

# Security Builder® Crypto™

## CROSS-PLATFORM CRYPTOGRAPHIC MODULE

**Integrate encryption, digital signatures and other security mechanisms including the National Security Agency (NSA) Suite B\* algorithms, into any application or device, using the first toolkit to include standards-based Elliptic Curve Cryptography (ECC) implementations.** Security Builder® Crypto™, Certicom's cross-platform cryptographic module, is built for small code size and includes a range of current and legacy algorithms that provide proven security to constrained environments.

Security Builder Crypto\*\* acts as a software cryptographic provider within the Certicom® Security Architecture™ – a comprehensive, portable and modular solution designed to allow developers to quickly and cost-effectively embed security across multiple families and generations of devices.

### COMPREHENSIVE SECURITY

The long-term interoperability of your security design is assured through compliance with ANSI, IEEE and FIPS standards as well as the NSA Suite B requirements, and a wide range of algorithms including ECC, RSA, DSA, DH, SHA-2, and AES. These algorithms provide the necessary security for SSL/TLS, IKE v1/IKE v2/IPSec, S/MIME and OMA DRM 2.0.

### IMPROVED ROI

The same API for more than 30 platforms means Security Builder Crypto can be easily integrated into your applications with no porting required – cutting development costs and time-to-market. Choose from multiple programming languages—including C and Java. Used within the context of the Certicom Security Architecture, this application programming interface (API)\*\* provides a single, common interface between the services, applications and cryptographic providers, further simplifying your development cycle.

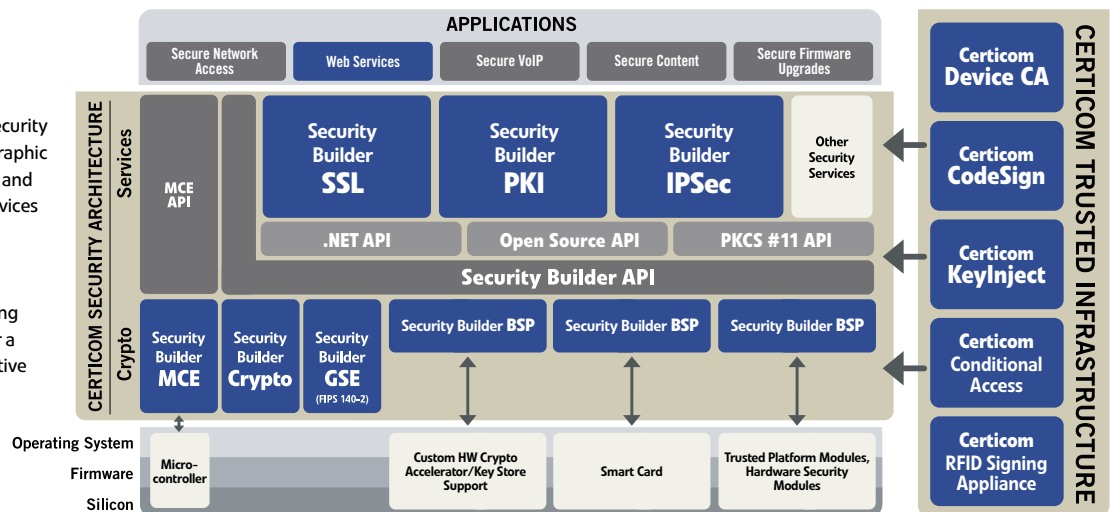
### SMALLER AND FASTER

Optimized for constrained platforms, the full cryptographic suite of algorithms within Security Builder Crypto can also be used in desktops and servers. The option to link only the features you need means compact implementations resulting in faster processing, better bandwidth usage, reduced storage and longer battery life.

### BETTER PERFORMANCE

As the Advanced Encryption Standard (AES) replaces older security algorithms, public-key sizes must be increased to provide equivalent strength for AES. ECC provides smaller key sizes with higher strength-per-bit of any public-key cryptosystem today, resulting in better performance in constrained environments.

