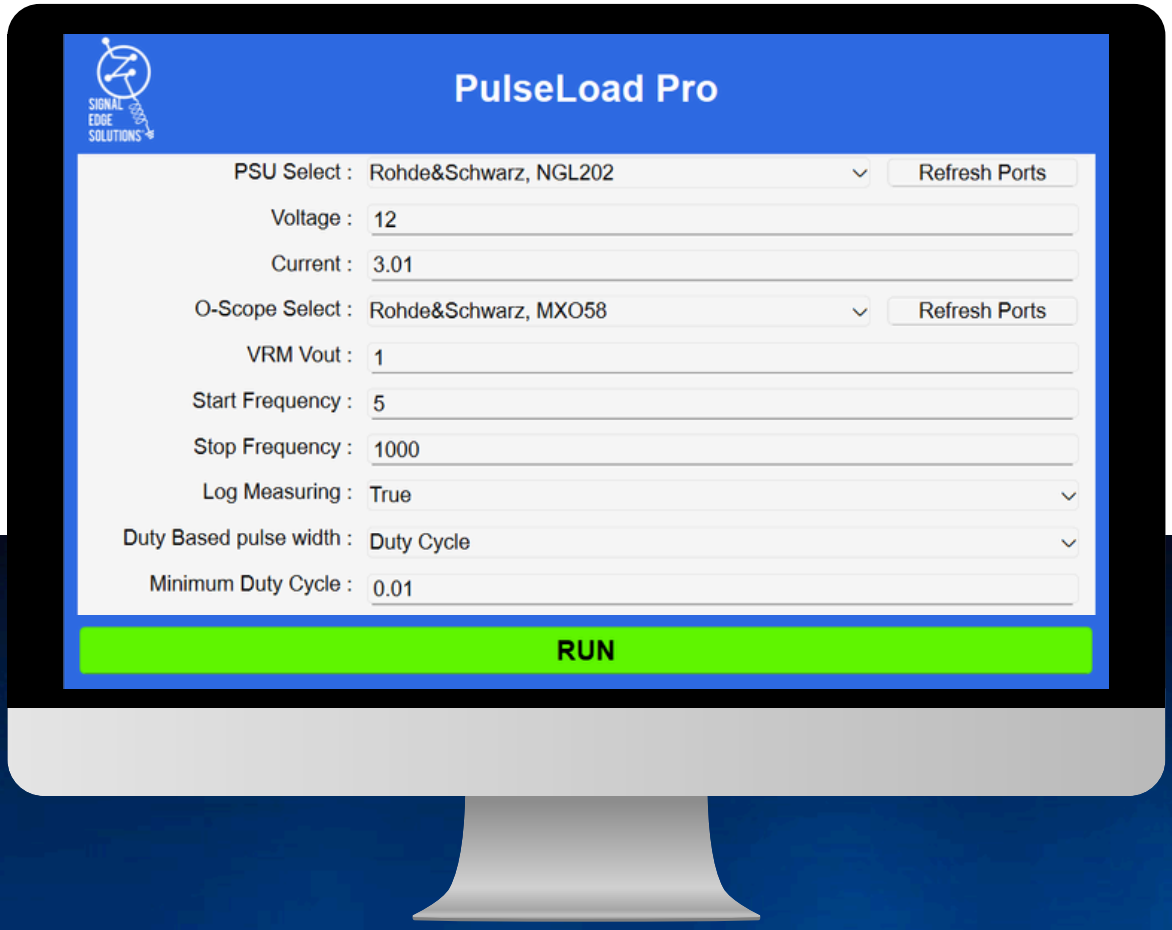
# Signal Edge Solutions

# PulseLoad Pro

## VRM and Power Supply Test Automation Software




Product brochure version 09.25

# AT A GLANCE

## Why automate your test setup?

Testing a voltage regulator module (VRM) or power supply can be a time-consuming process. Manually adjusting a waveform generator and oscilloscope to capture the exact transient step load response is not only repetitive but also severely limits the amount of data the user can collect.

Introducing PulseLoad Pro, a software designed to transform VRM testing. PulseLoad Pro automates the entire test sequence, driving the user's equipment and analyzing measurement results. What once was a multi-hour task can now be completed in under a minute. With this tool, the user can save hours spent repeatedly changing settings, then taking measurements over and over, just to have to spend even more time analyzing the countless screenshots they took. Instead, they can run PulseLoad Pro and get all of that work done in a fraction of the time.

PulseLoad Pro automates data collection and post-processing, giving the user a full, comprehensive set of measurements without manual effort. This software accelerates power supply and VRM testing workflows, allowing the user to shift focus onto what truly matters: engineering and design.

