

The innovative Programmer which assures to SMH Technologies at least three years of technological competitive advantage on the market

# FLASHRUNNER

In System Programming      Design your needs



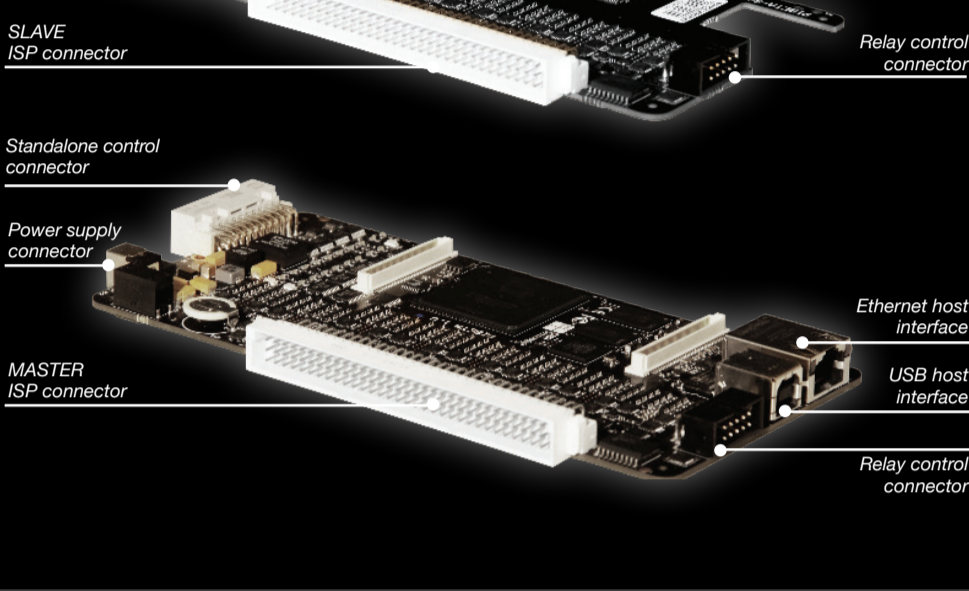
## Overview

FlashRunner 2.0 is the most innovative In-System parallel programmer available. This program implements cutting-edge technology that features 16 independent parallel programming channels while targeting 8, 16 and 32 bit based micro-controllers and serial memories. With unique flexibility this new FlashRunner is specifically designed to program multi-PCB panels and highly structured boards with several programmable devices providing up to **16 independent channels**. The user friendly new FR2.0 WorkBench GUI allows the user to configure the system in few clicks, minimizing time-to-production.

## Why FlashRunner

FlashRunner 2.0 combines the most advanced technology based on SMH's ten years experience in ISP programming. The introduction of FlashRunner 2.0 provides SMH 3 years technological competitive advantage in the market. Modern PCB production often requires faster performance. High performance manufacturing systems reduce production costs by lowering cycle times. To reduce costs while maintaining reliability, these manufactures produce circuit board assemblies in multi up panels. FlashRunner 2.0, uses cutting-edge technology to address multi up panels and deliver the fastest and most reliable programmer in the market.

## Connectivity

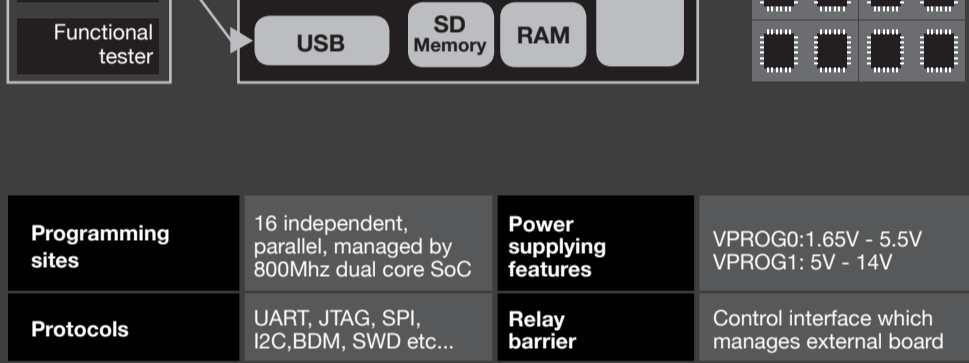


## Hardware Features



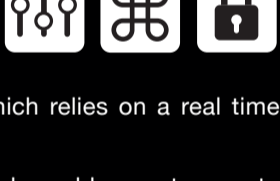
- Up to 5.000+ device support, with daily updates
- Supports most ISP protocols (BDM, JTAG, SPI, I2C, MON, ICC, SCI, UART, and many others)
- 16 parallel and independent programming channels
- Compact design for easy ATE integration
- Programming voltage / current measure and trimming for each channel
- Up to 30 Mhz communication frequency
- Ethernet LAN / USB host interface, optoisolated
- Standalone mode via control interface connector
- Relay barrier control interface

