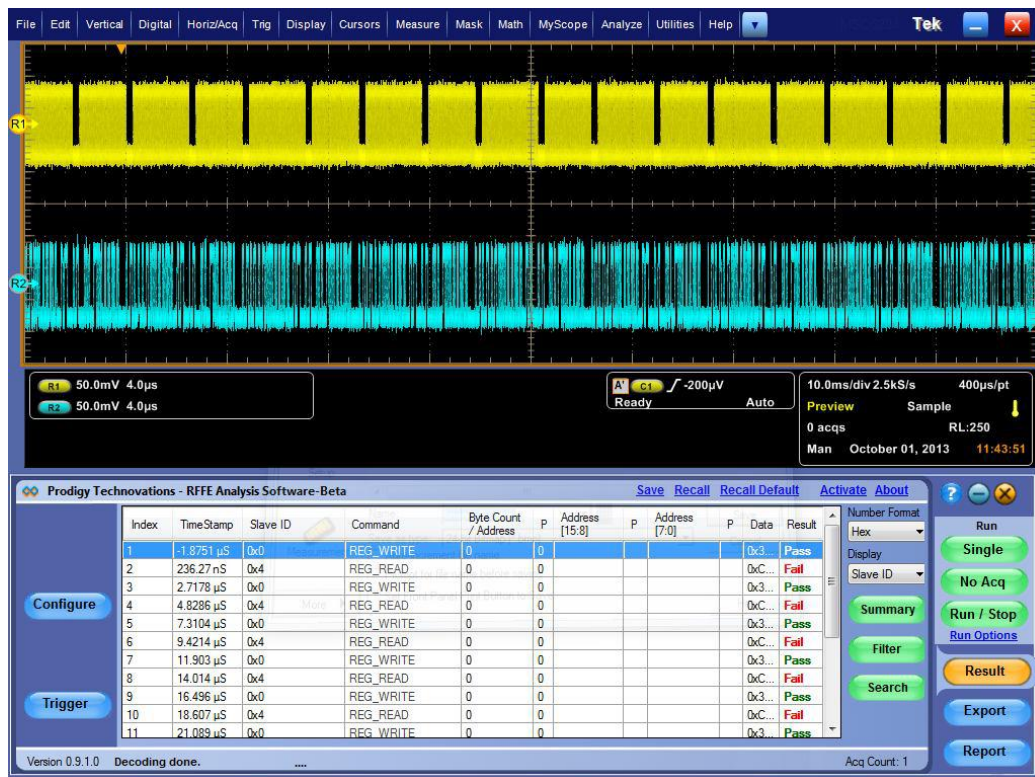# PGY-RFFE RFFE Protocol Trigger & Decode Analysis Software

RFFE Protocol Trigger & Decode Software

RF Front End control interface (RFFE) developed for controlling front interfaces including Power Amplifies, Low noise amplifiers, filters, switches and power management modules in new generation mobile devices. Engineers designing RFFE interface are need test and debug the RFFE interface for its protocol specification. System designers need to debug the communication taking place in RF interface. It is time consuming and error prone to manually decode the clock and data signals of RFFE to test and debug hundreds of RFFE messages.

PGY-RFFE Software runs on Tektronix oscilloscopes such as DPO/MSO5000, DPO7000 and DPO/DSA/MSO70000 oscilloscope series. PGY-RFFE utilizes the hardware based real-time RFFE protocol aware trigger, protocol analysis of long acquisition record length up to 125MB to provide superior RFFE Protocol Analysis result at press of button.

Features:

- RFFE protocol Analysis using oscilloscope live channel data or stored RFFE signals
- Powerful RFFE real-time protocol aware hardware based trigger capabilities
- Displays the decoded data in RFFE frame format
- Error checks for parity bits of command and data
- Error checks for Byte count with actual data count and missing SSC
- Flexibility to view Slave ID in Symbol or Hex value
- Flexibility to view decoded data in hex, binary, Decimal or octal format
- Long duration data decode support to capture more number of RRFE protocol transactions
- Search capabilities to locate protocol event
- Filter capabilities to view information of Interest
- Documentation by exporting data in CSV and TXT file format
- Report Generation

Easy RFFE Protocol Test Setup and Debug

PGY-RFFE Software installed in Tektronix oscilloscopes can be launched by clicking the PGY-RFFE icon in oscilloscope desktop folder. Now user has simultaneous view and control to oscilloscope as well as PGY-RFFE Software. User can analyze RFFE in Single acquisition mode, Repetitive mode and No Acq mode. In No Acq Mode, the RFFE software analyses an already captured RFFE signal that is present in the acquisition memory of the oscilloscope.

