FLASHRUNNER
FR01AT0

Overview

FlashRunner FR01AT0 is a complete production In-System Programmer specifically designed for an easy integration with all in-circuit and functional test s(ATEs), like Agilent, Teradyne, SPEA, TRI and others.

FlashRunner FR01AT0 is based on and is software-compatible with FlashRunner FR01ENG, with the addition of new hardware features such as **galvanic isolation** (relay disconnection) with shield to fixture for all I/O ISP lines and the innovative **power voltage monitoring** which performs a constant check of the programming voltage throughout the programming cycle.

Features

• Universal, standalone and host controlled In-System Programmer;
• Easy integration with all ATE test systems;
• Based on FlashRunner FR01ENG engine;
• Controllable by ATE through optoisolated LAN, RS-232 or parallel control lines;
• Fast programming algorithms developed to reach the memory technology speed limit of the target device;
• More than 3500 devices supported (Atmel, Freescale, Fujitsu, Infineon, Microchip, NEC, NXP, Renesas, STMicroelectronics, Texas Instruments and others);
• Compact size (130 x 74 x 42 mm).

SMH **SMH Technologies™**

UNIVERSAL PRODUCTION IN-SYSTEM PROGRAMMING

FlashRunner FR01AT0 Advanced Features

- Galvanic isolation (relay disconnection) for all I/O ISP lines (to put shared ISP lines on hiZ when the ATE is performing tasks other than programming);
- Power voltage monitoring (on three ISP lines), with programmable threshold and pulse width, to continuously check if an ISP power supply line voltage falls below a safe level;

- Over current monitoring on programmable power supply lines;
- Multiplexing on ISP lines coming from ATE or FlashRunner to the fixture;
- DIN41612 48-way female connector with interconnection flat cables with signal-ground pairs architecture.

FlashRunner FR01AT0 Other Hardware Features

FlashRunner FR01AT0 features state-of-the-art electronics to provide you with high integration flexibility in a compact footprint-ideal for integration inside a fixture. FlashRunner's open architecture makes its firmware easily upgradable to support both new devices and new features.

- Single, wide range power supply input (9 to 24V DC);
- Galvanic isolation (relay disconnection) with shield to fixture for all I/O ISP lines:
  - Seven digital I/Os / two analog output lines (shared)
  - Two programmable output voltages (0 to 15V, 0.25A and 0 to 5V, 0.5A)
  - One analog input line
  - One programmable clock output

- Secure Digital memory card (up to 2 GB) for binary files and projects, plus 512 bytes on-board dynamic memory for serial numbering;
- On-board timekeeper and calendar for time-stamped log file;
- Optoisolated parallel control lines for project selection (START, STOP, FAIL, PASS, BUSY, SEL);
- Optoisolated RS-232/Ethernet channel.

FlashRunner FR01AT0 Software Features

FlashRunner FR01AT0 is set up and controlled via ASCII-based commands.

- Controlled by a host PC through RS-232/Ethernet connections or in standalone mode through parallel control lines;
- Unlimited number of projects (scripts) stored in its SD card;
- Capability to support all types of ISP protocols (JTAG, SPI, I2C, SCI, BDM, etc);

- Interface Library DLL to control the instrument from within user written applications;
- Command-line utilities;
- Optional Data Protection System to make the contents of the binary file to be programmed to the target device not readable (and not duplicable) by non-authorized people.

DC 10551