

[MapKit](#) / [MapCameraPosition](#)

Structure

MapCameraPosition

A structure that describes how to position the map's camera within the map.

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

```
struct MapCameraPosition
```

Overview

MapCameraPosition contains a variety of properties that you can use to control the semantic framings of the camera in relation to its position to the map, such as [automatic](#), which frames the content of the map, and the [camera](#) property, which allows you to specify an explicit camera position.

When you pass MapCameraPosition as a binding to a map, the map adjusts its camera to frame the requested content, or to exactly match the camera MapCameraPosition specifies. If a person interacts with the [Map](#) in a way that moves the map, the map resets the position to a value that specifies [positionedByUser](#).

Topics

Creating a camera position

```
static func camera(MapCamera) -> MapCameraPosition
```

Creates a new camera position from an existing map camera you provide.

```
static func item(MKMapItem, allowsAutomaticPitch: Bool) -> MapCameraPosition
```

Creates a new camera position centered on a map item and automatic pitch selection you provide.

```
static func rect(MKMapRect) -> MapCameraPosition
```

Creates a new camera position with the map boundaries you provide.

```
static func region(MKCoordinateRegion) -> MapCameraPosition
```

Creates a new camera position the coordinate region you provide.

```
static func userLocation(followsHeading: Bool, fallback: MapCameraPosition) -> MapCameraPosition
```

Creates a camera position with the specific fallback position and optionally follows the user's heading.

Information about camera position and framing

```
static var automatic: MapCameraPosition
```

The position that frames the map's content.

```
var allowsAutomaticPitch: Bool
```

The setting that allows the map's camera to automatically set the pitch when framing the item.

```
var camera: MapCamera?
```

A map camera that defines the camera positioning.

```
var fallbackPosition: MapCameraPosition?
```

The position to use if the framework hasn't resolved the person's location.

```
var item: MKMapItem?
```

The item the map is framing.

```
var positionedByUser: Bool
```

A Boolean value that indicates whether the person specified the camera position by interacting with the map.

```
var rect: MKMapRect?
```

The position that frames the given map rectangle.

```
var region: MKCoordinateRegion?
```

The coordinate region to frame.

Accessing information about someone's location

`var followsUserHeading: Bool`

A Boolean value that indicates whether the map is following someone's heading.

`var followsUserLocation: Bool`

A Boolean value that indicates whether the map is following someone's location.

Relationships

Conforms To

`Equatable`

See Also

Map customization

`struct MapCamera`

Defines a virtual viewpoint above the map surface.

`struct MapCameraBounds`

Defines an optional boundary of an area within which the map's center needs to remain.

`struct MapCameraUpdateContext`

A structure that defines additional information about the map camera.

`struct MapCameraUpdateFrequency`

A structure that describes when the map camera updates.