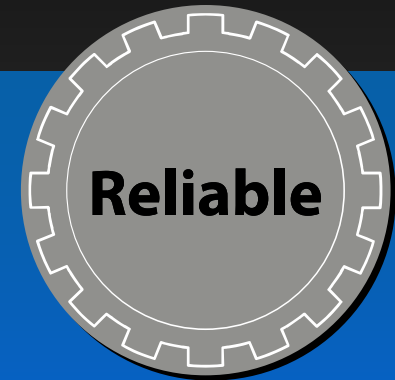
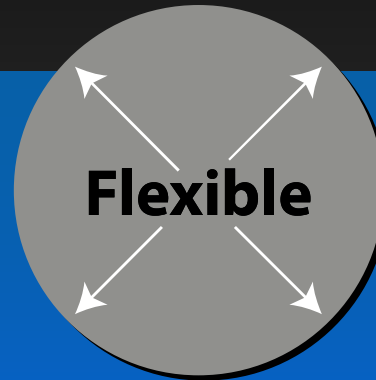


Why FlashRunner?

DC10081

Introducing FlashRunner



FlashRunner is the First **Complete Production In-System Programmer specifically designed for Manufacturing Lines**

1st in Device Support

Over 2500 Devices Supported (and Growing...)



1st in Choice

Broad Range of Fully-Compatible Models



Top Reasons for Choosing FlashRunner

- **Programming Speed**
- **Reduces ESD Problems**
- **ATE Advantages**
- **Individual Board Personalization**
- **Remote Control from Anywhere in the World**
- **Protection System against Piracy**
- **Eliminates Socket Costs**
- **Extensive Device Coverage**
- **Quality and Support**

Programming Speed



It has been proved by several in-system production lines all over the world that FlashRunner programming speed is generally, on average, **1.8 to 2.5 higher** than all other systems' actually in use. It is therefore clear that, with the installation of FlashRunner, the programming time is reduced by half and, therefore, the fast return of the investment will render the use of the unit highly profitable.

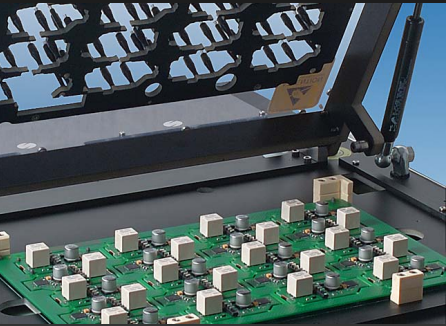
Attached, an Excel sheet that will enable you to easily compute the short- and medium-term profits achievable by using FlashRunner.

Reduces ESD Problems



Electrostatic Discharge (ESD) is a dangerous source of interference that can cause electronic systems to reset, lose data, or fail to operate. In-system programming reduces device handling to zero, thus reducing the probability of device damaging in the production environment. Socket programming, by contrast, requires dedicated areas and precautions.

ATE Advantages



Its simple and versatile interface system allows FlashRunner to be easily and seamlessly integrated into Automatic Test Equipment (ATE) systems. FlashRunner is compatible with Agilent, Teradyne, SPEA, Genrad, and other systems and test fixtures. FlashRunner works either in standalone mode or driven by a host system, through Ethernet or RS-232 connections.

Individual Board Personalization



FlashRunner allows you to personalize each board by storing user information in the target device. Information such as serial number, MAC address, production batch, firmware version, remote control frequencies and, in general, all kind of data that differs from board to board, can be easily incorporated in the board. This data can be taken directly from the product or board barcode, for example, for a full automated process.

Remote Control from Anywhere in the World



Thanks to its LAN connectivity, FlashRunner can be set up, controlled and monitored miles away from the production floor. This feature has proved to be extremely useful for companies outsourcing the electronic board manufacturing offshore, since it improves production quality allowing instantaneous exchange and control of files being used by the production personnel.

Protection System against Piracy



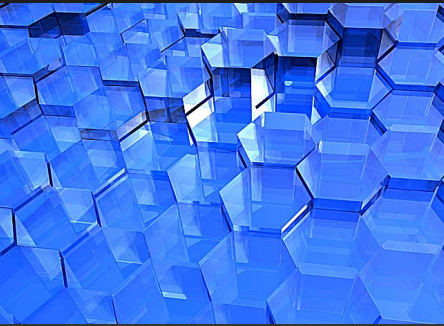
FlashRunner implements a protection system that makes the contents of the binary file to be programmed to the target device not readable (and not duplicable) by non-authorized people. Additionally, the protection system extends to the programming cycle, preventing production personnel from tampering with the programmer's settings.

Eliminates Socket Costs



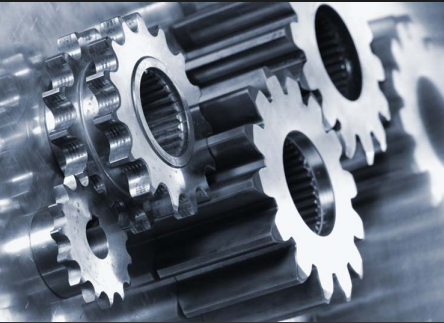
After a certain number of insertions, programming sockets need to be replaced due to wear and tear. Sockets are typically rated at 10,000 insertions. Switching to FlashRunner and in-system programming frees you from the need of periodically replacing (expensive) sockets.

Extensive Device Coverage



FlashRunner's fully reconfigurable and flexible hardware is capable of programming a vast amount of Flash-based microcontrollers and serial memories. Currently supporting more than 2500 devices, FlashRunner's device list is continuously increasing at a fast pace. Thanks to special partnerships with the most important Silicon Manufacturers, our engineers are constantly updated with first-hand technical information, which results in prompt and comprehensive device support.

Quality and Support



FlashRunner is a professional, robust solution that ensures full quality programming flows. Programming reports (log files), data transfer controls (CRC), optoisolation, short circuit protections, over-voltage and over-current detection and other features guarantee faultless programming cycles. FlashRunner is backed by a 3-year warranty and by first-class technical support.

Typical Applications



ATE Integration

(Agilent, Teradyne, SPEA, TRI, etc.)

Full Automated Download System



Automated Programming Stations



Fixture Systems