

UART Protocol Exerciser and Analyzer



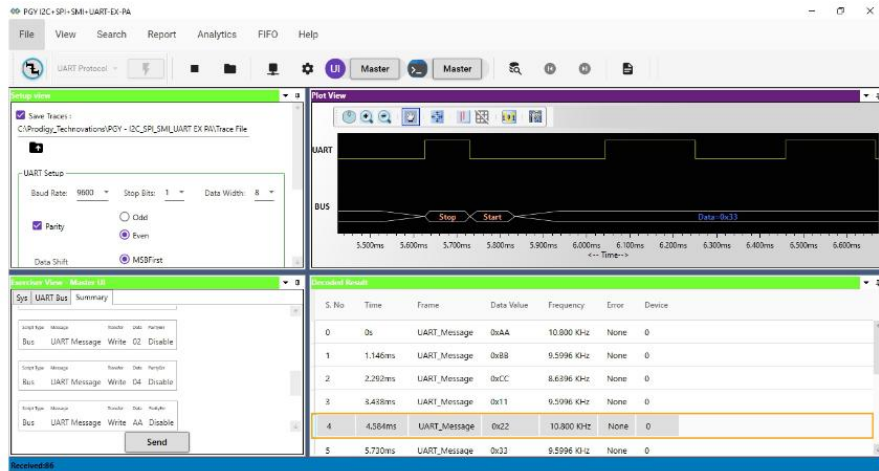
UART Protocol Analyzer (PGY-UART-EX-PD) are the Protocol Analyzers with multiple features to capture and debug communication between host and design under test. PGY-UART-EX-PD is the leading instrument that enables the design and test engineers to test the respective UART designs for their specifications by configuring the PGY-UART-EX-PD as Master/Slave, generating UART traffic and decoding the UART protocol decode packets

UART stands for Universal Asynchronous Receiver Transmitter. A UART's main purpose is to transmit and receive serial data. PGY-UART-EX-PD is the leading instrument that enables the design and test engineers to test the UART designs for their specifications. Generating UART traffic with custom traffic capability and decoding UART Protocol packets.

Key Features

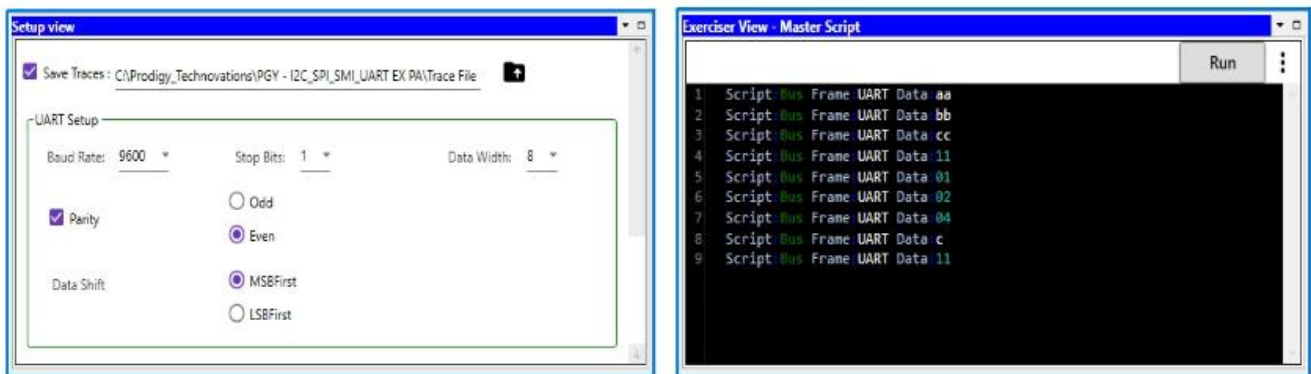
- ✦ Supports custom UART traffic generation.
- ✦ Simultaneously generate UART traffic and protocol decode of the bus.
- ✦ Variable UART baud rates.
- ✦ Continuous streaming of protocol data to the host computer to provide a large buffer.
- ✦ A timing diagram of protocol decoded bus.
- ✦ Listing view of protocol activity.
- ✦ Error Analysis in protocol decode.
- ✦ Ability to write exerciser script to combine multiple data frame generation at different data speeds.
- ✦ USB 2.0/3.0 host computer interface.
- ✦ API support for automation in Python or C++.

