High performance cryptographic cores

Snapcrypt™

With the increased use of mobile devices, information security has become a major concern to both enterprises and consumers. As the functionality of newer generation devices expands to include commerce, multimedia applications and enterprise connectivity, strong, high-performance security is mandatory.

Cryptographic algorithms typically are highly complex, increase the CPU's demand for energy which places additional strain on the already limited processing power of mobile devices. This, in turn, elevates battery consumption which can limit the amount of time the user is able to use the device. Generic cryptographic libraries also utilize a significant amount of a device's valuable memory resources.

The overhead created by encryption and decryption is particularly acute with streaming multimedia applications. The large amount of data transmitted makes it almost impossible for generic implementations of encryption algorithms to encrypt and decrypt data streams in real-time. This is particularly true of voice and video applications which are extremely sensitive to delays and interruptions.

SNAPCRYPT

Snapcrypt addresses these security requirements by offering cryptographic libraries optimized for Texas Instruments DSP and for ARM RISC processors. Snapcrypt features a small memory footprint combined with exceptional efficiency that minimizes the impact on battery life. Snapcrypt provides a complete suite of industry standard cryptographic libraries. These cryptographic libraries enable application developers to easily integrate encryption, hash functions, digital signatures and key exchange mechanisms into embedded systems.

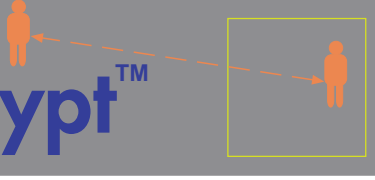
Powered by industry-standard cryptographic algorithms and optimized for mobile applications, Snapcrypt will enable rapid and robust implementation of security applications in embedded systems. Snapcrypt is also FIPS approved which means that the protocols, algorithms and key management processes meet and/or exceed government standards for protecting up to the most sensitive user information. Snap Defense Systems also offers software which can create interoperability among different devices. This, in turn, creates operational efficiencies and reduced capital expenditures when procuring secure communication systems.

Snapcrypt provides all popular private and public key encryption algorithms (including all algorithms required by the IPSec standard), such as; DES, 3DES and AES for symmetric encryption, key exchange protected by ElGamal, RSA and Diffie-Hellman, MD5 and SHA-1 hash functions, along with their keyed versions (HMAC), RSA, ECC and DSA for digital signatures.

KEY BENEFITS

- Highest security approval
- Optimized for wireless and mobile applications
- Efficient use of computing resources, minimal impact on battery life
- Small footprint design
- Supports TI's eXpress DSP and ARM RISC Processors
- High performance and efficiency
- Supports all standard encryption algorithms
- Fast time-to-market

Snapcrypt™



SNAPCRYPT™ BENEFITS

- HIGHEST SECURITY LEVEL FIPS APPROVED
- OPTIMIZED FOR WIRELESS AND MOBILE APPLICATIONS
- EFFICIENT USE OF COMPUTING RESOURCES, MINIMAL IMPACT ON BATTERY LIFE
- SMALL FOOTPRINT DESIGN
- SUPPORTS TI'S EXPRESS DSP AND ARM RISC PROCESSORS
- HIGH PERFORMANCE AND EFFICIENCY
- SUPPORTS ALL STANDARD ENCRYPTION ALGORITHMS
- FAST TIME-TO-MARKET

TECHNICAL SPECIFICATIONS

Supported Platforms	TI DSP C54x; TI DSP C55x; TI DSP C62x; TI DSP C64x; TI OMAP; ARM7; ARM9; ARM10; ARM11; XScale
Standards Compliance	Supports algorithms used in government, financial and Internet standards, including all algorithms required by IPSEC Compliant with ANSI, FIPS, IETF, PKCS and PacketCable standards
Key Agreement	Diffie-Hellman; ECDH
Digital Signatures	RSA; DSA; ECDSA
Public Key Encryption	RSA; ElGamal
Symmetric Block Ciphers	DES; 3DES; AES; Supports all FIPS- approved modes of operation
Hash Functions	MD5; all Secure Hash Algorithms (SHA-1, SHA-224, SHA-256, SHA-384 and SHA-512); MMH
Message Authentication Code (MAC)	HMAC-MD5; HMAC-SHA; MMH-MAC; CCM

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