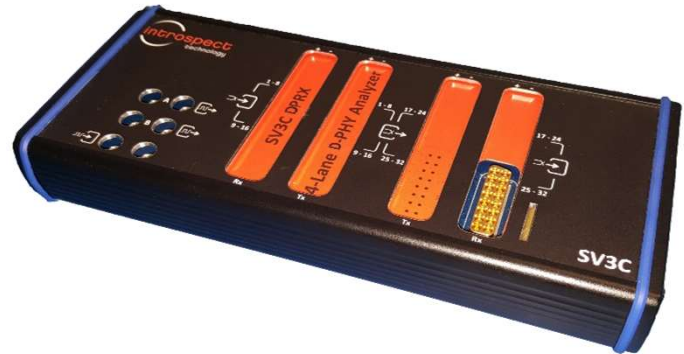


4-Lane, up to 3.5 Gbps Instrument for MIPI D-PHY Analysis

The SV3C-DPRX D-PHY Analyzer is an ultra-portable, high-performance instrument for exercising and validating MIPI D-PHY transmitters as well as probing live MIPI D-PHY links. The Analyzer is data-rate agile, making it ideal for the capture and analysis of MIPI transmitters used in cameras, displays, and other devices. It also includes integrated LP and HS receivers, dynamic termination, and offers sophisticated capture, compare, and analysis modes. Featuring 4 lanes which enables testing of an entire MIPI physical layer transmitter port and full protocol testing.



Key Features:

- **Data rates:** 80 Mbps to 3.5 Gbps fully-continuous operating range, including LP and HS handling.
- **Lanes:** 4 Rx and 1 Clock
- **Signal analysis:** each receiver channel offers independent timing and packet analysis
- **Waveform measurements:** analog waveform capture
- **Easy to Use:** Introspect ESP enables interactive operation or full automation

Key Benefits:

- **Parallel:** Complete protocol analysis suite including video frame extraction and continuous monitor for long term error checking. The SV3C tests all your lanes simultaneously.
- **Self Contained:** an all-in-one system reduces bench space and helps create a portable test and measurement environment; the SV3C integrates multiple tools into one.
- **Automated:** scripting capability is ideal for debug tasks, firmware verification, and full-fledged production screening of devices and system modules.

Typical application: Image Analysis

ID	Time (ns)	VC	Index	DT	DT Name	ImageWidth	ImageHeight	FirstPacket	LastPacket
0	0.000000	0	0	0x3E	RGB8888	1080	1920	3005	3005
1	10.789323	0	1	0x3E	RGB8888	1080	1920	3005	2205
2	21.532793	0	2	0x3E	RGB8888	1080	1920	2211	11500

Capture and extract CSI and DSI images

Analyze frames, packets, bursts and LP events with precision timestamps

Receiver Parameters

Parameter	Value	Description
Number of Differential Receivers	4+1	4 data lanes plus 1 clock lane
HS Differential Detectable / Allowable Voltage Swing	90 – 600 mV	
LP Differential Programmable Threshold Voltage Swing	-100 –1500 mV	
Total Memory Space	4 GByte	Space allocated to transmit patterns and images

Environment and Control

Feature	Description	Benefit
DUT Control Interface	JTAG Control Port and I2C Control Port	Access and set the DUT SerDes control registers via the DUT JTAG Controller Port
User Interface	Introspect ESP GUI allows for interoperability with embedded instruments, FPGA instruments, and other lab tools	Enables full lab automation; provides a scalable, future-proof solution
Scripting	Data logging; automatic report generation	Suited for performing optimization sweeps

The screenshot displays the Introspect SV3C GUI interface. It features several key components:

- Capture Summary:** A table listing captured packets with columns for ID, Time (ms), VC, Index, DT, DT Name, ImageWidth, ImageHeight, FirstPacket, and LastPacket. Red arrows point to specific rows, with a note: "Short and long packets are automatically enumerated, header details extracted".
- Image Reconstruction:** A window showing a reconstructed image of a building. A note states: "Images automatically reconstructed and saved".
- Precision Time Stamps:** A detailed view of packet timing, with a note: "Precision time stamps".
- Packet Details:** A window showing the structure of a captured packet, including fields like Packet ID, Time (ms), Burst, VC, DT, DT name, Header ECC, WC, Payload CRC, and Shot. A note says: "Errors highlighted".
- Packet 1 Detail:** A window showing the bit stream of a packet, with a note: "Hyperlinks for navigating between common bits, bytes and frames".
- HS Buns:** A window showing the raw data from each lane, with a note: "Bytes from each lane before and after being merged".
- HS Bits:** A window showing the raw data from each lane, with a note: "HS bits, per lane, automatically translated to hex and decimal".