

[Apple CryptoKit](#) / [SymmetricKey](#)

Structure

SymmetricKey

A symmetric cryptographic key.

iOS 13.0+ | iPadOS 13.0+ | Mac Catalyst 13.0+ | macOS 10.15+ | tvOS 13.0+ | visionOS 1.0+ | watchOS 6.0+

```
struct SymmetricKey
```

Overview

You typically derive a symmetric key from an instance of a shared secret ([SharedSecret](#)) that you obtain through key agreement. You use a symmetric key to compute a message authentication code like [HMAC](#), or to open and close a sealed box ([ChaChaPoly.SealedBox](#) or [AES.GCM.SealedBox](#)) using a cipher like [ChaChaPoly](#) or [AES](#).

Topics

Creating a key

```
init<D>(data: D)
```

Creates a key from the given data.

```
init(size: SymmetricKeySize)
```

Generates a new random key of the given size.

Getting the key length

```
var bitCount: Int
```

The number of bits in the key.

Relationships

Conforms To

ContiguousBytes

Copyable

Equatable

Sendable

SendableMetatype

See Also

Message authentication codes

`struct HMAC`

A hash-based message authentication algorithm.

`struct SymmetricKeySize`

The sizes that a symmetric cryptographic key can take.