



Financial Systems Environments

Protecting Banks, Insurance, & Financial Services

Data security in the contemporary financial services environment is increasingly complex with many moving parts and with high stakes repercussions when compromised. It requires calculated strategy to secure billions of transactions, while protecting both institutions and their account holders against modern day cyber “bank robbers”.

These growing thefts implement insidious strategy with a new intricacy of tactics and methods, which cannot be overcome by merely encrypting the data alone. When attackers anticipate their target's every move, they can break through security, including the encrypted data.

Predictability makes it easy to gain access, to control encryption keys, to hide, spy, and steal.

MerlinCryption's unique stochastic randomization faculty shuts down the hacker's ability to anticipate and conquer. Encryption, authentication, a patented random data generator, and two embedded encryption platforms each leverage dynamic action with variable determinants. Coupled with top-down control, MerlinCryption technology eliminates insider espionage throughout the banking systems environment.

This radically different approach overcomes two fundamental flaws in commonly-used encryption security:

1. Encryption key management risk
2. Static encryption algorithm limitation

ADVANCED TECHNOLOGY

SOFTWARE & HARDWARE SOLUTIONS

- Embedded Encryption Platform SDK
- Low Overhead Embedded Encryption Platform SDK
- Four-Factor Encrypted Authentication
- Random Data Generator for Keys & Passwords
- Encrypted Storage-Only Media

MARKET APPLICATIONS

- **Verticals:** Military • Healthcare • Financial • Law
- **Horizontal:** Cloud • VoIP • eCommerce
- **Infrastructure:** Storage • Virtualization • Communications • Network Management
- **Embedded Connectivity & Device:** IoT • M2M
- **Media Storage:** USB • SSD • Other

TECHNOLOGY SPECS & STATS

- Encryption speed more than twice as fast as AES
- Highly efficient minimal overhead code:
 - Platform = 200K
 - Low Overhead Platform = 55K
 - Encryption Engine as small as 22K
- Portable to any CPU
- Encrypted Payloads transmitted by any communications protocol and on any network
- 1 Patent, 1 Patent Pending, multiple patents in process
- Eliminates PKI, Cert Authorities, Key Depository
- Written C & C++ for Linux, Windows, DOS, & custom
- Approved for export NLR & OFAC compliant
- Provides compliance with HIPAA, HITECH, & other regulatory guidelines

Advanced Keys and Passwords: *Stay Ahead of the Curve*

The common approach to encryption key management, in itself creates security risks. Keys have a short fixed length, making them recognizable by their size. Keys are stored and transferred between end points, exposing them to theft.

MerlinCryption initiates a radically different approach to key generation and management. Keys can be *any* size... from 2008 bits up to 2 GB...or all sizes in between. MerlinCryption's smallest key is a billion times a billion (58 times) stronger than a 256-bit key (or 10^{522} larger). Because keys can change size with every encryption instance, hackers cannot identify, monitor, or predict patterns or behaviors.

Keys are created, used, and destroyed on the *EN*crypting end and then recreated, used and destroyed on the *DE*crypting end. No key transfer... no key storage. This eliminates expensive and laborious PKI and risky Certificate Authorities. Keys are layered with variable passwords, which also scale in length to 64KB.

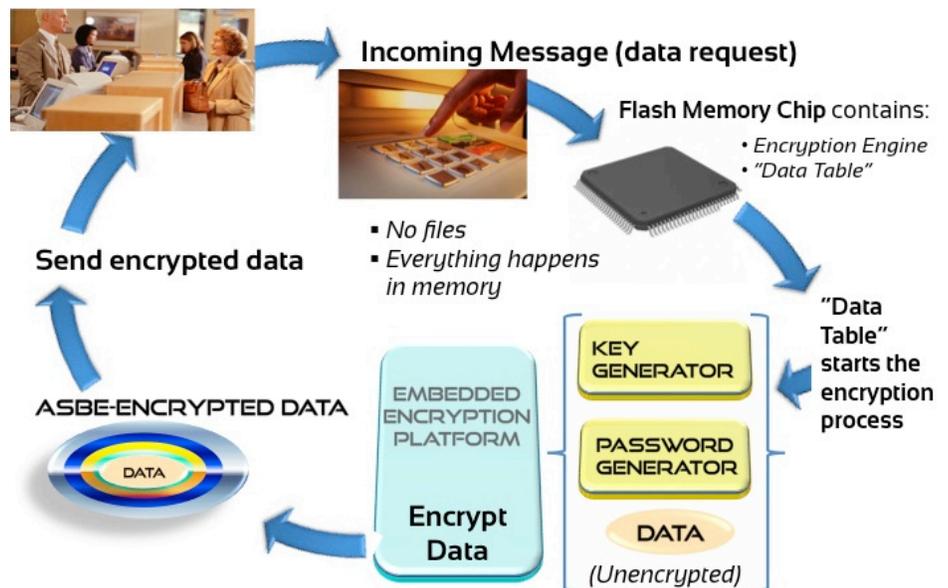
Outmaneuver Attack: Dynamic ASBE Algorithm & 4-Factor Authentication

Current market encryption algorithms are static in nature and repeat processes over and over. Their behaviors are expected with anticipated patterns and predictable results.

Anti-Statistic Block Encryption (ASBE) leverages dynamic algorithmic complexity. All output is variable with no static behavior. ASBE defeats Cryptanalysis and *always* produces different cyphertext in every encryption instance, even when using the same key, the same password, and the same plaintext input,

Typical Authentication is based on something you know, something you have, and/or something you are. MerlinCryption secures authentication to the next level by incorporating additional methods based on dynamic “temporary” factors. This unexpected category includes non-linear and environmental factors, which aptly detect risk of compromise.

*MerlinCryption's
Patent-Pending
Embedded Encryption
Platform employs specific
mechanisms of
independent control,
which thwart insider
espionage and malicious
attack vectors.*



Game Changers

- ASBE is more than twice as fast as AES
- Encryption engine as small as 22KB, embedded encrypted platform 200KB, and low overhead platform is 55KB,
- Encrypted Payloads are transmitted by *any* communications protocol and on *any* network
- The encryption software is portable to any CPU
- Two Embedded Encryption Platform SDKs streamline easy implementation
- Written in C and C++ for linux, windows, and can be compiled for other operating systems

THE SMART-WORLD'S SMART-ENCRYPTION®

MerlinCryption develops encryption, authentication, a random data generator, and embedded encryption platform security for Cloud, VoIP, ecommerce, M2M, IoT, and USB hardware. Breakthrough technology secures dynamic end-to-end encryption for financial, healthcare, Smart-Grid, SCADA, industrial systems, law enforcement, and military.

These unprecedented solutions protect data as it is created, viewed, edited, shared, stored, and moved across all communications channels and through the Cloud.

MerlinCryption Is Changing The Way The World Encrypts Data



**MERLIN
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