



**FlashRunner III Series
 Manufacturer-Specific In-System
 Programmers**



- Fast and Reliable for the Industrial Environment
- Programming Algorithms as Fast as Memory Technology Limit
- Easy Integration in Programming Lines (ATE, ICT, Test Fixtures)
- Supports a Silicon Manufacturer of your Choice



Overview



FlashRunner III

FlashRunner III series (patent pending) is a range of high-performance, standalone In-System Programmers specific for Flash-based microcontrollers and serial memories. FlashRunner III series is targeted at production environments and can work either in full standalone mode or controlled by a host system.

- Fastest programming algorithms (as fast as target device's memory technology limit), approved by silicon manufacturers;
- Easy ATE integration;
- Standalone operations (projects and code images stored on a memory card, FAT16 compatible);
- Also controllable by any host system via RS-232;
- Flexible, fully configurable;

Request Information

To learn more about FlashRunner, please visit our website (www.ttc.com) or contact a TTCI sales engineer, for product literature and quotes.

Phone: 410-526-2800

Email: info@ttci.com



- Compact and robust design for production environments;
- Data integrity guaranteed (every data transfer to/from the host system or Secure Digital card is CRC tagged).

FlashRunner III supports a Silicon Manufacturer of your choice.

Hardware Features

FlashRunner features state-of-the-art electronics and provides you with high integration flexibility in a small footprint.

- 7.5V DC power supply input;
- Five digital I/O lines;
- Two digital I/O or analog output lines;
- One programmable output voltage (0 to 5.5V, 0.5A);
- One programmable clock output;
- Secure Digital memory card (up to 2 GB);
- I/O protection;
- One command inputs (START);
- Three status outputs (FAIL, PASS, BUSY);
- RS-232 channel.

FlashRunner's open architecture makes its firmware easily upgradeable to support new features.

Software Features

FlashRunner is set up and controlled via ASCII-based commands. FlashRunner can receive and execute commands in two ways:

- Over the RS-232 (Host mode);
- Via a "script" stored in its SD card (Standalone mode).

In the first case, FlashRunner is controlled by a host system (e.g. Windows HyperTerminal); in the latter case, FlashRunner works in standalone mode and is fully autonomous.

- Fully autonomous standalone mode (thanks to its SD memory card);
- Controllable by any host system through a terminal utility and simple ASCII protocol;
- Erase, blank check, program, read, verify, oscillator trimming, etc.

FlashRunner comes with a Windows utility that allows you to communicate with the instrument and perform the most common operations: send commands, manage SD card files, update the instrument's firmware, etc.

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Available Models

The FlashRunner III series includes the following models:

FR03ATM0	Supports Atmel devices
FR03FJT0	Supports Fujitsu devices
FR03FSL0	Supports Freescale devices
FR03INF0	Supports Infineon devices
FR03MCP0	Supports Microchip devices
FR03NEC0	Supports NEC devices
FR03NXP0	Supports NXP devices
FR03REN0	Supports Renesas devices
FR03SLL0	Supports Silicon Labs devices
FR03STM0	Supports STMicroelectronics devices
FR03TXI0	Supports Texas Instruments devices

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