

E SERIES

# SV6E-X

Mid-Frequency Digital Test Module



## Multi-Protocol Digital Exerciser and Analyzer With 200 MHz I/O Speeds

The SV6E-X is an all-inclusive solution for mid-frequency digital interface development and test. Capable of supporting popular protocols such as I2C, I3C, SPI, SoundWire, and RFFE, this module replaces racks of equipment that are typically required for I/O testing. For any given protocol, the SV6E-X contains three instruments in one, a **protocol exerciser**, a **protocol analyzer** with fine-resolution timing analysis, and a **real-time oscilloscope** with a full suite of conformance test capability. All three categories of instrumentation features are accessible simultaneously and in real-time using the award winning Pinetree software.

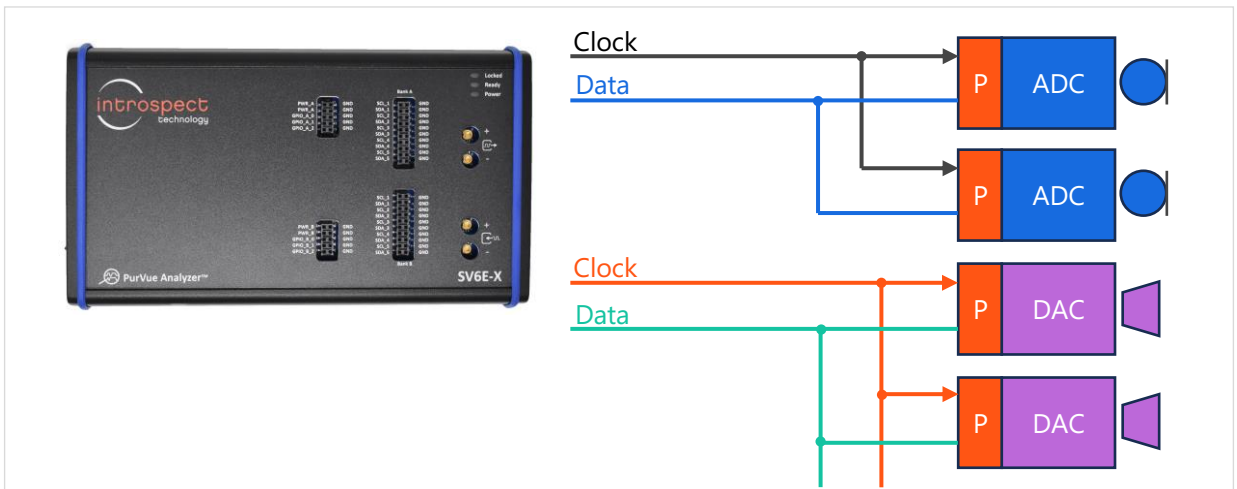
### KEY FEATURES:

- **Selectable protocols:** provides true native protocol handshake with a built-in API for popular digital protocols
- **Device instances:** integrates up to 4 parallel devices, each with its own independent protocol stack
- **PurVue Analyzer option:** available 1 Gbps real-time oscilloscope that can connect to any channel
- **Protocol analysis:** easily trigger on protocol-specific commands

### KEY BENEFITS:

- **Future proof:** use a single investment in hardware to evolve protocol testing over multiple generations of products
- **Flexible:** programmable voltage levels and input/output timings offer true functional stress testing and characterization
- **Automated:** scripting capability ideal for debug tasks, verification and full-fledged production screening of devices and system boards

## Typical Application: MIPI SoundWire Device Testing



## General Specifications

FEATURE	DESCRIPTION	BENEFIT
Available Protocols	I3C, I3C Basic, JESD403-1 SidebandBus, Quad SPI, Octal SPI, SoundWire, RFFE	Load a protocol license at any time without the need for a hardware upgrade
Number of I/O Channels	2 banks of 10 channels each	Emulates the most complex multi-drop protocol situations
Maximum Data Rate	400 Mbps in DDR mode (200 MHz clock frequency)	Provides a future-proof investment for next generation device data rates
On-Board Memory	1 GByte	Can stream to PC for larger memory capacity

## Electrical Specifications

FEATURE	DESCRIPTION	BENEFIT
Voltage Level	0.8V to 3.6V in 1mV steps	Supports a wide array of devices under test
Push/Pull and Open-Drain Drivers	Selectable per channel	Enables mixed bus testing for I2C and I3C applications
Bus High-Keepers	Selectable per channel	Useful for multiple low-power protocols
Timing Resolution	5 ns logic, 100 ps analog	Fine and coarse capabilities depend on the parameter being set and the protocol

## Detailed Analysis Capability

**Capture summary**

Precision time stamps

Human-readable event lists

Hyperlinks to toggle from protocol layer to physical layer view

**Powerful search**

↑ Dynamically adjust timing diagram span based on selected events