Multi-Domain view



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

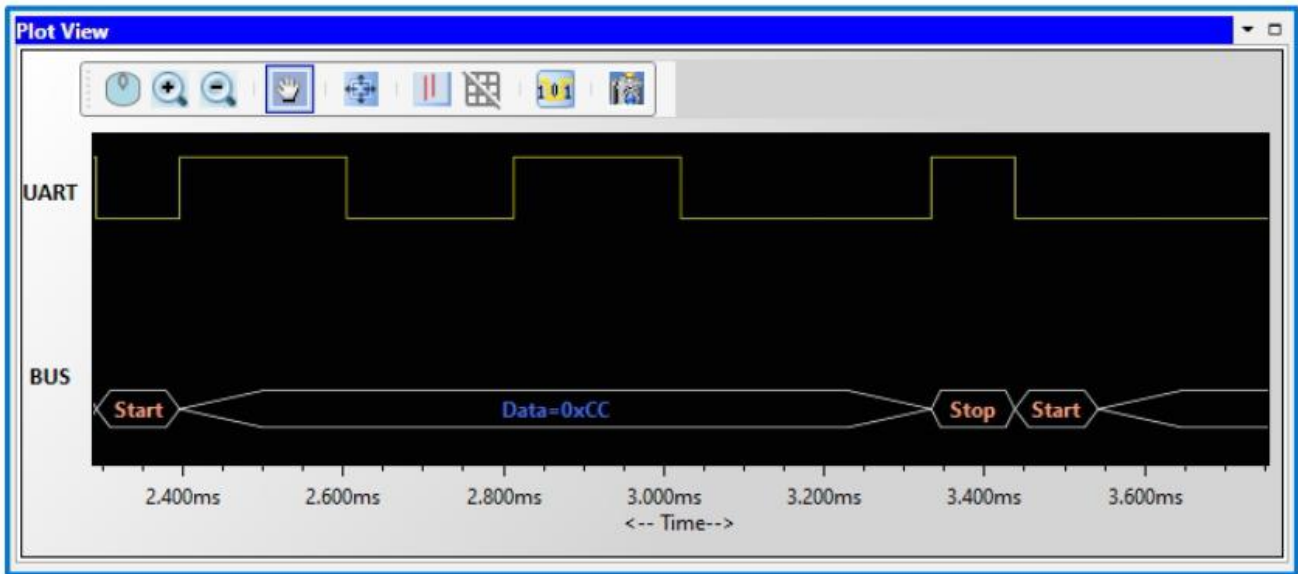
Exerciser



PGY-UART-EX-PD supports UART 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 the real world including error injections. In this sample script user can generate UART traffic as in above image



