Secure Programming

Breakthrough, Multi-Layer IP Protection

Softlog Systems

Your hex files contain business-critical intellectual property that could be compromised during the contract manufacturing process. Utilizing breakthrough technology, our Secure Programming feature provides several layers of protection that dramatically reduce the risk of unauthorized reconstruction of hex data.

- Robust, multi-layer IP protection
- Patent-pending technology
- Multiple encryption levels
- Counter prevents unauthorized runs
- Secure buffer of "invisible" hex data

Separation of Admin and User Functions

Secure Programming operates on two levels. The "Admin" level corresponds to the developer or owner of the software, while the "User" level corresponds to a contract manufacturer (CM) or other personnel authorized to program devices. Security-sensitive tasks are only performed at the Admin level. Using the Softlog GUI, the software owner initializes the programmer with a unique password, ID number and secure buffer prior to shipping it to the CM. The owner can update the programmer remotely by sending encrypted files to the CM.

Encrypted Environment File

At the outset of a programming run, the owner creates an environment file that includes hex data, configuration information, and an optional counter that limits the number of successfully programmed devices. Secure Programming encrypts the environment file using strong encryption algorithms. This file can only be decoded by a programmer that has been initialized with the correct password and ID number.

Anti-Spoofing Counter

An optional counter, stored in non-volatile memory of the programmer, ensures that the number of programmed devices does not exceed a pre-defined value. This limits the number of devices that can be programmed from a particular environment file, thus preventing gray/black marketing of "spoofed" products.

Key Features

- "Invisible" secure buffer up to 64 bytes in ICP2 protected memory
- Configurable destination of secure buffer (Flash memory or EEPROM)
- Configurable destination address and size of the secure buffer
- Secure buffer checksum to guarantee data integrity
- Remote update of the HEX file and the counter

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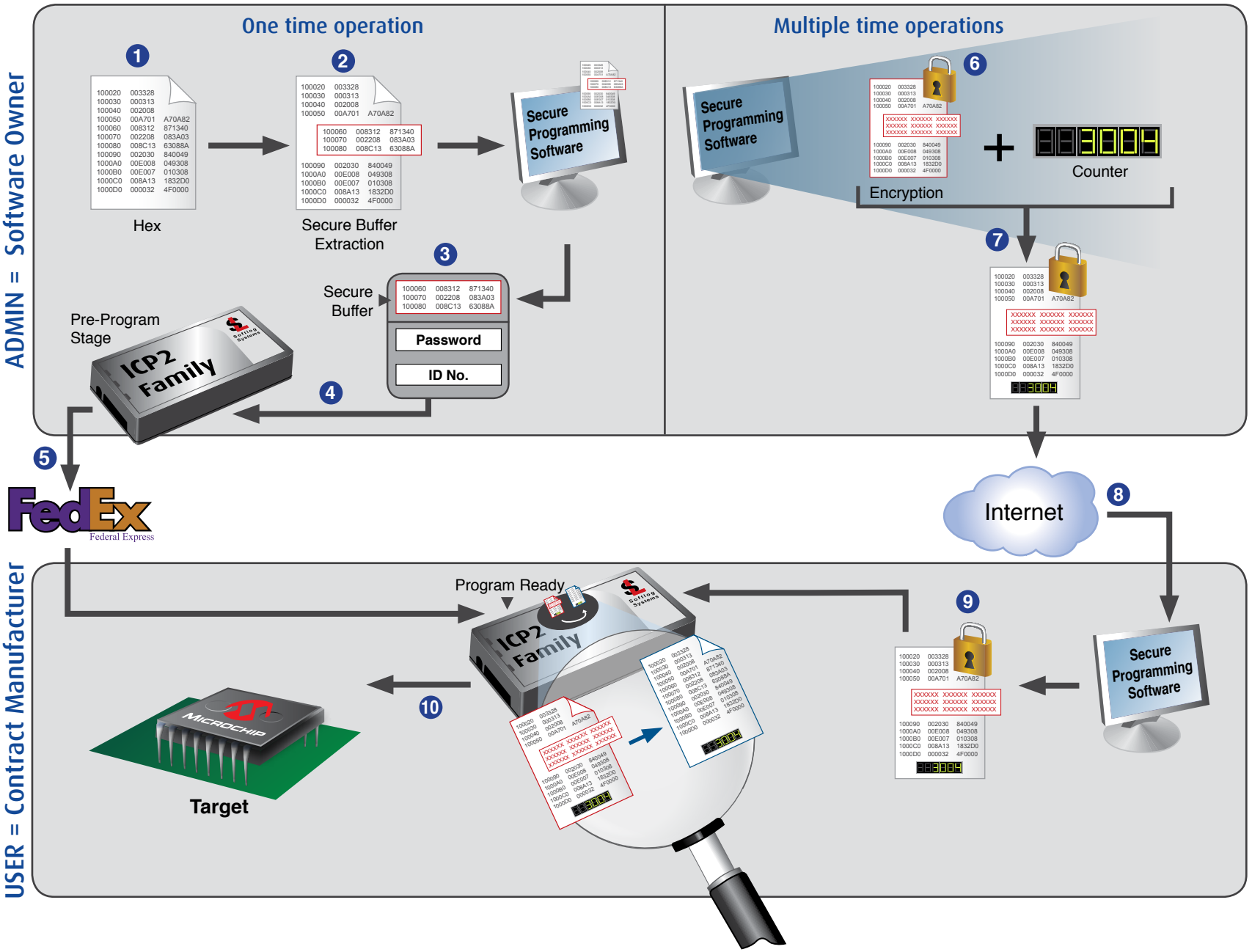

1. Your original HEX file
2. Secure Buffer extracted
3. Security ID file created (ID + Password + Secure Buffer)
4. Security ID file transferred to ICP2 Family Programmer
5. Programmer sent to the USER

6. Your HEX file with dummy values
7. Encrypted Secure Environment created (with Counter)
8. Secure Environment sent to the USER

9. Secure Environment transferred to the Programmer
10. Target microcontrollers are programmed until counter reaches zero

Recognized Microchip Third-Party Tool Provider

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