

**E SERIES**

# SV6E-X: SoundWire I3S

Mid-Frequency Digital Test Module



## Multi-Purpose Protocol Exerciser, Protocol Analyzer, and Real-Time Oscilloscope Enabling High-Performance Testing of SWI3S

The SV6E-X is an all-inclusive solution for mid-frequency digital interface development and test. Featuring its support for MIPI SoundWire I3S (SWI3S™), a protocol commonly used in microphone arrays and stereophonic and surround sound, the SV6E-X module replaces racks of equipment that are typically required for I/O testing. The SV6E-X contains three instruments in one: a **protocol exerciser**, a **protocol analyzer** with fine-resolution timing analysis, and a **real-time oscilloscope**. As a result, the SV6E-X enables high-performance testing of SWI3S.

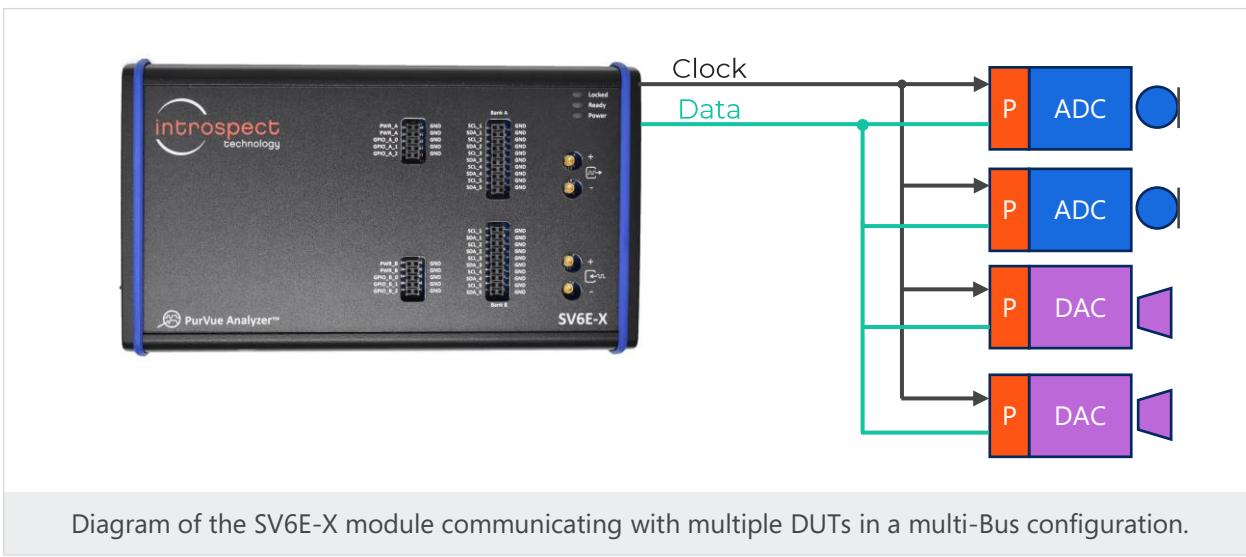
### KEY FEATURES:

- Configurable Data Rate:** Up to 26 Mbps in DDR mode (13MHz Clock Frequency).
- Configurable Voltage:** Ranging between 0.8V and 3.6V, the SV6E-X supports a wide array of devices under test.
- Power Saving and Wakeup Capability:** Efficient functionality to save power as peripheral remains idle when not required.
- Easy to Use:** Pinetree software environment enables interactive operation or full automation.

### KEY BENEFITS:

- Future proof:** Use a single investment in hardware to evolve protocol testing over multiple generations of product development.
- Flexible:** Programmable voltage levels and input/output timings offer true functional stress testing and characterization capabilities.
- Automated:** Scripting capability is ideal for debug tasks, verification and full-fledged production screening of devices and system boards.

## Typical Application: Testing Multiple SWI3S Peripherals



## General Specifications

FEATURE	DESCRIPTION	BENEFIT
Number of I/O Channels	2 banks of 8 channels each (Up to 4 Devices per bank)	Emulates the most complex multi-drop protocol situations
Maximum Data Rate	26 Mbps in DDR mode (13 MHz clock frequency)	Provides the flexibility to configure up to the maximum SoundWire frequency
On-Board Memory	1 GByte	Streams to PC for larger memory capacity
Power-Saving Mode	Supports clock stop and in-band wakeup requests	Emulates a real-life device power-saving mode
Status monitoring and In-Band Interrupts	Supports ping requests and peripheral in-band interrupts	Simulates SoundWire status monitoring and Interrupt requests

## Electrical Specifications

FEATURE	DESCRIPTION	BENEFIT
Voltage Range	0.8V to 3.6V in 1mV steps	Supports a wide array of devices under test
Timing Resolution	2.5 ns logic, 1 ns analog	Fine and coarse timing control capability based on the parameter being set