

A Lab Programmer Has Never Been Made So Powerful !



Product Highlights

- Low Cost: Equipped to support all of your lab's programming requirements, but not at the sacrifice of speed, quality or capability
- Fast Programming Performance: Programs 16-Mbit Flash memory in 12 seconds
- Quick File Downloading Capability: 2.8 Mbits/second through USB interface
- Low-Voltage Support: Supplies VCC down to 1.2 volts
- Universal Device Support: Memories, microcontrollers and programmable logic
- Windows Interface: Supports Windows 95/98/ME/2000/XP
- Free Software Updates: For the life of the programmer
- Approved Algorithms: Follows semiconductor manufacturer published algorithms verbatim
- Highest Quality: Industrial grade, ISO 9001 certified

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System General sets a new standard for laboratory/engineering instrument by introducing PowerLab universal programmer

- The first high-performance USB-interface universal programmer in the world.



High-Speed Programming and File Downloading

PowerLab was specifically designed as a low-cost universal programming solution for lab applications. With few exceptions, PowerLab provides an extensive list of silicon support including many of today's cutting-edge parts. High-density Flash memory, PLD, CPLD, FPGA and microcontrollers are just a few examples of supported device types. With System General's industry-proven HSP (high speed programming) technology embedded within the programmer, PowerLab dramatically improves device programming performance at this price point. For example, an Intel 28F160C3TA Flash memory programs in only 12 seconds- refer to the benchmark table below to determine how much time you can save using PowerLab! Additionally, file download speed is improved- with USB connectivity you can now download a 16-Mbit file in 6 seconds.



Robust Circuit Design and Configurable Parameters

PowerLab is constructed using surface-mount components. In so doing, its pin driver circuits are as close to the socket pins as possible. This physical proximity provides the best programming environment for sub-micron devices that demand clean signal waveforms.



SMD Design for the Best Waveform Quality

System General has followed the market trend for low-voltage IC design, and responds with system VCC support down to 1.2 volts for future "green" devices. PowerLab includes support for user-definable programming parameters, allowing designers to stress devices with variable DC levels against their circuit designs. With this, engineers can turn PowerLab into a powerful quality control tool for programming devices with different voltage margins to weed-out potentially defective parts before they're soldered onto prototype assemblies.

(All Times Represented in Seconds)

Flash Device	Blank Check	Program	Verify
28F800B5	0.5	5	0.5
28F160B3TA	1	12	1
28F320B3TA	2	25	2
28F640W18	5	26	NA **

* Benchmark based on the Intel EFP algorithm.

** Not Applicable; Verification is part of the Program algorithm.

USB and RS-232C Interfaces

System General Quality and Lifetime Free Device Updates

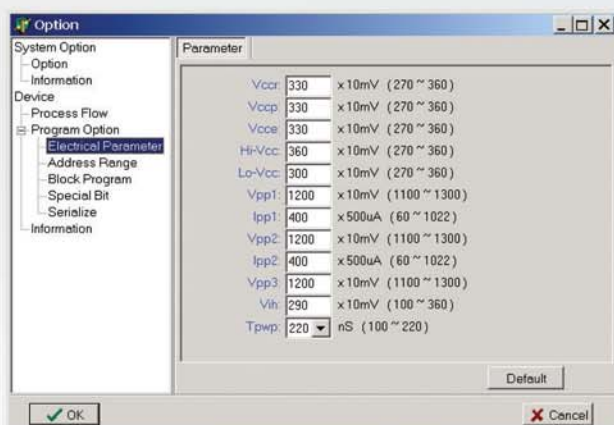
Very few device programmer companies are ISO 9001 certified, and System General is extremely proud to be one of them. Your quality assurance of PowerLab starts at its design stage and continues throughout its lifetime. As with any other System General programmer, PowerLab follows our stringent requirements of 25% design margin and over-current protection. This protects the system against high leakage current caused by damaged or defective devices, or by illegal programming operations. To ensure you receive the best in hardware quality, each PowerLab must pass a 72-hour burn-in at 55o C (131o F). On the algorithm side, our software engineers adhere strictly to semiconductor manufacturer specifications when coding device support. Each algorithm is thoroughly tested with live IC samples prior to its release.

PowerLab is easily updated by downloading the latest software release from System General web sites. And, these updates are free for the life of the programming system.



The Best Investment in Terms of Price/Performance Ratio

The return of your investment starts with the bundled user-friendly Windows-based software. Programming devices is only a few mouse-clicks away. Coupled with its powerful pin drivers, the PowerLab performs vector tests for PLD devices and extensive DC parametric tests for all devices supported. In addition, the powerful pin drivers support different pin configurations and specification requirements. This translates to fewer changeovers and reduced budget for the socket adapters in the future.



Configurable Programming Parameters

S p e c i f i c a t i o n s

• General Functions •

Read, Blank Check, Program, Verify, Illegal Bit Check, Erase, Secure, Checksum, Protect, Unprotect, Insertion Check, Auto Start, File Format Auto ID, Device Special Bit Configuration, Session Logging, Device Help

• Advanced Functions •

Pin Continuity Check, Verify with Comparison List, Serial Code Programming, Range Programming, Set/Split Programming, Functional Test, Parameter Configuration, Project Management, Enhanced Memory Editor, USB Interface, Address Relocation

• Electrical Specifications •

Voltage Output: 0.9 V ~ 20.0 V.
Current Limit: 900 mA
Clock Signals: 1.25 MHz ~ 12.50 MHz
Programming Signals: Vcc, Vpp, Vpe, Vps, GND

• PC System Requirements •

Windows 95/98/ME/2000/XP
Pentium II and above
Free Disk space: 32 MB recommended
Serial port and/or USB interface

• Electrical Requirements •

Power: 100 to 240 VAC, auto-switching
Frequency range: 47 to 63 Hz
Power Consumption: 20 VA maximum

• Shipping Dimensions And Weight •

Shipping Dimensions: 36.0 x 20.0 x 9.8 cm (14.17 x 7.87 x 3.86 in)
Shipping Weight: 2.6 kg (7.97 lbs)

• Dimensions And Weight •

Net 29.2 x 17.0 x 4.0 cm (11.5 x 6.7 x 1.6 in)
Net 1.65 kg (3.67 lbs)

• Environmental Requirements •

Temperature: 4 to 45o C (41 ~ 113o F)
Humidity: 90% non-condensing

• Included Accessories •

AC/DC Adapter - 100 to 240 VAC (1)
Power Cord (1)
USB Cable (1)
Software CD (1)

