Rambus

CRYPTOGRAPHY RESEARCH
CryptoFirewall Cores
Solution Overview

CryptoFirewall Cores

Our cores complement existing security implementations, and are ideal for preventing counterfeiting in a broad number of applications.

Superior Security

- Highest level of security for anti- counterfeiting
- Independent hardware core maintains security even if other parts of the chip are compromised

Improve Profitability

- Reduce revenue lost to unauthorized access and counterfeits
- Simplifies device validation to improve time-to-market

High Flexibility

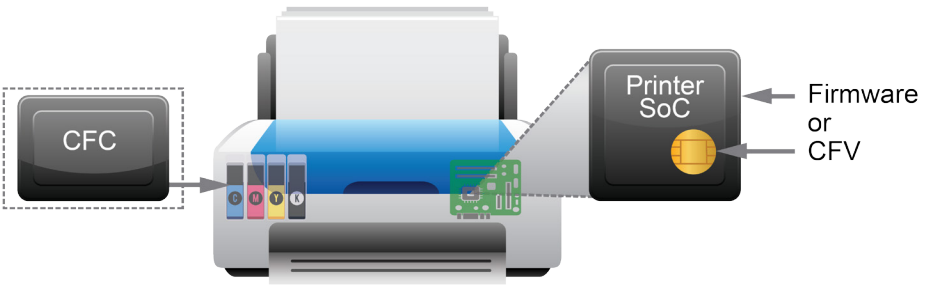
- Compatible with standard manufacturing process
- Support for a wide array of applications and easy integration into existing and new designs

Overview

Designed to prevent tampering, the hardware-based CryptoFirewallTM security core minimizes the risk of security failure and helps simplify product development. Comprising a security boundary inside a chip, the core stores private keys and maintains security – even if the rest of the system is compromised. CryptoFirewall solutions complement existing security implementations and are ideal for a wide range of applications, including electronic devices, printers and ink toners.

Anti-Counterfeiting Application:

Our hardware-based Consumable Protection System is a cost-effective and robust security solution designed to prevent counterfeiting of mass-market consumables such as printer supplies. This tamper-resistant security core can be integrated into existing chips, or implemented as a discrete security chip on consumables for unsurpassed protection against counterfeiting.



Features

Protects against a broad range of attacks including:

- Software bug vulnerabilities
- Reverse engineering
- Glitching/fault induction
- Power analysis (SPA/DPA)
- Test/debug mode exploits
- Protocol attacks
- Microprobing
- Cryptanalysis
- Focused ion beam analysis
- Imaging/microscopy
- Software emulation
- Insider attacks

Anti-Counterfeiting:

- Secure device authentication
- Secure usage authentication

Deliverables

Gate-level netlist targeted to vendor-specified cell library

Full technical documentation:

- Interface specifications
- Integration guides
- Validation guides
- Manufacturing test and personalization specs

Test and Verification:

- Verification models
- Emulation boards
- Functional verification tests
- System and validation tests

rambus.com/cryptofirewall