

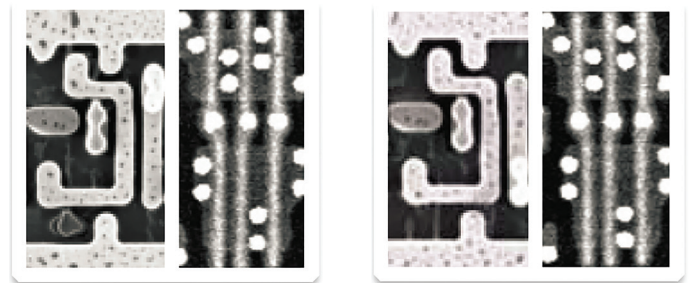
# INSIDE SECURE CIRCUIT CAMOUFLAGE TECHNOLOGY

Keep design secrets away from competitors and counterfeiters. Protect specialized security features & functions of customized ASICs from reverse engineering and cloning.

Inside Secure is dedicated to the development of turn-key technology products and services that address today's security issues. SypherMedia Library (SML) is our camouflage technique applied to a standard cell silicon library. SML is a unique and innovative technology that when incorporated into an ASIC design, the silicon itself will resist reverse-engineering attacks. SML utilizes standard tools and design methodology, doesn't rely on coatings or shields, and provides a high return on investment for silicon manufacturers and those customers using this technology.

Inside Secure has patented methods making reverse engineering of semiconductors virtually impossible and saving our Customers billions of dollars. With worldwide applications rights and over 50 granted US patents and numerous international patents, we have developed proprietary, trade secret techniques uniquely positioned to implement these designs. SMI offers training and licensing options, enabling your design team to implement SML circuit camouflage technology on your devices. Inside Secure offers a range of courses in hardening silicon IP to reverse engineering, cloning, and tamper attacks.

## SypherMedia Library™ stops image recognition



Normal AND2 gate

Camouflage AND2 gate

*The camouflage AND2 gate appears identical to the normal AND2 gate. It performs a different logic function. A reverse engineer mistakenly interpreting both gates as normal AND2 gates would extract an incorrect netlist from silicon.*

## Circuit Camouflage Overview

- Inside Secure receives frontend and backend cell library files
- Inside Secure designs Camo Cells and SmartFill Cells
- Inside Secure delivers Camo frontend and backend cell library models
- Integrate Camo cell models into Customer design database
- Run design through Customer's tool flow to validate design
- Tape Out and fabricate Customer's design

## Inside Secure has developed technologies specifically for Anti-Tamper, Intellectual Property protection and Cloning Prevention.

Inside Secure's patented and trade secret protection methods make reverse engineering of semiconductors virtually impossible. Using our designs and techniques, chip makers keep sensitive and strategic aspects of custom designs secret from competitors and counterfeiters providing hardware protection to secure your intellectual property. We provide high tamper resistance from unauthorized modifications to the design and further increase reverse engineering difficulty by using Camo SmartFill to fill the entire chip with circuitry. By filling in empty space with realistic circuitry, Camo SmartFill also prevents attackers from inserting a Trojan circuit without destroying the underlying function of the ASIC. These techniques also secure and protect your intellectual property during the manufacturing process.

- Keeps designs secret from manufacturers, competitors, and counterfeiters
- Protects against state-of-the-art circuit extraction attacks
- Applicable to any CMOS process and any digital design
- Extends the security life of your product
- Low-risk technology that has been in practice for over 20 years
- Easily applied to any standard cell design flow
- Minimal impact to area, performance, and power consumption
- Camouflage of analog IP is also available
- Secures design during device manufacturing

Figure 1

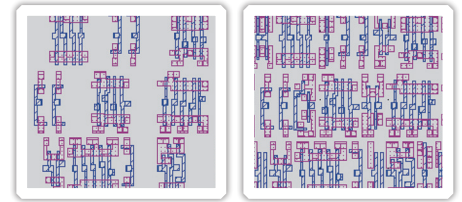
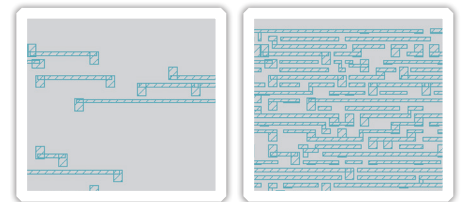


Figure 2



### SypherMedia Library™ hides your critical IP

*Figure 1 shows how SML can hide ASIC gates among a dense network of camouflage circuitry.*

*Figure 2 shows how SML can hide ASIC metal traces among a dense network of camouflage nets. These techniques increase the effort and the error rate of a reverse engineering attack.*

**“The SypherMedia Library™ Circuit Camouflage is the most effective hardware intellectual property protection solution I have encountered.”**

Michael Strizich President, Micronet Solutions, Inc.

**“The SypherMedia Library™ Circuit Camouflage has been successfully integrated by Infineon Technologies into customer specific products.”**

Infineon Technologies.

For further details on all of Inside's security solutions, visit [www.insidesecond.com](http://www.insidesecond.com)

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