The Certicom Security Architecture is a comprehensive, portable and modular security platform that includes: software cryptographic providers that offer FIPS 140-2 Validation and meet NSA guidelines for ECC; security services like SSL, IPSec and PKI; hardware security cores and board support packages (BSP) that expose cryptographic functionality available in hardware. An application using SSL can benefit from CSA to enable either a FIPS, non-FIPs provider (SB-Crypto) or native hardware crypto provider.



\*Suite B is the NSA's cryptographic specifications for securing classified and unclassified communications: [http://www.nsa.gov/ia/industry/crypto\\_suite\\_b\\_cfm?MenuID=10.2.7](http://www.nsa.gov/ia/industry/crypto_suite_b_cfm?MenuID=10.2.7)  
 \*\*Security Builder Crypto-C only

# Features

	Security Builder Crypto-C	Security Builder Crypto-J
<b>Programming Language</b>	C	Java
<b>Symmetric Encryption</b>	AES, DES, 3DES, RC2, RC4, RC5*	AES, DES, 3DES, RC2, RC4, RC5**
<b>Asymmetric Encryption</b>	RSA, ECIES	RSA, ECIES
<b>Key Agreement/Key Transport</b>	DH, ECDH, ECMQV, RSA	DH, ECDH, ECMQV, RSA
<b>Digital Signatures</b>	ECDSA, ECQV, RSA, DSA, RSA-PSS, ECNR, ECPVS	ECDSA, RSA, DSA, ECPVS
<b>Hash Functions</b>	SHA-1, SHA-224, SHA-256, SHA-384, SHA-512, MD2, MD4, MD5, HMAC-SHA-1, HMAC-SHA-224, HMAC-SHA-256, HMAC-SHA-384, HMAC-SHA-512, HMAC-MD5, ANSI KDF, IEEE KDF1	SHA-1, SHA-224, SHA-256, SHA-384, SHA-512, MD2, MD5, HMAC-SHA-1, HMAC-SHA-224, HMAC-SHA-256, HMAC-SHA-384, HMAC-SHA-512, HMAC-MD5, ANSI KDF, IEEE KDF1
<b>Random Number Generation</b>	ANSI X9.62 RNG, FIPS 140-2, Hash_DRBG, HMAC_DRBG, CTR_DRBG	ANSI X9.62 RNG, FIPS140-2, Hash_DRBG, HMAC_DRBG, CTR_DRBG
<b>Platform Support</b>	Available for a wide range of platforms. Please contact your Certicom sales representative for additional details.	Supports JDK 1.5 and 1.6. Please contact your Certicom sales representative for additional details.

\* RC5 is only available to customers outside of the United States

\*\* For a complete list of platforms, visit <http://www.certicom.com/csa>.

Please contact Certicom about support for other platforms, other cryptographic providers and for source code releases.

## Need to know how to use the Certicom Security Architecture?

Security Builder Crypto is part of the suite of Security Builder modules that are used by more than over 300 customers and thousands of applications, including Motorola, Research in Motion, Texas Instruments and Unisys. For a sampling of some of the ways you can use the toolkits to provide strong security for your project, visit <http://www.certicom.com/csa>

## About Certicom

Certicom, a wholly owned subsidiary of Research In Motion Limited (RIM) (Nasdaq: RIMM; TSX: RIM), manages and protects the value of content, applications and devices with government-approved security. Adopted by the National Security Agency (NSA) for government communications, Elliptic Curve Cryptography (ECC) provides the most security per bit of any known public-key scheme. As the global leader in ECC, Certicom's security offerings are currently licensed to hundreds of multinational technology companies, including IBM, General Dynamics, Motorola and Oracle. Founded in 1985, Certicom's corporate office is located in Mississauga, Ontario, Canada with worldwide sales offices in USA and Asia. Visit [www.certicom.com](http://www.certicom.com).



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