## What is PulseLoad Pro?

PulseLoad Pro is a software that measures the step load response of a VRM or power supply across a wide range of frequencies, then displays the worst-case response waveform and the surrounding seven measured frequencies on the oscilloscope. It gathers and saves all of the measured data for any desired post-processing.

As part of the test automation process, the software will automatically set the input probe termination impedance. It will run a sweep of all the responses to determine the largest signal in order to auto-scale all the waveforms and avoid clipping, then measure and determine the worst-case response.

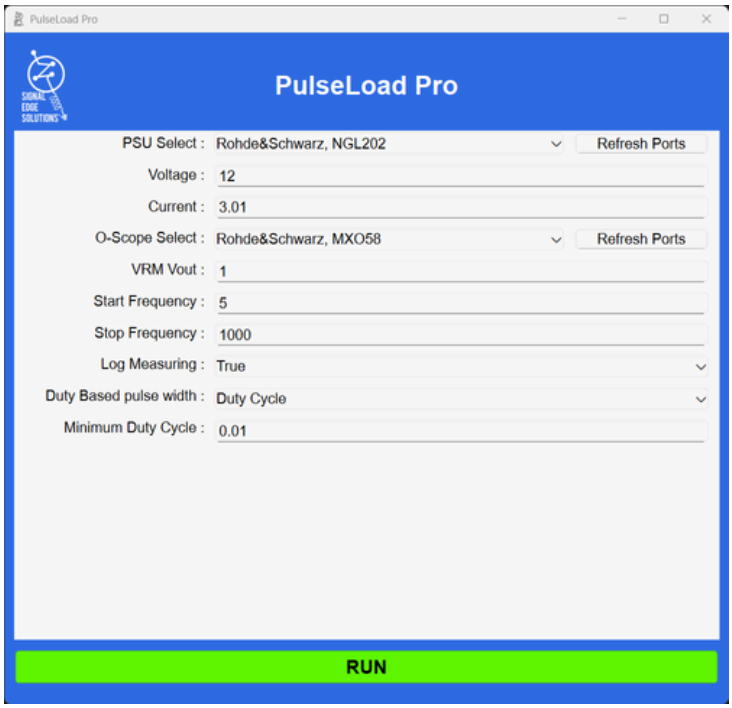
# HOW IT WORKS

## Rapid Data Collection

PulseLoad Pro will run a sweep of all the measured responses to determine the scale of the worst response, allowing it to auto-scale all the waveforms and avoid clipping. It will set the scale and trigger level based on the auto-scaling, then sweep through the frequencies again, recording the measurements this time.

## Analysis and Post-processing

The software will analyze all the measured data and determine which frequency had the worst-case voltage ripple. PulseLoad Pro will display the worst-case frequency along with the seven surrounding frequencies as reference waveforms on the oscilloscope. It will then use a built-in post-processing MATLAB package to graph all the measured waveforms together, as well as their voltage ripple Vs. frequency.

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# 3 SIMPLE STEPS
## to high-speed measurement analysis

### #1 Connect equipment

PulseLoad Pro runs on an external PC. Connect an oscilloscope and a power supply over Ethernet to the same local area network or via USB hub.

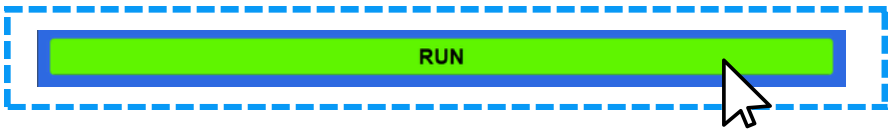
### #2 Define test parameters

Using the GUI, specify the following:

- Input voltage on the power supply: this voltage is what will be set at the input to the DUT from the power supply.
- O-Scope Select: specify the connected oscilloscope
- VRM Vout: specify the VRM or DUT output voltage
- Start Frequency
- Stop Frequency
- Long Measuring: (True/False)
- Duty Based pulse width
- Minimum Duty Cycle

### #3 Click to run

Click the “RUN” button, and PulseLoad Pro will do the rest.



