

FLASHRUNNER

In System Programming Design your needs

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



OVERVIEW

FlashRunner 2.0 technology is one of the most advanced and widely adopted solutions in the In-System Programming industry. This programmer implements cutting-edge technology that features 16 independent parallel programming channels while targeting 8,16 and 32 bit based microcontrollers 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**.

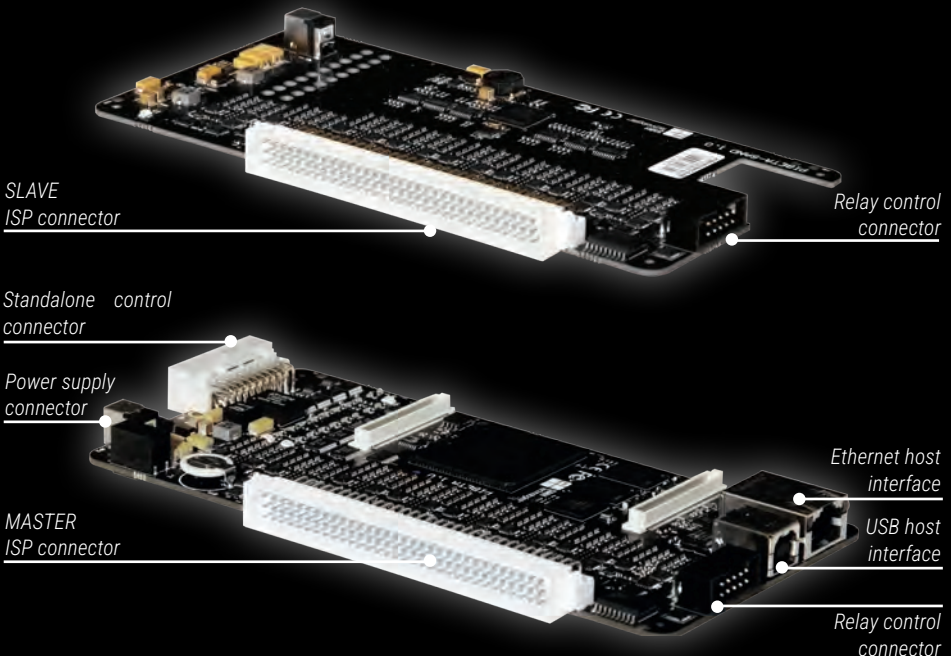
The user friendly new FR2.0 WorkBench GUI allows the user to configure the system in few clicks, minimizing time-to-production.

WHY FLASHRUNNER

Modern PCB manufacturing increasingly demands higher performance and efficiency. Advanced production systems help reduce costs by minimizing cycle times. To further optimize cost-effectiveness without compromising reliability, manufacturers often assemble multiple circuit boards in larger panels. FlashRunner 2.0 leverages state-of-the-art technology to

efficiently handle multi-up configurations, delivering one of the fastest and most reliable programming solutions available on the market. FlashRunner 2.0 combines the most advanced technology and the decennial experience of SMH Technologies in ISP programming, providing at least three years of technological competitive advantage in the market.

CONNECTIVITY



HARDWARE FEATURES



TRUE
PARALLELISM



HIGH
SPEED



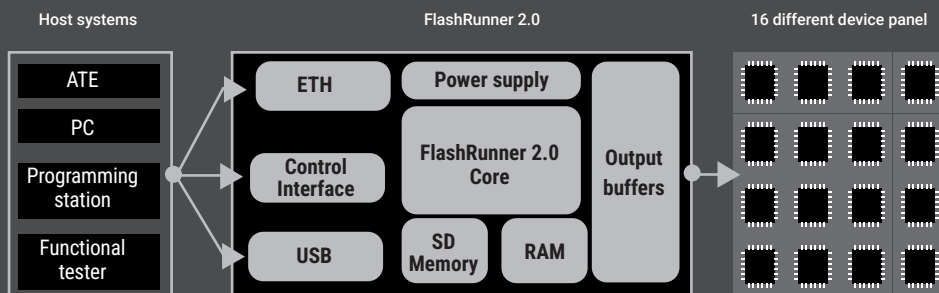
INDUSTRIAL
STRENGTH



UNIVERSAL

- Up to 20.000+ device support, with daily updates
- Supports most ISP protocols
(BDM, JTAG, SPI, I2C, QSPI, DAP, SWD, 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 40 MHz communication frequency
- Ethernet LAN / USB host interface, isolated
- Standalone mode via control interface connector
- Relay barrier control interface