## Typical application

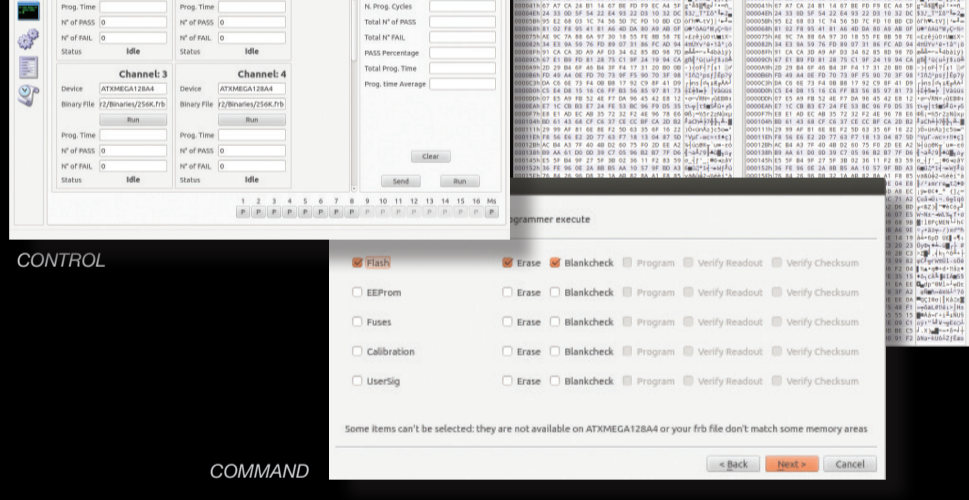


<b>Programming sites</b>	16 independent, parallel, managed by 800Mhz dual core SoC	<b>Power supplying features</b>	VPROG0: 1.65V - 5.5V VPROG1: 5V - 14V
<b>Protocols</b>	UART, JTAG, SPI, I2C, BDM, SWD etc...	<b>Relay barrier</b>	Control interface which manages external board
<b>Communication frequency</b>	Up to 30 Mhz	<b>Dynamic memory</b>	1 Gbyte DDR RAM
<b>Digital lines</b>	8 for each channels	<b>Static memory</b>	SD card
<b>Host interfaces</b>	Ethernet LAN 10/100 Mbit/sec-USB-Control	<b>Logging</b>	Via on-board timekeeper and calendar for time-stamped log files
<b>Dimensions</b>	w/ slave board 170 x 83 x 19 mm w/o slave board 170 x 83 x 30 mm	<b>LEDs</b>	Operation status LED for each channel
<b>ISP connector</b>	DIN41612	<b>Voltage read/trim</b>	Yes
<b>FlashRunner power supply range</b>	9 V-14 V	<b>Current read/trim</b>	Yes

## Software Features



- FlashRunner 2.0 a Linux Embedded operating system, which relies on a real time scheduler and a full featured hardware abstraction layer.
- FlashRunner 2.0 features software interfacing libraries which enables customers to complete systems integration using software from different frameworks, as LabVIEW® and Visual C/C++.
- A new, friendly and interactive GUI (Graphic User Interface) reduces configuration efforts by guiding users to create a working project in a few mouse clicks. This interface detects and identifies errors such as mismatches between target device and customer firmware, as well as power supply setup.



CONTROL	COMMAND	SECURITY
<ul style="list-style-type: none"> <li>• Production control panel</li> <li>• Programming times and statistics</li> <li>• Interface libraries</li> <li>• Connections pinout</li> <li>• Remote Control via Web</li> <li>• Browser</li> </ul>	<ul style="list-style-type: none"> <li>• Project wizard</li> <li>• File transfer</li> <li>• Firmware and Software updates</li> <li>• Windows, Linux and Mac compatible</li> </ul>	<ul style="list-style-type: none"> <li>• Binary Encryption</li> <li>• Dump and compare</li> <li>• Log file and Production Report file</li> <li>• User Permission</li> <li>• Management</li> </ul>

## Modularity

FlashRunner 2.0 is highly configurable. Models are available to support 4, 8, 12 or 16 channels. Channels are independent and can be used to program identical devices in parallel or different devices at the same time.

## Available Models

- FR2P0-04CH FlashRunner 2.0 In-System Programmer 4 x independent programming channels
- FR2P0-08CH FlashRunner 2.0 In-System Programmer 8 x independent programming channels
- FR2P0-12CH FlashRunner 2.0 In-System Programmer 12 x independent programming channels
- FR2P0-16CH FlashRunner 2.0 In-System Programmer 16 x independent programming channels

## Available CH upgrade

- PA2P0-04T08 FlashRunner 2.0 License to upgrade from 4 to 8 CH
- PA2P0-12T16 FlashRunner 2.0 License to upgrade from 12 to 16 CH

# FLASHRUNNER

## Technical Support

Purchasing a product is only part of solving your programming needs. We know that you must count on professional help should the need arise. FlashRunner is sold and supported by a worldwide network of resellers and system integrators, comes

with a three-year warranty and is backed up by knowledgeable and fast technical support. Additionally, our engineers are available for custom designs and validation reports, to help you start up your projects and providing you with accurate programming flow certifications.

## Device support

Our supported device list is updated daily and counts more than 6000+ items. However, if you still can't find the device you are looking for we offer you a development service, which meets your needs. Every request will be handled in order to meet your production deadlines in time.

## The FR Series

- FR SERIES I** high performance programming engine  
FlashRunner I models are single site programmers, targeted for production environments. FRI series are Universal and Fully Upgradeable programmers, which work either in full standalone mode or controlled by a host system.
- FR SERIES II** Manufacturer-Specific In-System Programmers  
FlashRunner II models include all the programming algorithms for a selected silicon producer. Fast and Reliable for the Industrial Environment.
- FR SERIES III** Essential programmer oriented for use in R&D area and Lab applications  
FlashRunner III models include all the programming algorithms for a selected silicon producer. Fast and Reliable, compact size easy to fit into test equipments in Industrial production lines.
- FR** Designed for ATE High Integration Performance  
Fast and Reliable for the Industrial Environment. Designed in Cooperation with ICT Automatic Test Equipments Specialists.
- FR** PXI Fully hardware and software PXI integration  
Multi-target parallel programming with independent channels  
PXI standard module. Three parallel in system programming channels.
- FR** Multisites True Parallel in system programmers  
The best complete solution for programming multi-PCB panel assemblies.

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