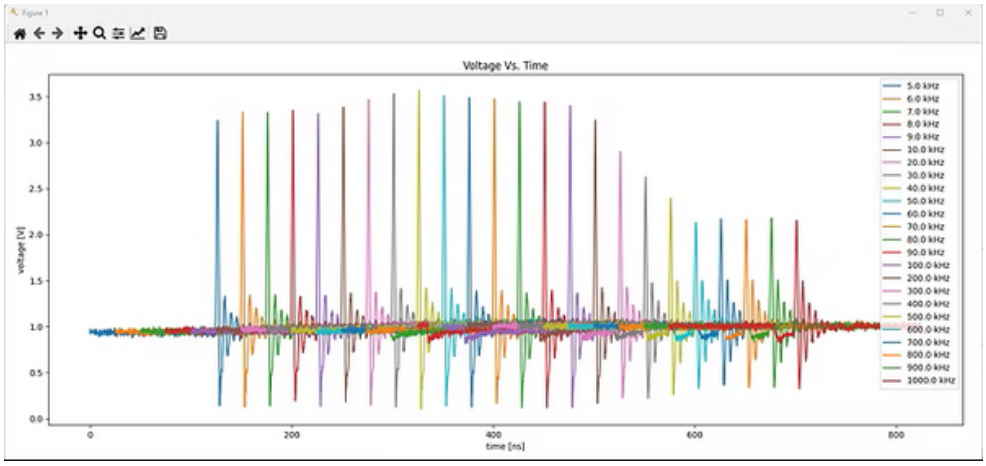

### Need a custom test automation software?

We can help.

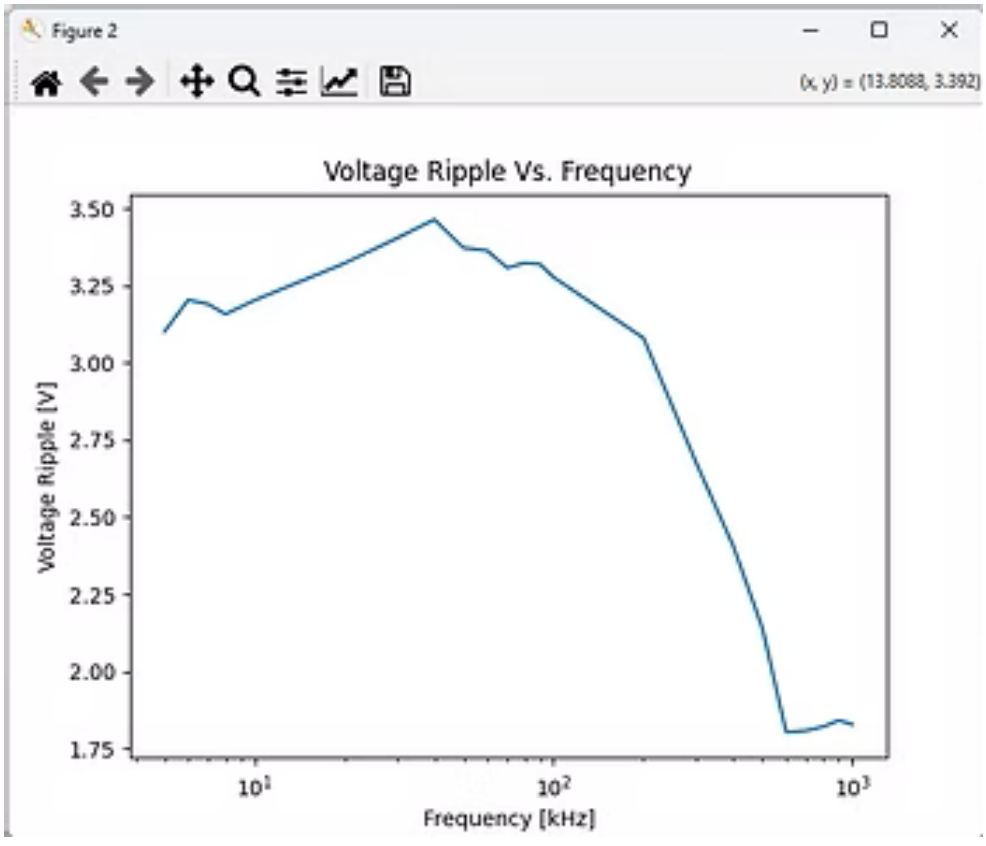
Contact us at info@signaledgesolutions.com to discuss our test automation software services.

# GRAPH REPORTS

### Measured waveforms graph




### Vpp vs. frequency graph

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# OPTIMIZE YOUR SETUP

## with the PulseLoad Pro Product Bundle

Combine the PulseLoad Pro software with cutting-edge test and measurement products by Rohde & Schwarz and Picotest to build your own comprehensive automated testing solution.