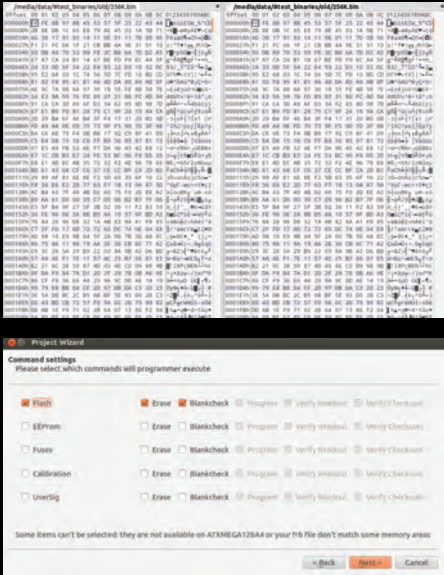
TYPICAL APPLICATION



Programming sites	16 independent, parallel, managed by 800MHz dual core SoC	Devices power supply features	VPROG0: 1.65V - 5.5V VPROG1: 5V - 14V
Protocols	UART, JTAG, SPI, QSPI, DAP, SWD, I2C, BDM, SWD etc...	Relay Barrier	Control interface to control an external relay barrier
Communication frequency	Up to 40MHz	Dynamic memory	1 GB DDR RAM
Digital Lines	8 Digital Input/Output signals for each channel	Static memory	64 GB uSDcard (up to 256 GB)
Host Interface	10/100/1000 Mbps Ethernet LAN interface USB-UART interface	Logging	Very informative and time-stamped thanks to on-board timekeeper and calendar
Dimensions	8-channel version: w/ slave board 170x83x19 mm 16-channel version: w/o slave board 170x83x30 mm	LEDs	Operation status LED for each channel
ISP connector	DIN41612	Voltage and current monitoring	yes, continuous monitoring
FlashRunner Power Supply	15 V		

SOFTWARE FEATURES

- FlashRunner 2.0 WorkBench: the new user-friendly Graphical User Interface (Windows and Linux compatible)
- Based on Embedded Linux operating system
- Interface Library to control the programmer directly from user's test applications
- Dynamic data management (e.g. Serial numbering)
- Cybersecurity features (both hardware and software level)
- Log file and Production Report file
- Optional channel upgrade
- Memory dump and compare functions
- Easy integration with C/C++ DLL interface libraries
- ASCII-based commands



CONTROL

- Production control panel
- Programming times and statistics
- Complete connections pinout
- FlashRunner 2.0 DLL

Libraries are compatible with:

- C (Visual Studio)
- C++ (Visual Studio)
- C# (Visual Studio)
- Visual Basic
- LabView
- TestStand



COMMAND

- Project wizard
- File transfer manager
- Firmware and Software updates
- Windows, Linux and Mac compatible GUI Interface



SECURITY

- Encrypted FRB files to avoid binary hacking
- Dump and compare features of all channels
- Log file and Production Report file
- User Permission Management
- Tracking of programming cycles number
- Errors w/language descriptions

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:

FR2P0-08CH / 8 independent and parallel programming channels, available also with 4 active channels;

FR2P0-16CH / 16 independent and parallel programming channels, available also with 12 active channels.

Optional channel upgrade from 4 to 8 channels and for 12 to 16 channels.

ADDITIONAL COMPLEMENTARY TOOLS

A complete set of dedicated accessories is available to ensure a fast and straightforward integration of FlashRunner in production environments, while preserving excellent signal integrity and ensuring high-quality electrical performance.

Available accessories include Cable Interface, Relay Barrier, and Mass Interconnection systems.



FLASHRUNNER



TECHNICAL SUPPORT

SMH Technologies offers specialized technical support services tailored to meet every requirement:

Included Technical Support

Comprehensive technical support is included with every product, ensuring prompt assistance. SMH provides detailed troubleshooting,

software updates, and remote diagnostics to minimize downtime and optimize system performance.

Local Support through a Partner Network

SMH Technologies has established a robust network of certified local partners worldwide, offering on-site technical assistance and rapid respon-

se times. This network guarantees timely maintenance, installation support, and training services tailored to your specific operational environment.

Warranty and Repair Service

SMH Technologies provides a full warranty on all products, supported by efficient repair services to ensure minimal interference. Our repair centers

are equipped with original spare parts and staffed by qualified technicians to restore equipment to optimal working condition quickly and reliably.

DEVICE SUPPORT

Our supported device list is updated daily and counts more than 20.000+ 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.

FlashRunner 2.0 programmer is fully equipped with:

- Documentation
- Quick start guide
- Programmer

FlashRunner 2.0 is available in two different configurations:

FR2P0-08CH - available also with 4 active channels

FR2P0-16CH - available also with 12 active channels

In both configurations, the programmer is provided with:

- Power supply
- LAN connection cable
- USB connection cable

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