

# PGY-JTAG-EX-PD

## JTAG Protocol Exerciser and Analyzer



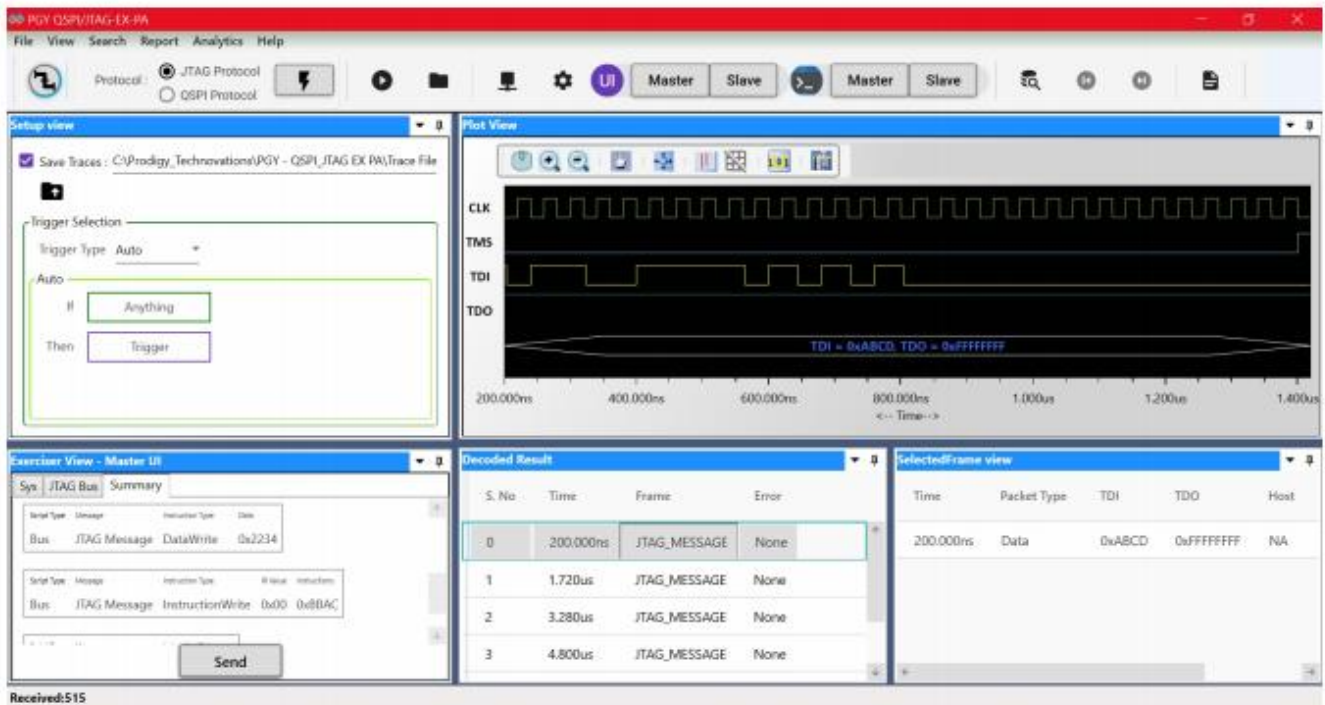
PGY-JTAG-EX-PD is the leading instrument that enables the design and test engineers to test the JTAG designs for its specifications by configuring PGY-JTAG-EX-PD as master/slave, generating JTAG traffic with error injection capability and decoding of JTAG Protocol packets

