GateMate uniqueID™: Design copy protection

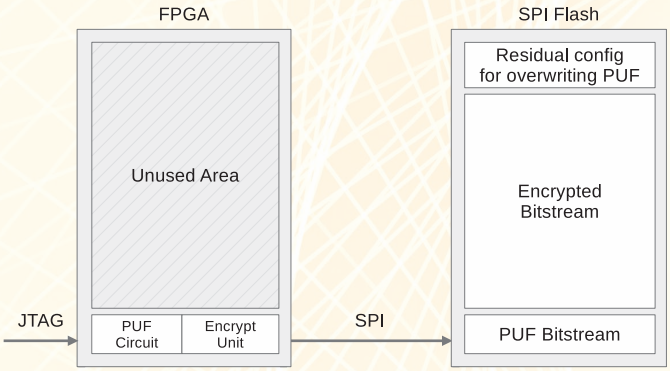
designed and manufactured in Germany

Unbreakable Identity: The Power of PUFs

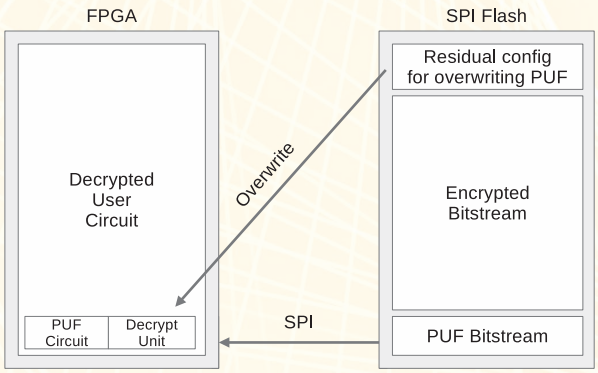
Microscopic, chip-specific variations that arise naturally during manufacturing can be used as a unique fingerprint, generating an unclonable digital identity for each FPGA. This fingerprint is used as a PUF (Physically unclonable Function) harnessed to create robust cryptographic keys for secure operations like bitstream encryption and decryption.

Cologne Chip's GateMate Advantage: Rigorous Testing, Unparalleled Security

Cologne Chip has conducted extensive testing of PUF behavior on GateMate FPGAs under various conditions which ensures stable and unique key generation utilizing built-in SRAM cells. The encryption and decryption process offers flexibility, allowing users to select from a variety of industry-standard encryption algorithms (e.g. AES) for enhanced security.



Streamlined encryption workflow generates a SPI-Flash image using fingerprint information of the FPGA used



Seamless decryption process reads SPI-Flash and internal FPGA fingerprint to decrypt configuration information and configs user circuitry in the FPGA

Secure Your Designs with GateMate FPGA. Our GateMate FPGA solution utilizes PUF technology for robust bitstream encryption and anti-cloning, providing unparalleled security and IP protection.

Cologne Chip
GateMate FPGA

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