Highest flexibility

FlashRunner HS hardware capability satisfies all application fields, thanks to its ISP Active Modules that can be employed for the programming of following devices:
eMMC
NAND
General Purpose (Microcontrollers, Serial Memories, CPLD)

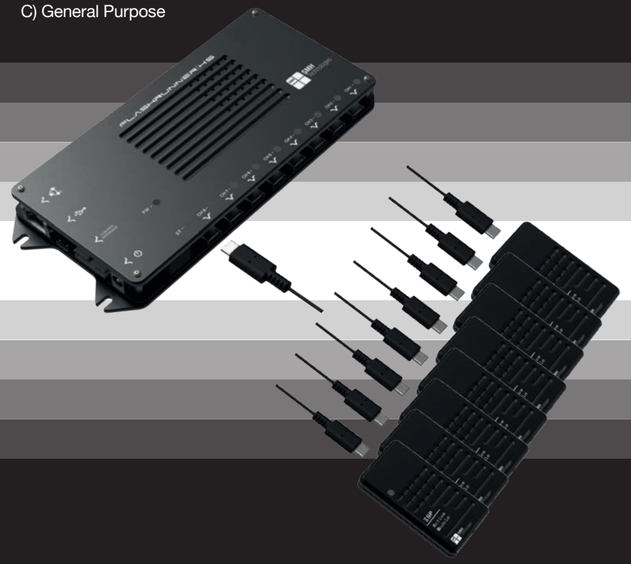
The programming system is composed by a HS Control Unit board plus related ISP Active Modules up to 8 channels; in this way solution cost will be adjusted to production needs optimizing programmer's efficiency also in respect to the economic investment.

A new friendly interactive gui (Graphic User Interface)

The new GUI interface cuts off overall configuration efforts, guiding the customer in creating a working project in few mouse clicks and detecting mismatches between the target device and customer's firmware, as well as power supply setup.

ISP Active Modules:

A) EMMCs
B) NAND
C) General Purpose



Technical Support

Purchasing a product is only part of solving your programming needs. We know that you must rely on professional help, should the need arise. FlashRunner is sold and supported by a worldwide network of Technological Partners and Distributors, as well as several SMH operational offices located in America, Far East and Europe. FlashRunner is equipped 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 10.000+ 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 HS Control Unit programmer is fully equipped with:

- Detailed User Manual
- Quick start guide
- 3-years warranty certification
- FlashRunner HS Control Unit programmer
- 15V 40W AC/DC Wall Switching Power Adapter
- Ethernet cross cable 2 meter RJ45
- USB 2.0 cable 1.8 meter (type-A to type-B micro)
- WIKI section with complete documentation for each driver

FlashRunner HS ISP Active Module is fully equipped with:

- Detailed User Manual
- Quick start guide
- 3-years warranty certification
- FlashRunner HS Active Module
- USB 3.1 Gen1 SuperSpeed cable 1.5 meter (type-C to type-C)
- WIKI section with complete documentation for each driver

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"The revolutionary technology which overcomes production efficiency concept, providing the highest speed to all application fields"

FLASHRUNNER|HS

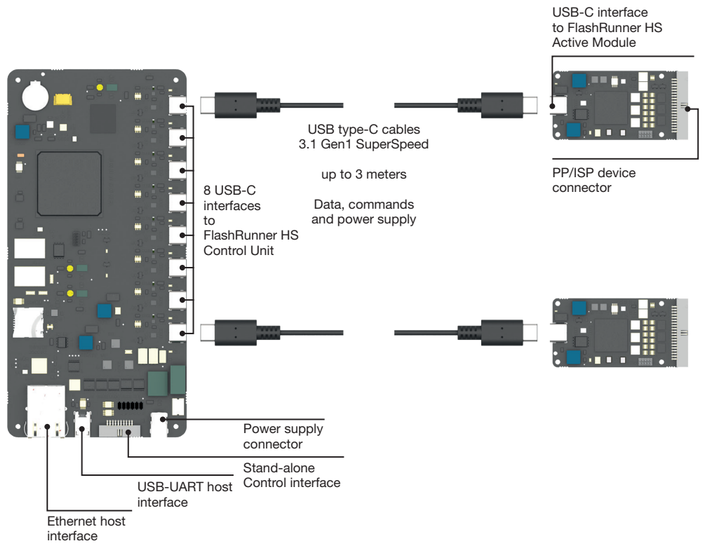
FLASHRUNNER HS: **HIGHEST FLEXIBILITY THAN EVER**

Overview

FlashRunner 2.0 technology is the most popular and innovative of In-System Programming industry. SMH Technologies, taking advantage of its decennial experience in this field, developed a brand-new programming system to face the challenge of an increasingly demanding sector.

Why FlashRunner HS

FlashRunner HS combines very high programming performances and high modularity to obtain a distributed programming solution that perfectly fits the needs of Pre-Programming and In-System Programming. This new member of the FlashRunner family is specifically designed to place the programmer header in the near proximity of the programmable devices without being affected by long distance and signal transmission decay. The new programmer implements cutting-edge technology that allows to manage really big amount of data maintaining the best possible programming performance. This is particularly suited for Pre-Programming application since high speed performance can be better exploited in case of good contact conditions with the programmable device.