### PulseLoad Pro Product Bundle:

- (1) PulseLoad Pro Software License
- (1) R&S® MXO58-PRO Configured Oscilloscope
- (1) R&S®NGL200 Power Supply
- (2) Picotest 3DPP-200 Probe Holder Set
- (1) Picotest P2105A Probe-Based Stepper
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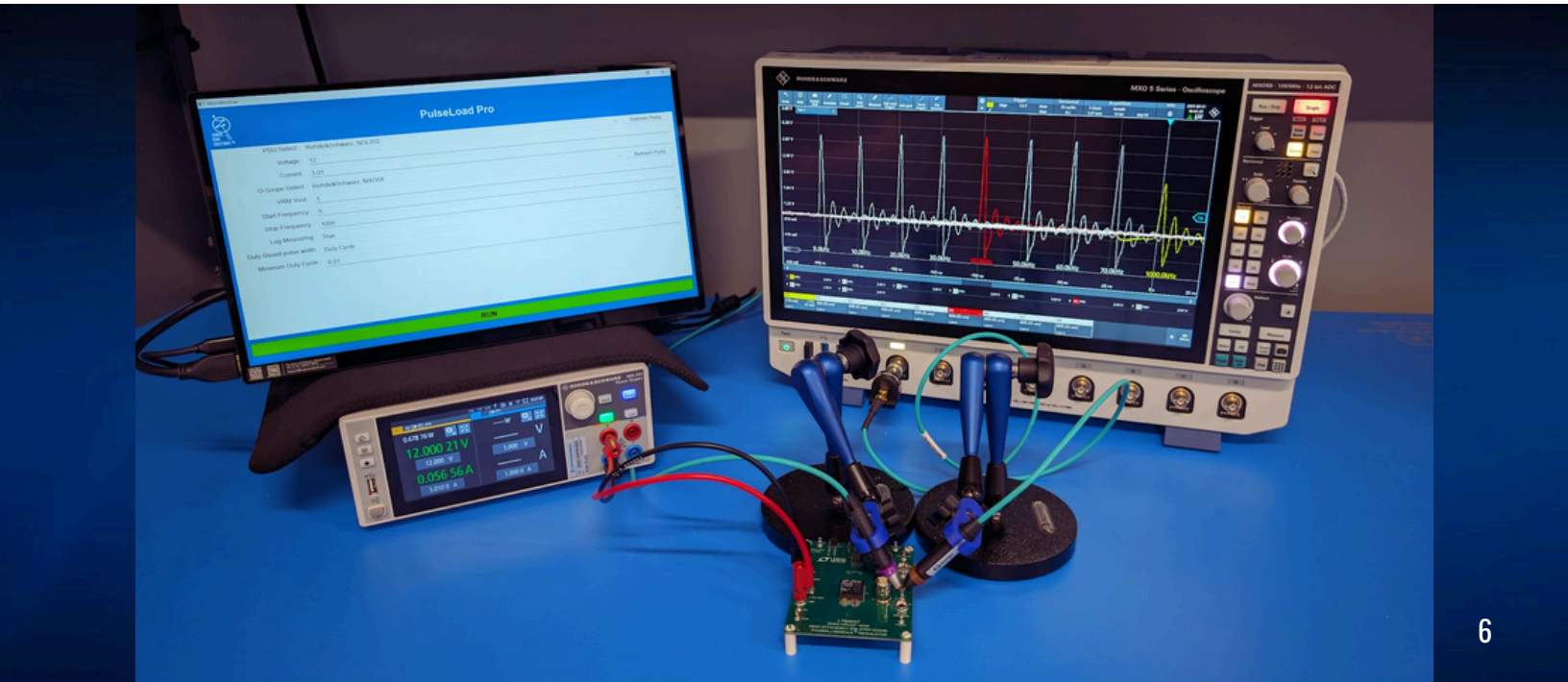

# ABOUT US

Signal Edge Solutions was founded on the belief that there is a significant gap in the signal integrity and power integrity (SI/PI) field, particularly as the industry rapidly advances towards an AI-connected world. We are actively addressing this gap by providing highly advanced services and products that focus on high-speed measurement, measurement-based modeling, and electromagnetic (EM) modeling services tailored to ASIC, package, and printed circuit board (PCB) design. Our expertise ensures reliable performance in the complex ecosystems powering artificial intelligence and other cutting-edge applications. In addition to these, we offer specialized engineering consulting services, which include ASIC package design, chiplet package design, and end-to-end SI/PI simulation modeling of complex ASICs and FPGA designs, all critical for the demanding requirements of next-generation AI and data-driven technologies.

**Signal Edge Solutions Software End-User License Agreement**

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# CONTACT US


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