

## 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.

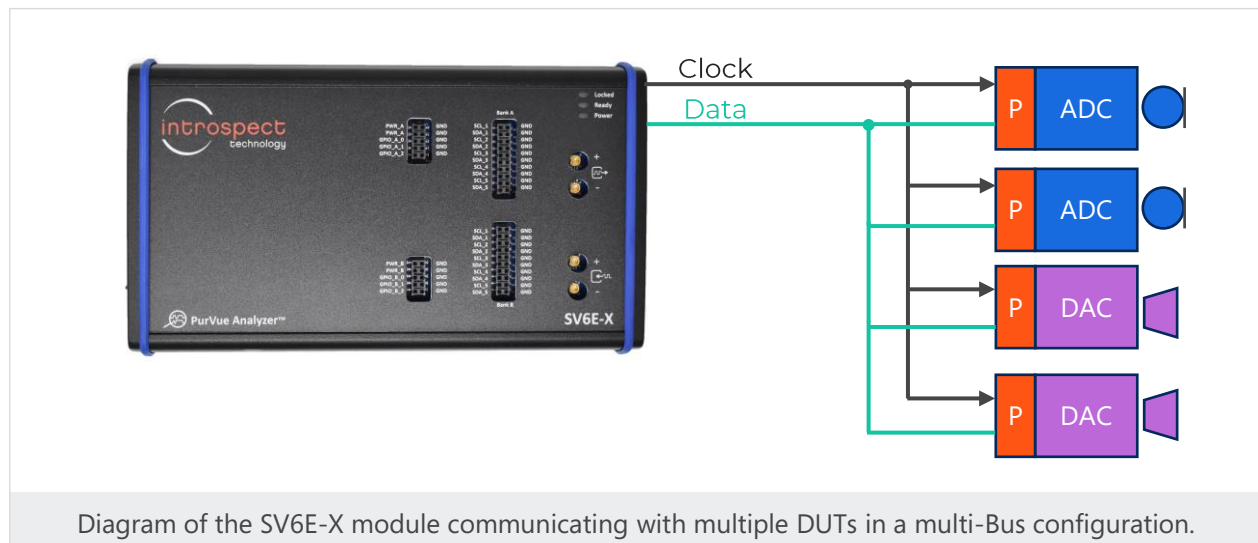
### KEY FEATURES:

- **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 |