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

FLASHRUNNER 2.0

In System Programming

Design your needs

ISP - CONNECTOR
CONTROL RELAY
FLASHRUNNER 2.0
POWER
STATUS
CHANNELS
1
2
3
4
5
6
7
8
10
11
12
13
14
15
16
BUSY
CONTROL INTERFACE
SMH
SMH Technologies™
UNIVERSAL PRODUCTION IN-SYSTEM PROGRAMMING
Technologies™
CE FC

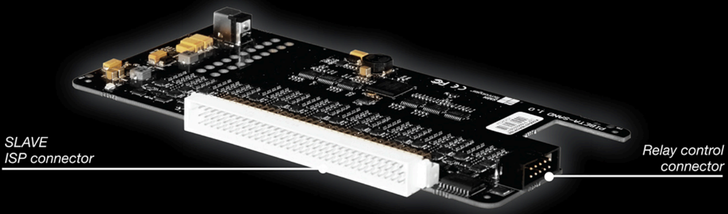
Overview

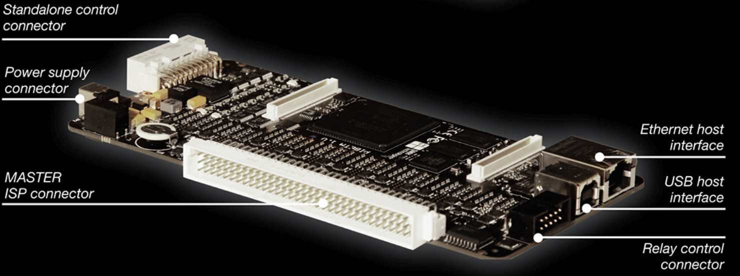
Why FlashRunner

FlashRunner 2.0 is the most innovative In-System parallel programmer for 8, 16 and 32bit based microcontrollers and serial memories.
It implements the most innovative cutting-edge technology that features 16 independent parallel programming channels; this product, thanks to its flexibility, is specifically designed to program multi-PCB panels assemblies and highly structured boards with several devices mounted on.
The user friendly new FR2.0 WorkBench GUI allows to configure the system in few clicks, ensuring rapid time-to-production.

FlashRunner 2.0 combines the most advanced technology and the decennal experience of SMH in ISP programming, providing at least three years of technological competitive advantage in the market.
Modern PCB production systems require new powerful technology, able to support increasingly higher performances, not only in terms of reliability but also throughput, to reduce overall production system costs.
For this reasons, most of the electronic boards produced nowadays are developed in panels of circuits. FlashRunner 2.0, thanks to its new cutting-edge technology, is the fastest and most reliable programmer in the market that can program in parallel up to 16 different devices.

Connectivity





Hardware Features

HIGH SPEED

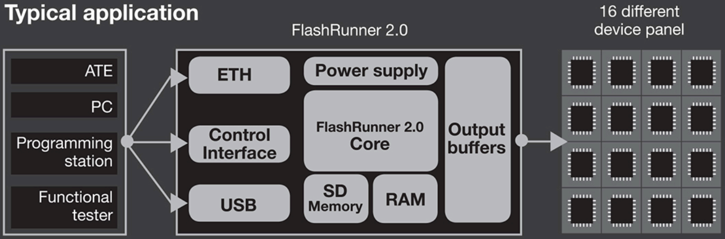
INDUSTRIAL STRENGTH

UNIVERSAL

TRUE PARALLELISM

- 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 indipendent 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



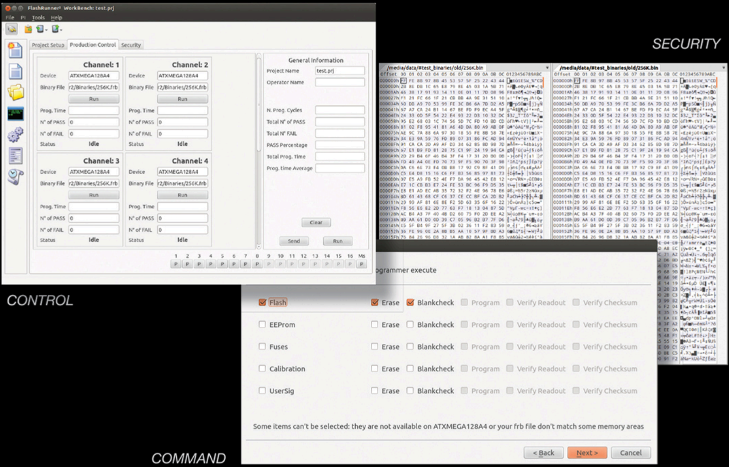
Programming sites	16 independent, parallel, managed by 800Mhz dual core SoC	**Power supplying features**	VPROG0:1.65V - 5.5V VPROG1: 5V - 14V
Protocols	UART, JTAG, SPI, I2C,BDM, SWD etc...	**Relay barrier**	Control interface which manages external board
Communication frequency	Up to 30 Mhz	**Dynamic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

Software Features

- FlashRunner 2.0 is based on Linux Embedded operating system, which relays on a real time scheduler and a full featured hardware abstraction layer.

