

One of the Fastest Programming Systems Ever Built



**USB2.0
Interface**

Product Highlights

- 112 powerful universal pin drivers (expandable to 448 pins for testing)
- Built-in 8192-Mbit RAM buffer (expandable to 16,384 Mbits)
- Programs a 64-Mbit Flash device in 18 seconds
- USB port for high-speed data transmission
- Supports 1.2V Vcc Green devices
- Supports antifuse devices
- Multi-linkable for gang programming
- Pipelined throughput
- Windows software with job control functions
- Graphical real-time statistical display
- Online automatic failure-cause analysis
- Configurable programming parameters for fine-tuning
- Supports NAND-gate Flash programming
- ISO 9001 certified

One of the Fastest Programmers Ever Built

- In 1998, System General was the first programmer company to pioneer High-Speed Programming (HSP) technology for Flash memories. Since its introduction, HSP has set the standard for the rest of the industry. Evolving from proven HSP technology, the new 9800 programmer supports virtually every type of programmable device currently available. It can program an Intel 16-Mbit Flash memory in only 12 seconds. It is internally 10 times faster than its predecessor. So, when Flash semiconductor programming technology improves, System General will be prepared to help customers take full advantage.

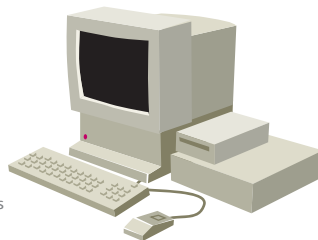


H9800

Rapid File Downloads

A high-speed programmer requires equally high-speed file downloads to avoid bottlenecks. The 9800 can download files from a PC at 4.8 megabits per second thanks to its USB interface. A 16-Mbit file downloads in around 4 seconds. The versatile "Plug-n-Play" USB feature allows the user to easily swap different system configurations.

To optimize programming throughput, the Model 9800 emphasizes maximum flexibility. A single system with multiple sites can easily be split into two or more separate systems.



High-speed data download

Download 16 Mbits in less than 4 seconds



Available for Manual and Automated Production

The model 9800 is available in two configurations. The T9800 table-top model is designed for manual programming, while the H9800 version performs handler interfacing.

On the T9800, engineers can use the password protected Engineer mode and the Task Manager software to program the first article. The programming conditions and parameters used for the first article are then saved as a specific task file. Once the first article passes certification in the target system, the saved task file can bring up the same programming setup on a T9800 for manual programming, or on another H9800 using any System General automatic handler. In order to minimize human error, the 9800 can be run in high-security Operator mode.

Programming times

(All times represented in seconds)

Flash Device	Blank Check	Program	Verify
ST M28W160	1.7s	7.3s	1.7s
ST M28W320	3.9s	11.5s	3.9s
ST M28W640	5.8s	18.5s	5.8s
Intel 38F2230WWYDQ0	11s	38.4s	11s
Intel 38F3340LLYDQ0	22s	102s	22s
Intel 48F4444LVYBB0	70s	218s	70s
Spansion S29GL128N	12s	78s	12s
Spansion S29GL256N	25s	145s	25s
Spansion S29GL512N	48s	292s	48s



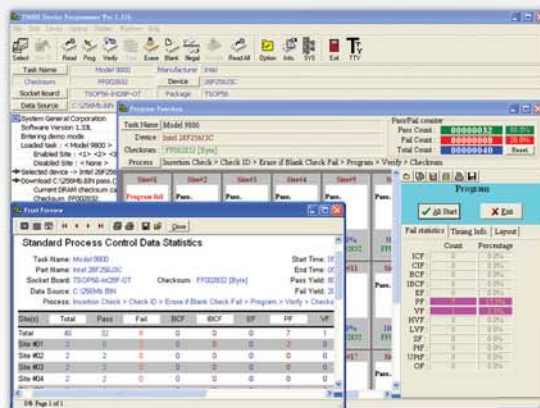
Covering Today's and Tomorrow's Device Technologies

When investing in a device programmer, the purchase should not only fit current programming needs, but also anticipate future device technologies. The new model 9800 is designed to meet these requirements. Its system Vcc can be set to as low as 1.2 Volts to program the next-generation of Green devices. Its powerful array of 112 analog pin drivers supports different pin definitions for each socket adapter. This can substantially reduce change-overs. With the add-on EPD adapter, you can extend the array of pin drivers to 448, to support CPLD functional testing. The 9800's current sensing capabilities are precise enough even to enable antifuse device programming. Furthermore, the 9800's asynchronous (ie, concurrent) approach starts device programming in each socket upon device insertion. The 9800 combines maximum operating efficiency with pipelined throughput.

