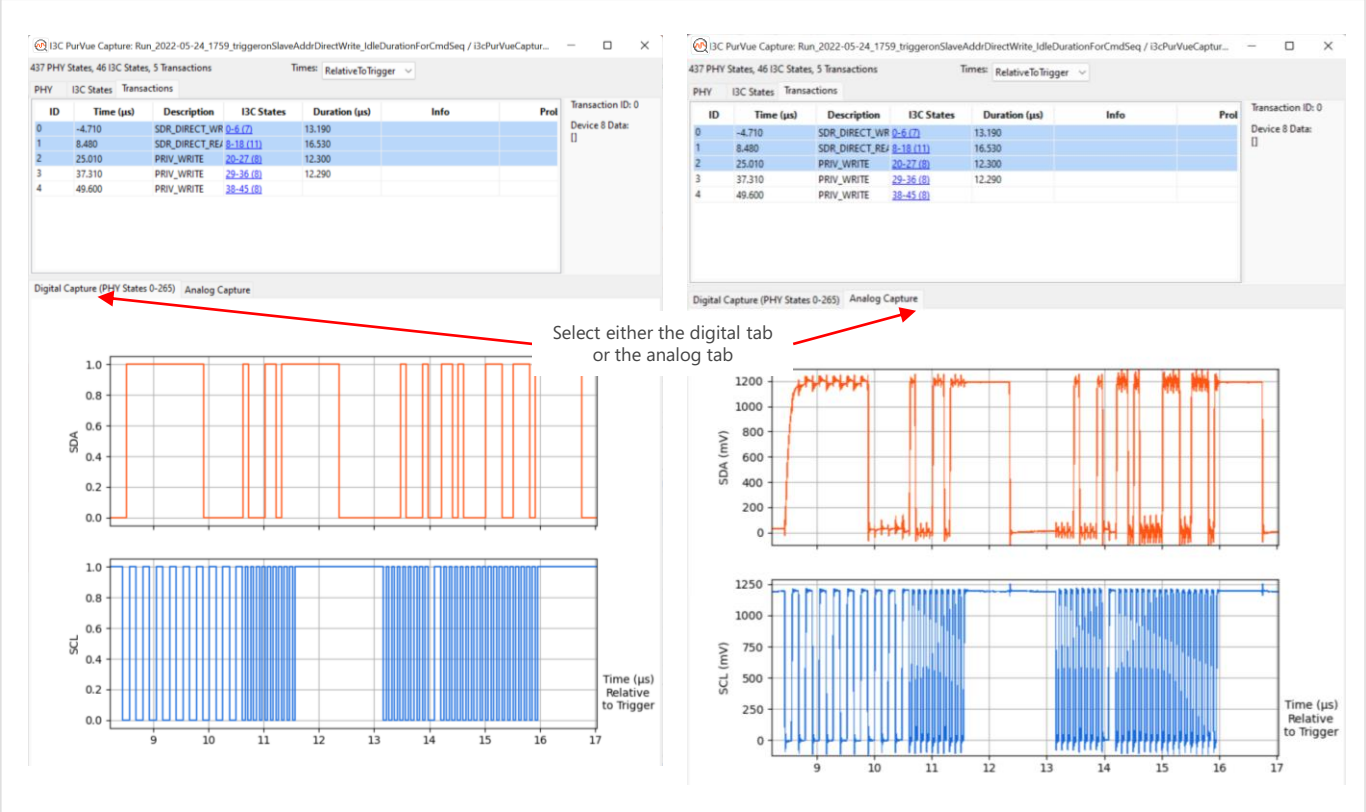
Real-Time PurVue Analyzer® Oscilloscope Capture Example

Specifications

PARAMETER	VALUE	DESCRIPTION
Input Voltage Range	-0.5V to +3.6V	Covers a wide range of I3C (up to v1.2) implementations
Input Impedance	1e12 Ohms	Minimal loading on I3C lines within the SV6E-X
Resolution	12 Bits	Provides excellent signal fidelity and noise measurement capability
Signal Bandwidth	500 MHz	Provides ample margin for signal-integrity measurement on I3C buses
Memory Depth	1 Gbyte	Can store long waveform records
PC Interface	USB 3.0 @ 5 Gbps	Allows rapid waveform uploads to the Pinetree software

Complete I3C Conformance Test Coverage

With the PurVue Analyzer®, the SV6E-X becomes the most complete solution for design validation and conformance testing of I3C (up to v1.2) interfaces. Literally, no other equipment is needed to completely validate and characterize an I3C based component or bus.



PurVue Analyzer® Captures Showing Exact Time Correlation Between Digital and Analog Waveforms