



**FlashRunner II 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)
- Includes all Programming Algorithms available for a Chosen Silicon Manufacturer



Overview

FlashRunner II series (patent pending) is a range of high-performance, standalone In-System Programmers specific for Flash-based microcontrollers and serial memories. FlashRunner II 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);
- Also controllable by any host system via RS-232 or Ethernet;
- Flexible, fully configurable;
- 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).

The FlashRunner II series includes all of the programming algorithms that have been developed for a silicon manufacturer of your choice.

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

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Hardware Features



FlashRunner Core

FlashRunner features state-of-the-art electronics to provide you with high integration flexibility in a compact footprint.

- 9 to 24V DC power supply input;
- Five digital I/O lines;
- Two digital I/O or analog output lines;
- Two programmable output voltages (0 to 15V, 0.25A and 0 to 5V, 0.5A);
- One analog input line;
- One programmable clock output;
- Secure Digital memory card (up to 2 GB);
- 512 bytes on-board dynamic memory;
- On-board timekeeper and calendar;
- I/O protection;
- Opt isolated inputs for project selection;
- Two opt isolated command inputs (START and STOP);
- Three opt isolated status outputs (FAIL, PASS, BUSY);
- Opt isolated RS-232/Ethernet channel.

FlashRunner's open architecture makes its firmware easily upgradable to support both new devices and new features.

Software Features



FlashRunner Control Panel

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

- Over the RS-232 or Ethernet connection (Host mode);
- Via "scripts" 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 (FAT16);
- Controllable by any host system through a terminal utility and simple ASCII protocol;

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- Unlimited projects (scripts);
- Log files;
- 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.

Available Models

The FlashRunner II series includes the following models:

FR02ATM0	Supports Atmel devices
FR02FJT0	Supports Fujitsu devices
FR02FSL0	Supports Freescale devices
FR02INF0	Supports Infineon devices
FR02MCP0	Supports Microchip devices
FR02NEC0	Supports NEC devices
FR02NXP0	Supports NXP devices
FR02REN0	Supports Renesas devices
FR02SLL0	Supports Silicon Labs devices
FR02STM0	Supports STMicroelectronics devices
FR02TXI0	Supports Texas Instruments devices

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