

[Apple CryptoKit](#) / KEMPublicKey

Protocol

# KEMPublicKey

The public key for a key encapsulation mechanism.

iOS 17.0+ | iPadOS 17.0+ | Mac Catalyst 17.0+ | macOS 14.0+ | tvOS 17.0+ | visionOS 1.0+ | watchOS 10.0+

```
@preconcurrency
protocol KEMPublicKey : Sendable
```

## Topics

### Instance Methods

```
func encapsulate() throws -> KEM.EncapsulationResult
```

Generates and encapsulates a shared secret.

Required

## Relationships

### Inherits From

Sendable, SendableMetatype

### Inherited By

HPKEKEMPublicKey

# Conforming Types

MLKEM1024.PublicKey, MLKEM768.PublicKey, XWingMLKEM768X25519.PublicKey

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## See Also

### KEM keys

`protocol` `KEMPrivateKey`

The private key for a key encapsulation mechanism.