Timing Diagram and Protocol Listing View



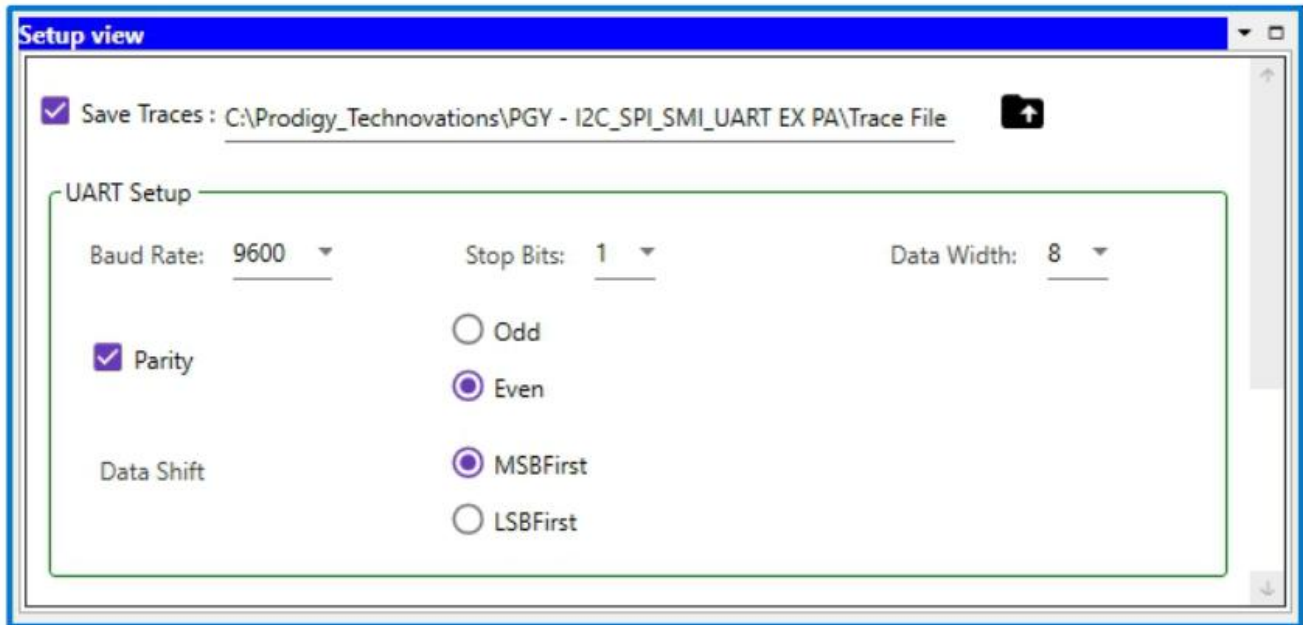
The timing view provides the plot of TX signals with a bus diagram. Overlaying of Protocol bits on the digital timing waveform will help easy debugging of protocol decoded data. Cursor and Zoom features will make it convenient to analyze protocol in the timing diagram for any timing errors.

S. No	Time	Frame	Data Value	Frequency	Error	Device
0	0s	UART_Message	0xAA	10.800 KHz	None	0
1	1.146ms	UART_Message	0xBB	9.5996 KHz	None	0
2	2.292ms	UART_Message	0xCC	8.6396 KHz	None	0
3	3.438ms	UART_Message	0x11	9.5996 KHz	None	0
4	4.584ms	UART_Message	0x22	10.800 KHz	None	0
5	5.730ms	UART_Message	0x33	9.5996 KHz	None	0
6	6.876ms	UART_Message	0x5	9.5996 KHz	None	0

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 the protocol listing window will be auto correlated in the timing view to view the timing information of the packet.



Setup View



Users can configure the PGY-UART-EX-PD for different baud rates, for different configurations of data width and stop bits. Users can also choose whether the parity is odd or even depending on the data type being used and also select the data shift type.



Product Specifications

PGY-UART Specifications	Features	PGY-UART-EX-PD
Exerciser:		
UART Traffic Generation	Custom UART traffic generation Simulate real world network traffic	✓
UART Baud rate supported	300-256000	✓
Voltage Drive Level	1V to 3.3V at steps of 100mV	✓
Parity Bit Selection	Odd or Even Parity	✓
Data Width	User Defined, 5-10bits	✓
Data Shift	User Defined, LSB First or MSB First	✓
Delay between two messages	User Defined	✓
Error Injection	Parity Error	✓
API Support	Support for Automation of operation using Python or C++.	✓
Protocol Analysis:		
Supports	UART protocol decode	✓
Protocol Views	Timing Diagram View. Protocol Listing View. Bus-Diagram to display Protocol packets with timing diagram plot.	✓
Protocol Error report	Parity error	✓
Capture Duration	Continuous streaming Protocol Data to host HDD/SSD	✓
Host Connectivity	USB 3.0/2.0 interface	✓

Ordering Information

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

Deliverables for PGY-UART -EX-PD

- PGY- UART -EX-PD Unit
- USB 3.0 cable
- PGY- UART -EX-PD Software in CD
- 12V DC adapter
- Flying lead probe cable with female connector to connect to DUT



Warranty:

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) 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.