### Key Features

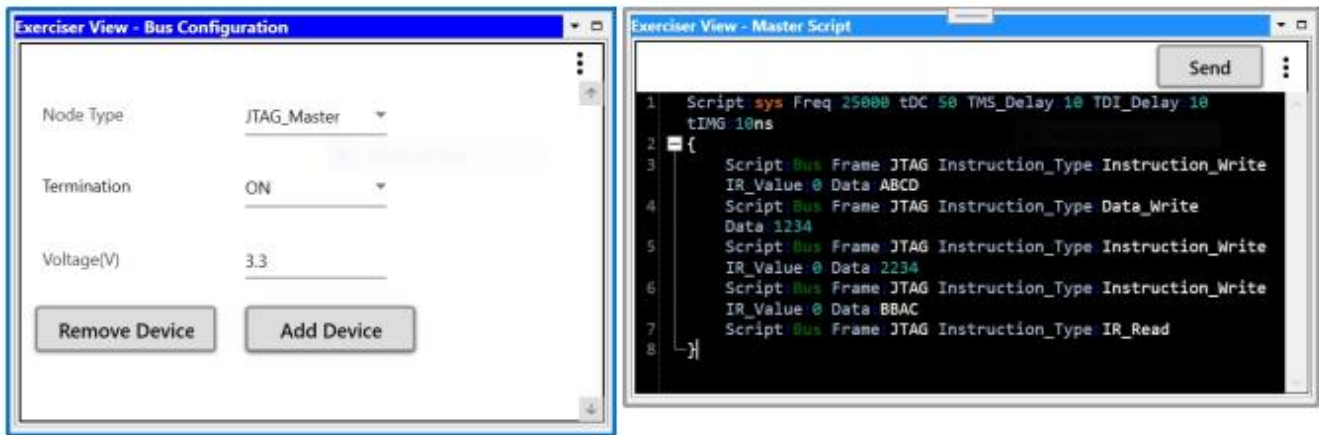
- ❖ Supports JTAG frequencies of up to 25MHz.
- ❖ Simultaneously generate JTAG traffic and Protocol decode of the Bus.
- ❖ JTAG Master Capability.
- ❖ Variable JTAG Data speeds and Duty cycle.
- ❖ User defined TCK & TDI Delays.
- ❖ Continuous streaming of protocol data to host computer to provide large buffer.
- ❖ Timing diagram of Protocol decoded bus.
- ❖ Listing view of Protocol activity.
- ❖ Error Analysis in Protocol Decode.
- ❖ Ability to write exerciser script to combine multiple data frame generation at different data speeds.
- ❖ USB2.0/3.0 host computer interface.
- ❖ API support for automation in Python or C++.

### Multi-Domain view

Multi-domain View provides the complete view of JTAG Protocol activity in a single GUI. Users can easily setup the analyzer to generate JTAG traffic using a GUI or script. User can capture JTAG Protocol activity at a specific event and decode the transition on the JTAG bus. The decoded results can be viewed in the timing diagram and Protocol listing window with auto-correlation. This comprehensive view of information makes it industry's best, offering an easy to use solution to debug the JTAG protocol activity.



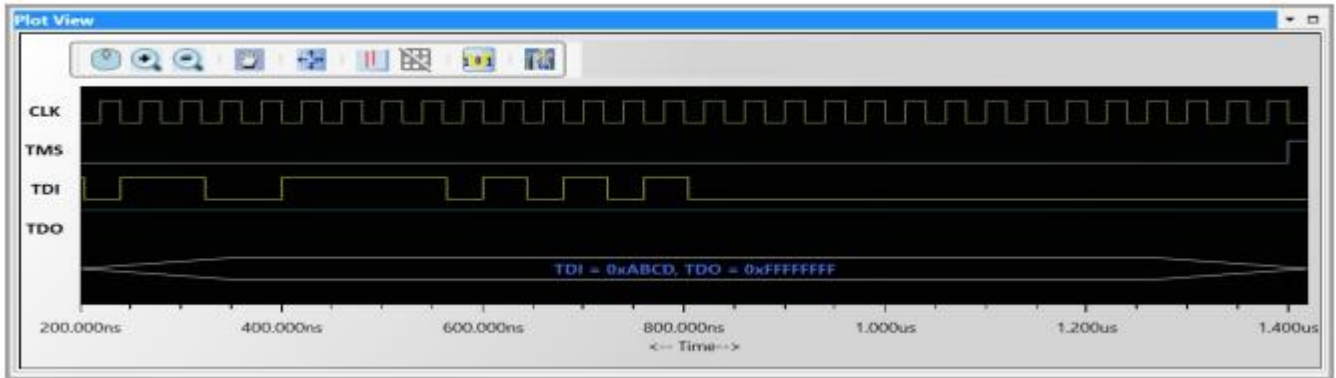
## Exerciser



PGY-JTAG-EX-PD supports JTAG traffic generation using GUI and Script. Users can generate simple traffic generation using the GUI to test the DUT. Script based GUI provides flexibility to emulate the complete expected traffic in real world including error injections. In this sample script user can generate JTAG traffic as below:

- ❖ Script Line #1: Set system Frequency 25MHz, Duty cycle to 50%, set TMS\_Delay to 10ns, set TDI\_Delay to 10 ns, set inter message gap to 10ns
- ❖ Script Line #3: Instruction\_Write
- ❖ Script Line #4: Data\_Write
- ❖ Script Line #5: Instruction\_Write
- ❖ Script Line #6: Instruction\_Write
- ❖ Script Line #7: IR\_Read

## Timing Diagram and Protocol Listing View



The Timing view provides the plot of CLK, TMS, TDI and TDO signals with a bus diagram. Overlaying of Protocol bits on the digital timing waveform will help easy debugging of Protocol decoded data. Cursor and Zoom features will make it convenient to analyze Protocol in the timing diagram for any timing errors.

Decoded Result				SelectedFrame view				
S. No	Time	Frame	Error	Time	Packet Type	TDI	TDO	Host
0	200.000ns	JTAG_MESSAGE	None	200.000ns	Data	0xABCD	0xFFFFFFFF	NA
1	1.720us	JTAG_MESSAGE	None					
2	3.280us	JTAG_MESSAGE	None					
3	4.800us	JTAG_MESSAGE	None					
4	6.360us	JTAG_MESSAGE	None					
5	7.920us	JTAG_MESSAGE	None					

The Protocol window provides the decoded packet information in each state and all packet details with error info in the packet. The Selected frame in Protocol listing window will be auto correlated in the timing view to view the timing information of the packet.

## Specifications

PGY-JTAG Specifications	Features	PGY-JTAG-EX-PD
<b>Exerciser:</b>		
Configurable	1 Master	✓
JTAG Traffic Generation	Custom JTAG traffic generation Simulate real world network traffic	✓
TCK Frequency	100KHz to 25MHz	✓
Voltage Drive Level	1.2 and 1.8V and 3.3V	✓
TCK duty cycle variation	25%, 50% and 75%	✓
TCK &TDI delay	User defined	✓
TCK &TMS delay	User defined	✓
Delay between two messages	User defined	✓
API Support	Support for Automation of operation using Python or C++	✓
<b>Protocol Analysis:</b>		
Supports	JTAG protocol decode	✓
Protocol Views	Timing Diagram View Protocol Listing View Bus-Diagram to display Protocol packets with timing diagram plot	✓
Capture Duration	Continuous streaming Protocol Data to host HDD/SSD	✓
Host Connectivity	USB 3.0 / 2.0 interface	✓

## Ordering Information

PGY-JTAG-EX-PD JTAG Exerciser and Protocol Analyzer

## Deliverables for PGY-JTAG-EX-PD

PGY-JTAG-EX-PD Unit.

USB 3.0 cable.

PGY-JTAG-EX-PD Software in CD.

12V DC adapter.

Flying lead probe cable with female connector to connect to DUT.

## Warranty Information

Hardware Warranty - 2 years.

Software and Firmware Warranty - 1 year.

Probes (covered under warranty for any manufacturing defect) - 6 months.

## Contact Information



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## About Prodigy Technovations Pvt Ltd

Prodigy Technovations Pvt Ltd ([www.prodigytechno.com](http://www.prodigytechno.com)) is a leading global technology provider of Protocol Decode, and Physical layer testing solutions on test and measurement equipment. The company's ongoing efforts include successful implementation of innovative and comprehensive protocol decode and physical layer testing solutions that span the serial data, telecommunications, automotive, and defense electronics sectors worldwide.