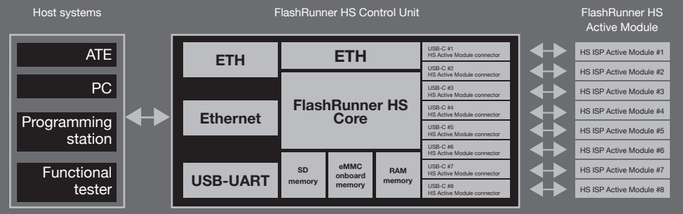
INTEGRATION HIGH SPEED INDUSTRIAL STRENGTH UNIVERSAL

Hardware Features

FlashRunner HS Control Unit
- LAN Communication Interface;
- Digitally Optoisolated USB-UART communication interface;
- Digitally Optoisolated ATE parallel interface for standal-one operations;
- 8 USB type-C ports to connect up to 8 HS Active Modules;
- Intel SOC FPGA with 800MHz dual-core ARM Cortex-A9 hard processor system (HPS) with support for symmetric and asymmetric multiprocessing;
- 1 GB on-board RAM DDR3 memory;
- Micro SD Card reader (up to 256 GB);
- 256 GB on-board eMMC memory;
- On-board timekeeper and calendar for time-stamped log file.

FlashRunner HS Active Module
- Very small form factor to be placed in near proximity with the device to be programmed;
- USB type-C port to be connected with FlashRunner HS Control Unit;
- ISP/PP device connectors to communicate with the devices to be programmed;
- Supports most ISP/PP protocols (eMMC, parallel-NAND, BDM, JTAG, QSPI, I2C, UART, MON, ICC, SCI and many others);
- Cutting-edge digital line driver to improve performance;
- Communication frequency towards device up to 50MHz;
- Power conversion section to supply the board and to provide programmable voltages to the output;
- External relay power line and command line;
- Output power lines voltage and current continuous monitoring.

Typical application



Programming sites	FR HS Control Unit connected to 8 distributed FR HS Active Modules (each one with a programming connector to a programmable device)
Protocols	eMMC, NAND, BDM, JTAG, QSPI, I2C, UART, MON, ICC, SCI and many others
Communication frequency	Up to 50MHz
Digital Lines	12 or 24 Digital communication lines per programming connector according to FR HS Active Module in use
Host Interface	Ethernet LAN,1Gbps, micro-USB, Control Interface
Dimensions	Control Unit: 170 x 83 x 19 mm Active Module: 60 x 32 x 10 mm
Power Supply	Control Unit: 15V DC power jack Active Module: provided by FR HS Control Unit through USB-C cable

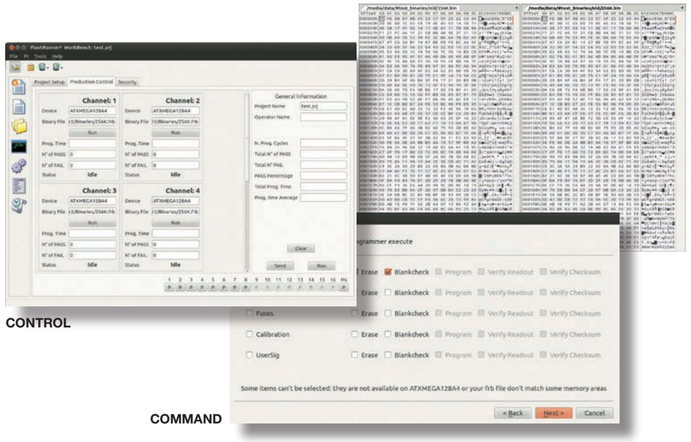
Power Supplying features	eMMC Active Module VPROG0: 1.2V – 3.6V @ 300mA VPROG1: 1.2V – 5.5V @ 300mA
ISP connector	eMMC Active Module: 40-position, 2-row, 1.27mm pitch, vertical or right-angle male connector
Dynamic Memory	1 GB RAM DDR3 memory
Static Memory	Up to 256 GB microSD-CARD memory 256 GB on-board eMMC memory
Relay Barrier	Power supply and command line provided through programming connector to an external board
Voltage and current monitor	Yes, continuous monitoring
Logging	Via on-board timekeeper and calendar for time-stamped log files
LEDs	Status LED and Operation LED for each programming channel

CONTROL COMMAND SECURITY

Software Features

- FlashRunner HS 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
- Serial numbering
- Optional customer binary file cryptography to ensure antipiracy protection
- Log file and Production Report file
- ISP channels expansion activation license
- Memory dump and compare functions
- Easy integration with C/C++ DLL interface libraries also in LabView and Teststand Software
- ASCII-based commands

SECURITY



CONTROL	COMMAND	SECURITY
• 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	• Project wizard • File transfer manager • Firmware and Software updates • Windows, Linux and Mac compatible GUI Interface	• Encrypted FRB files to avoidbinary hacking • Dump and comparefeatures of all channels • Log file and Production • Report file • User Permission • Management • Tracking of programming cycles number • Errors w/language descriptions