Powerful RFFE Protocol Aware Hardware Based Real-Time Trigger:
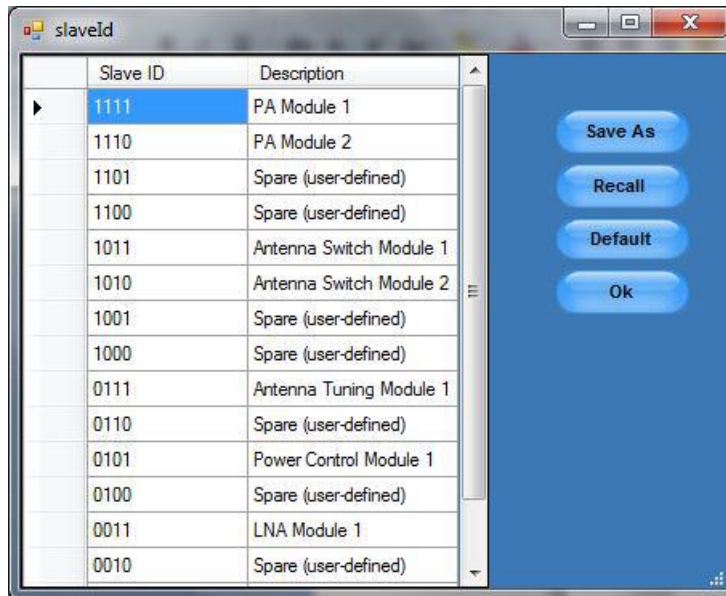
Simple, easy-to-use RFFE protocol-aware trigger feature allows engineers to capture RFFE signals at specific event in RFFE interface.
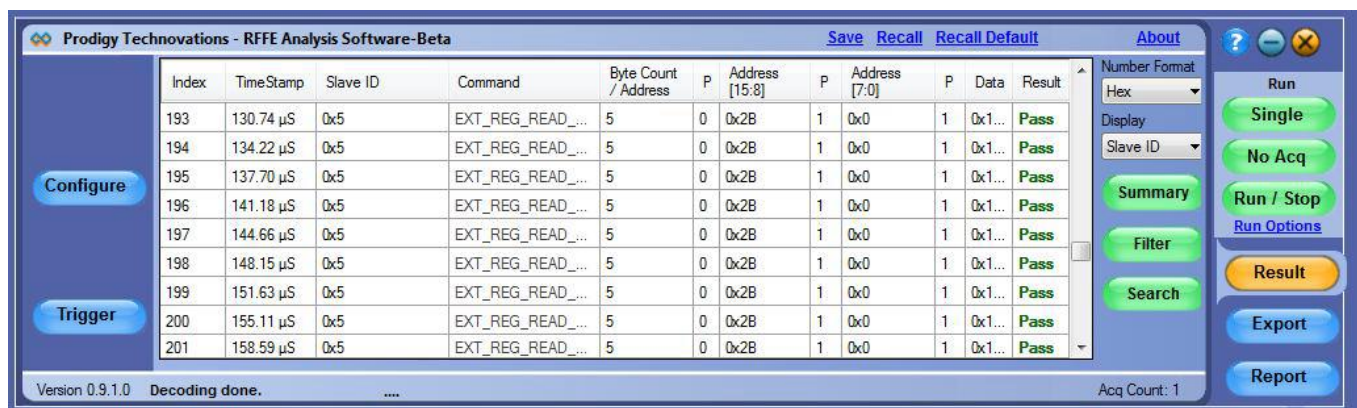

Select any of the live channels Ch1 to CH4 as trigger source and set the trigger pattern. The trigger can set to full speed, half speed or any custom data rate. RFFE provides the flexibility to select a combination of any one of the sixteen slave IDs, any command and command dependent parameters such as Byte count, Address, or Data.

