

High Voltage Power Monitor

A cost-effective, versatile, and easy-to-use tool for precisely measuring the power consumption of electronic devices

Overview

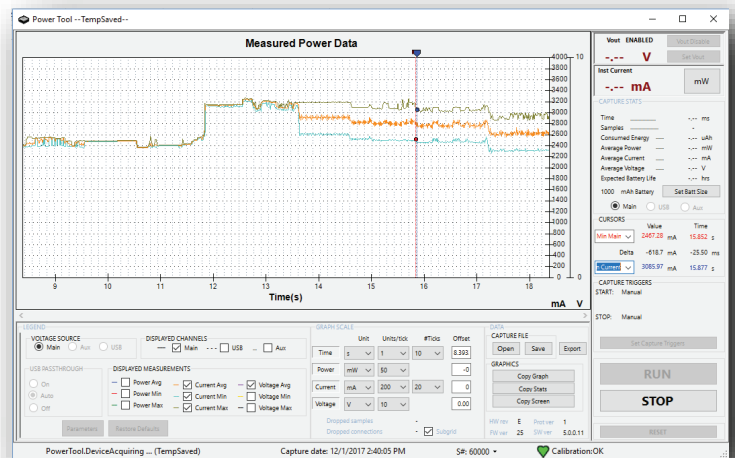
Consumers continue to demand longer battery life and lower power consumption from their electronic devices, but designing products to meet their needs can be complicated and expensive. The High Voltage Power Monitor (HVPM) from Monsoon Solutions is an essential tool for designers, engineers, quality control managers, and software developers who want to measure precisely how much power their devices are drawing. The HVPM provides highly accurate data to help you optimize your products and meet your goals for current usage and power consumption. From consumer devices, to automotive components, to development prototypes, the HVPM can help you determine exactly how your device is performing under a variety of conditions.

The High Voltage Power Monitor's simple, compact design means it's equally at home on a desk or in the lab. The Windows graphical software interface provides immediate feedback on your device's current and power usage, all without costly lab testing. Multiple API's exist which allow you to control and customize all aspects of your Power Monitor, including setting up fully-automated testing to save time and money. On Windows platforms implementations are available with .NET, COM, Python, and via command line. On Mac and Linux there is a fully open-sourced Python implementation for your testing needs.

Using the High Voltage Power Monitor from Monsoon solutions is the easiest way to get the data you need to make your product the best on the market.



High Voltage Power Monitor



Windows Control Software Screenshot

Solution	Approach
Enables automated current monitoring	Use included software to easily set up efficient & flexible data collection for environmental testing, quality assurance, and more.
Acts as a stand-alone power supply	Save time and money by avoiding switching between multiple power supplies and measurement devices. Output 0.8V to 13.5V at up to 6A on the HVPM Main channel.
Allows USB control of device under testing	Control a USB device during testing without compromising test accuracy.
Supports Large scale automation testing	Connect several HVPM's to one computer for optimized rack-based deployments.



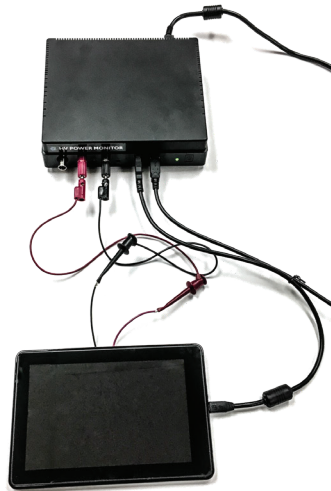
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Sample Use Cases

Verifying the Power Consumption of the Device

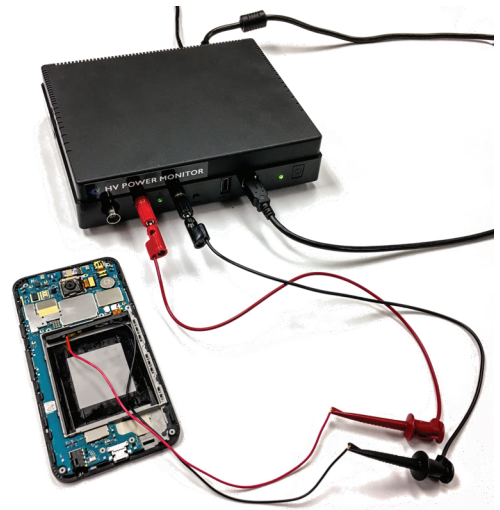
A designer at a tablet manufacturing company wants to optimize their product for longer battery life. They are able to make small tweaks to the hardware, software, and firmware, but needs data to evaluate the results of these changes. By utilizing the HVPM as a power supply and directly bypassing the charging circuit, they can measure exactly how much each small update affects the overall performance of the tablet. The HVPM can even measure power consumption during the tablet's different modes of operation, such as sleep, standby, or operation. Additionally, the designer can use the Aux channel to characterize the discharge curve of the battery, using multiple HVPM at their desk to simultaneously test different iterations.

The designer can also use the HVPM's USB channel to control the tablet using a USB connection during testing—they can set up the software to turn the USB connection on and off programmatically, and to measure all power delivered to the device. The HVPM enables the designer to advertise a more competitive product with more efficient power usage and a longer-lasting battery.



Powering Results with Precision and Simplicity

An engineer is updating a design which uses multiple independent power supplies to support analog and digital circuits. They need to measure how much power each voltage rail consumes to determine whether their design can withstand increasing current demands. The HVPM has sufficient voltage and current capacity for them to test the device through a wide range of power consumption scenarios. With just one piece of test equipment, they can fully characterize the power demands of the analog and digital portions of the device, swapping out different components and precisely measuring their effect on the system. The HVPM gives their company the data they need to keep up in today's power-hungry and cost-conscious electronics environment.



Model AAA10F Specifications:

- Size: 8 in x 6 in x 2 in (20 cm x 15 cm x 5cm)
- Weight: 1.1lb (0.5 kg)
- Input power 115V to 240V, 47-63Hz
- Main channel 0.8V to 13.5V range
- USB channel 2.1V to 5.4V
- Aux channel Input 0.5V to 5.5V
- Accurate to +/- 1% with a 1 μ A step size

Full specs at www.msoon.com/specifications

Use the HVPM to Monitor Power With:

- Smartphones, Tablets or Laptops
- Smart Phone Apps
- Internet of Things (IoT) devices
- USB devices
- Automotive sub-circuits
- Prototype designs
- Arduinos & microcontrollers
- Raspberry Pi & single-board computers
- Automation of benchmark testing
- Burn-in testing

What's Included:

- High Voltage Power Monitor
- Power Supply
- 2 Alligator Clips
- 2 USB Cables
- Free downloadable software