PGY-MPGY-UFS Protocol Analyzer is the most feature rich comprehensive Protocol Analyzer available to capture and debug UFS protocol data. UFS Protocol Analyzer supports PWM and HS G3 Speed. The innovative active probe has minimum electrical loading on device under test (DUT) and captures protocol data without affecting the performance of DUT. PGY-MPHY-UFS protocol Analyzer can supports one lane to two lane data paths. Comprehensive decoding of data, protocol tests, and error analysis enables verification of communication between UFS host and device.

PGY-MPHY-UFS Protocol Analyzer allows Design and Test Engineers to obtain deep insight into UFS host and device communication. UFS level triggering on command, response, data or CRC errors. PGY-UHS II Protocol analyzer instantaneously provides decoding of UFS layer, UnipRO layer decoding of Protocol data.

Key features and benefits:
- Supports PWM and HS Gear 3 data rates
- Supports upto 4 data lanes (2 TX and 2 RX)
- Upto 30GB trace depth
- Decoding at MPHY, UniPRO and UFS layer
- Trigger based on UniPRO and UFS layer packet content
- Support triggering in PWM and HS gear 3 data rate speed
- Trigger on CRC error conditions allow capturing infrequent error events
- Trigger out signal for any specific protocol event allows triggering of other instruments such as oscilloscope
- Interface to host system using USB3.0 or Gigabit Ethernet interface
- Flexibility to upgrade the hardware firmware using GbE interface provides easy field up gradation of firmware
- Decoded data packets can be exported to txt file for further analysis

Specifications:

Interfaces Supported	MPHY, PWM and upto HS gear 3, four data lanes (2 TX and 2 RX)
Protocol Decode	MPHY (8B/10B), UniPRO and UFS
Data Decode	Supported
Storage Capability	Continuous streaming of protocol activity upto 30GB
Capture Mode	Manual Run/Stop, Time specific
Trigger on	UniPRO and UFS packets
Trigger Actions	Capture data and/or trigger out signal
Signal Input	Digital Signal input to mark the activities in Protocol activity
Host System Interface	USB3.0 or GbE interface

Host Machine Minimum Requirements — Microsoft Windows® 8, Windows 7, 64 bit
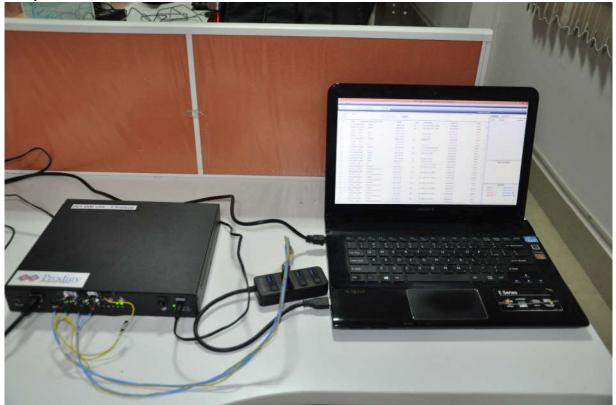16GB of RAM; Storage with at least 50 GB HDD space for the storing the acquired data display with resolution of at least 1024x768

Trigger Specifications

Stack	Protoocl Alayer		Packet Type
UniPRO	Link Startup Sequence		Trig_UPRO0
			Trig_UPRO1
			Trig_UPRO2
	PHY Capability Adapter packets (PACP)		PACP_PWR_reg
			PACP_PWR_cnf
			PAC__Cap_ind
			PACP_Cap_EXT1_ind
			PACO_EPR_ind
			PACP_TestMode_req
			PACP_Get_req
			PACP_Get_cnf
			PACP_SER_req
			PACP_SET_cnf
			PACP_TEST_DATA_0
			PACP_Test_DATA_1
			PACP_Test_DATA_2
			PACP_Test_DATA_3
	Data Link packets		SOF
			EOF
			EOF_ODD
			EOF_EVEN
			COF
			AFC/NAC
			Traffic Class 0/Traffic Class 1
UFS	UFS layer Packets		NOP IN
			NOP OUT
			Command
			Response
			Task Management Request
			task Management Response
			Ready To Transfer
			Ready to Transfer

Setup

PGY-PMHY-UNiPRO-UFS Protocol Analyzer provides USB3.0 and GBe interface for host connectivity. Software runs in host machine enables configuration of PGY-MPHY-UFS hardware for UFS protocol analysis including boot information capture for eMMC for comprehensive Protocol Analysis. High-speed host connectivity enables continuous streaming of protocol data and storage for long period of time.

