

[Apple CryptoKit / SHA3\\_256](#)

## Structure

# SHA3\_256

An implementation of Secure Hashing Algorithm 3 (SHA-3) hashing with a 256-bit digest.

iOS 26.0+ | iPadOS 26.0+ | Mac Catalyst 26.0+ | macOS 26.0+ | tvOS 26.0+ | visionOS 2.0+ | watchOS 26.0+

```
struct SHA3_256
```

## Overview

The `SHA3_256` hash implements the `HashFunction` protocol for the specific case of SHA-3 hashing with a 256-bit digest (`SHA3_256Digest`). Larger digests take more space but are more secure.

Applications can compute the digest by calling the static `hash(data:)` method once. Alternatively, if the data to hash is too large to fit in memory, applications can compute the digest iteratively by creating a new hash instance, calling the `update(data:)` method repeatedly with blocks of data, and then calling the `finalize()` method to get the result.

## Topics

### Initializers

```
init()
```

Creates a SHA3-256 hash function.

## Instance Methods

```
func finalize() -> SHA3_256.Digest
```

Finalizes the hash function and returns the computed digest.

```
func update(bufferPointer: UnsafeRawBufferPointer)
```

Incrementally updates the hash function with the contents of the buffer.

## Type Aliases

```
typealias Digest
```

The digest type for a SHA3-256 hash function.

## Type Properties

```
static let blockByteCount: Int
```

The number of bytes that represents the hash function's internal state.

```
static let byteCount: Int
```

The number of bytes in a SHA3-256 digest.

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## Relationships

### Conforms To

Copyable

HashFunction

Sendable

SendableMetatype