More than a Programming Workstation

At System General, we are aware of the need to test programmed devices before they reach board level. Reworking rejects is prohibitively expensive. For logic devices, the 9800 supports vector tests with user-defined DC parameters for up to 448 pins. For memory devices, margin testing can ensure that the programmed memory will operate within a valid voltage range. Engineers can use margin testing as a powerful QC tool to find and eliminate potential rejects. Margin testing can also be used to pinpoint high and low margins.

The USB-enabled 9800 control and algorithm software works with Windows 98/2000/XP, A 9800 with a regular serial interface can be operated using any Windows system, Tasks can be saved in one location, and used at another location.



T9800

Universal Programming System

Specifications

• General Specifications •

- ▶ Product Description..... Asynchronous universal programming system supporting all device types including EPROM, EEPROM, Flash, microcontroller, PLD, CPLD, FPGA, and many others
- ▶ Module Multi-Link..... Up to 20 sites
- ▶ Number of Sockets per Module..... 1 (expandable to 2 or 4 sockets for memory devices)
- ▶ Sync/Async Execution..... Yes
- ▶ Universal Pin-Drivers..... 112 Pins
- ▶ Pin-Drivers..... VCCP, VPP, VPE, VPS, VIH, VIL, ZH, ZL, Gnd (range: 0 ~ 21.0V)
- ▶ Test Pin Extension..... Up to 336 pins
- ▶ Hi-Voltage DAC..... 3 sets (all current-mode)
- ▶ RAM Buffer..... 8192 Mbits standard (expandable to 16384 Mbits)
- ▶ Communication Interface..... USB2.0 (USB requires Windows 98/2000/XP)

• Functional Specifications •

- ▶ Vector testing..... Yes
- ▶ Margin testing..... Yes
- ▶ VOH/VOL testing..... Yes
- ▶ EPROM auto identify..... Yes
- ▶ Block Erase/Program (available soon)..... Yes
- ▶ Split/Set programming..... Yes
- ▶ Range programming..... Yes
- ▶ Verify with list (compare) (available soon)..... Yes
- ▶ Auto-Sensing..... Yes
- ▶ ID checking..... Yes
- ▶ Insertion check Yes
- ▶ Pin continuity check..... Yes
- ▶ Serial code programming..... Yes
- ▶ Universal socket board..... Yes
- ▶ STAPL/JAM support..... Yes
- ▶ Green device support..... 1.2V
- ▶ Antifuse programming..... Yes
- ▶ Memory edit..... Yes
- ▶ Special bit edit..... Yes
- ▶ Programming parameter edit..... Yes
- ▶ Checksum method..... Byte, Word, CRC16, CRC32
- ▶ Job Manager/Operator-Mode..... Yes
- ▶ File format..... Intel Hex, Microchip INHX, Tektronix Hex, Motorola S, Signetics Hex, Extended Tekhex, HP 64000 Absolute, Spectrum, TI SDSMAC, ASCII Hex, ASCII Oct, ASCII Binary, Formatted Binary, Binary, JEDEC, POF, DIO, JAM, STAPL, and LOF

• Physical Specifications •

- ▶ Dimensions..... 20.0 x 14.5 x 10.3 cm
- ▶ Shipping dimensions..... 37.5 x 17.0 x 26.0 cm
- ▶ Weight..... 2.40 kg (5.33 lbs)
- ▶ Shipping weight..... 3.53 kg (7.84 lbs)

• Electrical Requirements •

- ▶ Operating voltage..... 100-240 VACu
- ▶ Frequency range..... 50/60 Hz
- ▶ Power consumption..... 40 VA max

• PC System Requirements •

- ▶ Operating system..... Windows 95/98/2000/XP
- ▶ Processor..... Pentium or above
- ▶ Free disk space..... 100MB recommended
- ▶ DRAM..... 512MB recommended
- ▶ Communication..... USB CD-ROM drive

• Environmental Requirements •

- ▶ Operating temperature..... 5-45°C
- ▶ Operating humidity..... 90% non-condensing

• Standard Accessories •

- ▶ Power cord
- ▶ Power connection cable
- ▶ System software CD (on-line help and tutorial)
- ▶ USB cable



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