- FlashRunner 2.0 is featured with software interfacing libraries which enables customers to achieve a full integration inside their software and across different frameworks, as LabView© and Visual C/C++.

- A new, friendly and interactive GUI (Graphic User Interface) which cut off overall configuration efforts, guiding customers creating a working project in few mouse clicks and detecting mismatches between target device and customer firmware, as well as power suply setup.


FlashRunner² WorkBench: test.prj
File
PI
Tools
Help
Project Setup
Production Control
Security
Run
Clear
Send
Run
/media/data/#test_binaries/old/256K.bin
/media/data/#test_binaries/old/256K.bin
< Back
Next >
Cancel

Channel: 1 — Device: ATXMEGA128A4; Binary File: r2/Binaries/256K.frb; Prog. Time: ; N° of PASS: 0; N° of FAIL: 0; Status: Idle

Channel: 2 — Device: ATXMEGA128A4; Binary File: r2/Binaries/256K.frb; Prog. Time: ; N° of PASS: 0; N° of FAIL: 0; Status: Idle

Channel: 3 — Device: ATXMEGA128A4; Binary File: r2/Binaries/256K.frb; Prog. Time: ; N° of PASS: 0; N° of FAIL: 0; Status: Idle

Channel: 4 — Device: ATXMEGA128A4; Binary File: r2/Binaries/256K.frb; Prog. Time: ; N° of PASS: 0; N° of FAIL: 0; Status: Idle

General Information
Project Name: test.prj
Operator Name:
N. Prog. Cycles:
Total N° of PASS:
Total N° FAIL:
PASS Percentage:
Total Prog. Time:
Prog. time Average:

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 Ms
P P P P P P P P P P P P P P P P P

ogrammer execute

☑ Flash	☑ Erase	☑ Blankcheck	☐ Program	☐ Verify Readout	☐ Verify Checksum
☐ EEProm	☐ Erase	☐ Blankcheck	☐ Program	☐ Verify Readout	☐ Verify Checksum
☐ Fuses	☐ Erase	☐ Blankcheck	☐ Program	☐ Verify Readout	☐ Verify Checksum
☐ Calibration	☐ Erase	☐ Blankcheck	☐ Program	☐ Verify Readout	☐ Verify Checksum
☐ UserSig	☐ Erase	☐ Blankcheck	☐ Program	☐ Verify Readout	☐ Verify Checksum

Some items can't be selected: they are not available on ATXMEGA128A4 or your frb file don't match some memory areas

SECURITY

CONTROL

COMMAND

CONTROL

- Production control panel
- Programming times and statistics
- Interface libraries
- Connections pinout
- Remote Control via Web
- Browser

COMMAND

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

SECURITY

- Binary Encryption
- Dump and compare
- Log file and Production
- Report file
- User Permission
- Management

Modularity

FlashRunner 2.0 is highly configurable, also regarding the number of programming channels. Main available hardware models are 8 and 16 channels. It is anyway possible to purchase FlashRunner 2.0 models with limited programming channels licensed (8 channels hardware purchased with 4 channels enabled and 16 channels hardware purchased with 12 channels enabled). Upgrade “ +4 “ channels available by remote session.

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 Licence to upgrade from 4 to 8 CH
PA2P0-12T16	FlashRunner 2.0 Licence to upgrade from 12 to 16 CH

FLASHRUNNER
2.0

DC 10772

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 daily updated and counts more than 4500+ items already. 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 FI Series

I SERIES high perfomance programming engine
FlashRunner I models is composed by 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.

II SERIES 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.

III SERIES 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.

Designed for ATE High Integration Performance
Fast and Reliable for the Industrial Environment. Designed in Cooperation with ICT Automatic Test Equipments Specialists.

PXI Fully hardware and software PXI integration;
Multi-target parallel programming with independent channels
PXI standard module. Three parallel in system programming channels

Multisites True Parallel in system programmers
The best complete solution for programming multi-PCB panel assemblies.

SMH Technologies™

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SYSTEM CERTIFICATION
ISO 9001
SGS