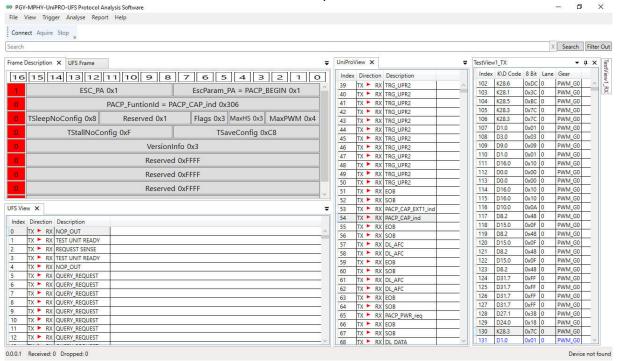**Comprehensive Protocol Analysis**

PGY–MPHY-UniPRO-UFS Protoocl Analyzer provides industry best protocol analysis capabilities. Easy to use interface reduces the protocol analysis time. Time stamped view of protocol decode listing provides easy view of protocol activities between host and device. At click of a button user can get decode of argument of Response from the device. Decoding of registers provides detail information on devices. Analytics features quickly provide insight into protocol activity without going through the complete protocol activity.
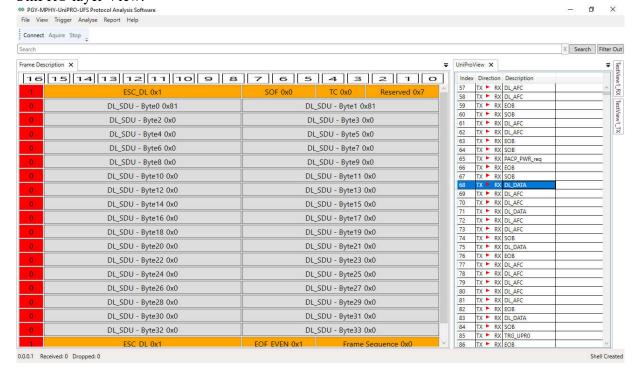
Multilayer Protocol Layer

PGY-MPHY-UniPRO-UFS Protocol Analysis offers multilayer of protocol activity with flexibility to link all views for easy correlation of data. This software brings information MPHY layer to

application single multi window view. This gives bit level protocol decode will user to analyze the communication between host and UFS memory.
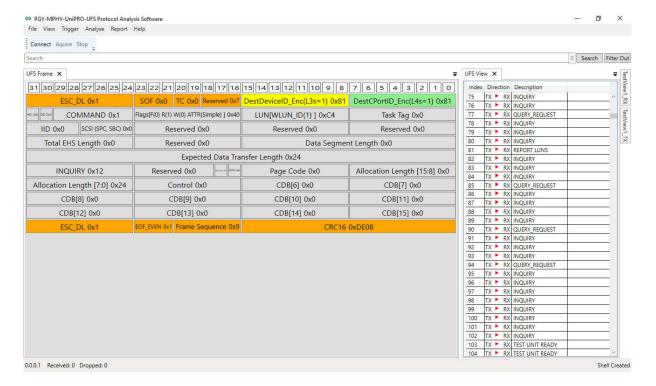

UniPRO layer View:

PGY-MPHY-UniPRO UFS Protocol Analysis software allows designer to focus on specific Protocol layer. Software displays the UniPPRO packets and selected packets bit level decode. Now user can debug design issues at each layer

UFS packet layer view

This view displays for information application layer transactions. UFS layer packets are listed and its packet level content.

Search and Filter:

PGY-MPHY-UniPRO-UFS Protocol Analyzer offers flexibility to search and filter for specific packets. User can be specific define the search at bit level for a packet.

Analytics

PGY-MPHY-UniPRO-UFS software would allow engineer to quickly view the error conditions.

- Errors reported in packets
- Linking the error bit info to packets
- CRC errors
- Gear changing information
- Lane width
- Credit overflow analysis

- IOPS Analysis
- Performance Analysis of packets

Ordering information:
PGY-MPHY-UniPRO-UFS   UFS Protocol Analyzer
(Shipment includes Hardware, software CD, One set probe, USB3.0 and Ethernet Cable, Power adopters)
Warranty:
Hardware and software carries warranty of one year.
Probes are covered three months warranty for any manufacturing defects
Contact:
Prodigy Technovations Pvt. Ltd.
Bangalore, India 560076, Phone: +91 80 42126100,
Email: contact@prodigytechno.com, www.prodigytechno.com