T9800
Universal Programming System

One of the Fastest Programming Systems Ever Built

Product Highlights

- Supports Security Provisioning Programming
- Powerful interface to manage the NAND Flash partitions and eMMC registers
- Supports EEPROM, Flash, MCU, PLD, CPLD, FPGA, eMMC and many others
- 112 powerful universal pin drivers
- Supports 1.2V Vcc Green devices
- Multi-linkable for gang-programming
- Asynchronous operation for pipelined throughput
- Online automatic failure-cause analyses

SYSTEM GENERAL

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 a Cypress 512 Mbit Flash memory in only 52 seconds. It is internally 3 times faster than its predecessor. So, when Flash semiconductor programming technology improves, System General will be prepared to help customers take full advantage.

H9800

Security Provisioning Programming

The System General Security Programming solution is the highly integration and cost-effective security programming solution.

This platform supports the authentication MCU devices as well as general devices such as general purpose MCU or flash memory device.

The System General Security platform embedded with HSM to AP series automatic programming system, integrate the F-SDK software tools to encrypt the firmware file for the safety and security programming environment providing.

High-speed data download

Download 64 Mbits is around 3 seconds

T9800 Site#4   T9800 Site#3   T9800 Site#2   T9800 Site#1
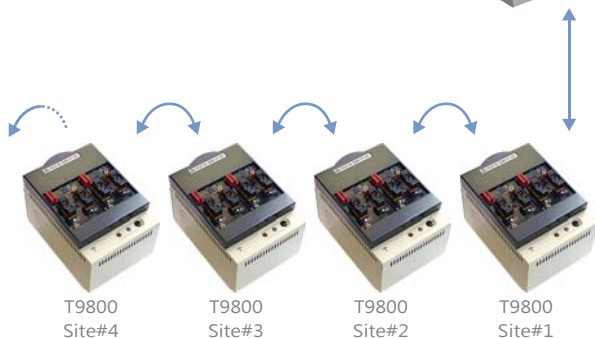
Available for Manual and Automated Production

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
NAND Flash			
Micron 29F1G08ABAEA	2.0	23.5	10.1
NOR Flash			
Cypress S29GL128S	0.5	13.8	0.5
Cypress S29GL256S	0.9	26.2	0.9
Cypress S29GL512S	1.5	49.9	1.5
Cypress S29GL01GS	2.9	105.8	2.9
Serial Interface Flash			
MXIC 25L25645G	2.3	30.3	2.3
Cypress S25FL256S	3.4	30.5	3.4

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The New Programming Solutions for T9800 – Designed to Maximize Your Programming Throughout

T4 Socket Board

As the diversity and complexity of the microcontrollers emerge, System General announces its innovative design of T4 socket board, aim to slash the algorithm development time frame to 50%, and to enhance the programming flexibility in this quad-site socket boards.

Designed with ARM's core chip, T4 not only provides a flexible structure for algorithm development, but also provides one affordable solution to any customers. Partnered with our latest handler, the T4 can reach the programming throughput by nearly 5X.

S4 Speed

S4 Socket Board

Initially designed to support NAND Flash with known bad sectors, the S4 socket board allows the T9800 programming system to output four devices, each with their own data pattern, simultaneously.

Coupled with our proprietary mapping technology, the S4 socket board can program, with minimum software overhead, four devices each with unique serial codes. Additionally, the improved pin drivers in our T9800 programming system allow it to take advantage of the NAND Fast Access Mode, slashing programming time by up to 80%. Combined with a S4 socket board, NAND programming throughput improves by nearly 8X.

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.

Furthermore, the 9800's asynchronous (ie, concurrent) approach starts device programming in each site upon device insertion. The 9800 combines maximum operating efficiency with pipelined throughput.

More than a Programming Workstation

At System General, we aim to offer more than just the programming platform. Our self-developed tools provide additional configuration settings for a more powerful approach. The NAND Image Builder provides a powerful interface to manage the bad blocks via partition layout arrangement. eMMC Image Builder then provides a flexible interface to configure the EXT_CSD registers to activate the enhanced functions of eMMC.

Our programming platform also provides systematic report that assists the users to monitor the programming yield rate, track the equipment performance, and to manage the failure-cause analyses via one integrated programming platform.
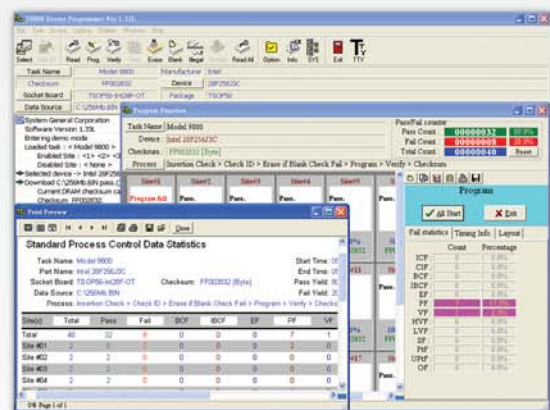
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S p e c i f i c a t i o n s

• General Specifications •

▶ Product Description................................... Asynchronous universal programming system supporting all device types including EPROM, EEPROM, Flash, microcontroller, PLD, CPLD, FPGA, eMMC and many others
▶ Module Multi-Link...................................... Up to 20 sites
▶ Number of Sockets per Module............. 1 (expandable to 2, 4 or 8 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)
▶ Hi-Voltage DAC... 3 sets (all current-mode)
▶ RAM Buffer... 8192 Mbits standard (expandable to 16384 Mbits)
▶ Communication Interface......................... USB 2.0 (USB requires Windows 2000/XP/7/10)

• Functional Specifications •

▶ Margin testing.. Yes
▶ VOH/VOL testing... Yes
▶ Split/Set programming...................................... Yes
▶ Range programming... Yes
▶ Verify with list (compare) .... 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
▶ 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

• 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 2000/XP/7/10
▶ Free disk space.................... 3GB recommended
▶ Communication..... USB 2.0/3.0 recommended

• 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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SGS

CE