Symbol table for Slave ID:

PGY-RFFE Software provides the flexibility to view the decoded data in symbol table. RFFE specification documents provide guidelines to describe the Slave IDs. PGY-RFFE software has the default slave ID table. However, the user can edit the default table and apply the custom described slave IDs for easy analysis of protocol activities. This symbol table is used for easy trigger setup, protocol analysis, filter and search features.
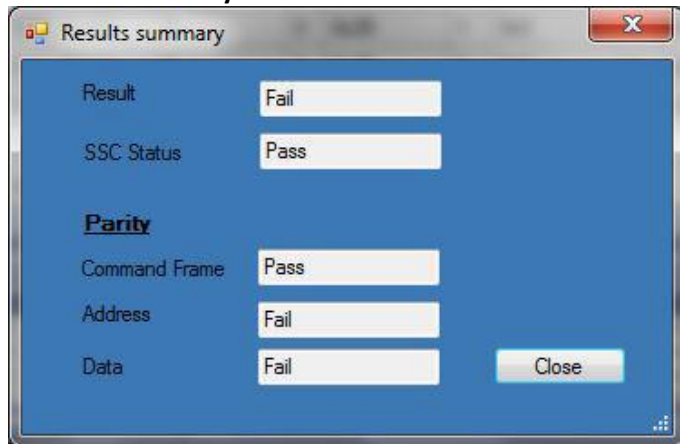

Protocol Analysis of RFFE Signals:

RFFE Protocol decoded data is displayed as above. PGY-RFFE software processes up to 125MB record length and display all the RFFE protocol packets. The software analyses each RFFE packet for missing SSC, parity bit error in address, command and Data bytes. PGY-RFFE software identifies any RFFE packet with missing SSC. This ensures that each RFFE packet meets protocol specifications of RFFE. PGY-RFFE software displays result for each RFFE protocol packet whether pass or fail.

Protocol Summary:

Protocol Summary provides a quick result view of protocol analysis of RFFE signals. This view lists pass/fail status of SSC, parity bit in command, address and data in the acquired data. This helps in locating the cause of RFFE Protocol packet failure.

Filter feature:

It is extremely challenging to view information of interest while there are hundreds of protocol transactions taking place between various devices. These problems compound during protocol analysis of a long record length. PGY-RFFE software solves this problem using the filter feature. By filtering information for Slave ID or specific command, or parity error type, user can view only specific data of interest. Filters provide filtering of information using individual packet content or combination of packet contents.

Search:
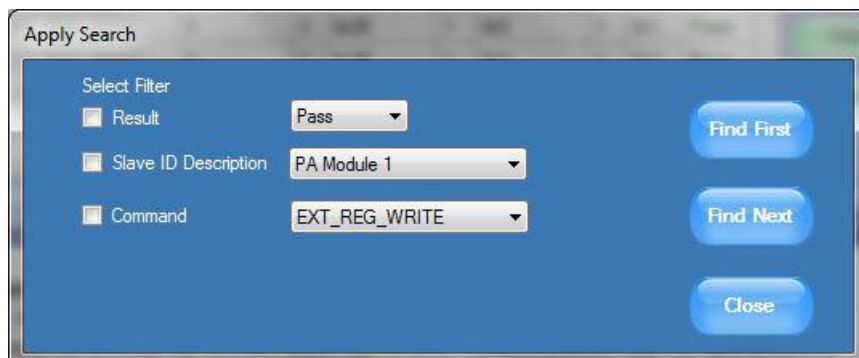
During protocol analysis, users tend to capture a large amount data capture any non-repeatable event. It is also extremely difficult locate the RFFE packet of interest. RFFE Software's Search filter in is able to quickly locate the required Slave ID or command or Combination of both.

Documentation of Protocol Analysis:

PGY-RFFE RFFE Protocol Trigger and Decode Analysis software provides flexibility to export the decoded data in txt and csv file format. Report generation allows the user to include different waveforms images including the oscilloscope screenshot in a pdf report. Headers, comments and test attributes can be added to the report.

Tektronix Oscilloscopes Supported

•DPO/MSO5000 series,DPO7000 series, DPO/MSO/DSA 70000 series

Ordering Information:

PGY-RFFE (shipment includes CD with PGY-RFFE Protocol Trigger and Decode Analysis Software) License is locked to the oscilloscope

Contact Information

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About Prodigy Technovations Pvt Ltd

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.