

□ Documentation

[Accelerate](#) / [vDSP](#) / Polar-rectangular conversion

API Collection

Polar-rectangular conversion

Convert each element of a vector between radius-angle and Cartesian pairs.

Topics

Converting polar coordinates to rectangular coordinates

`static func polarToRectangular<U>(U) -> [Float]`

Returns single-precision rectangular coordinates converted from polar coordinates.

`static func polarToRectangular<U>(U) -> [Double]`

Returns double-precision rectangular coordinates converted from polar coordinates.

`static func convert<U, V>(polarCoordinates: U, toRectangularCoordinates : inout V)`

Converts single-precision polar coordinates to rectangular coordinates.

`static func convert<U, V>(polarCoordinates: U, toRectangularCoordinates : inout V)`

Converts double-precision polar coordinates to rectangular coordinates.

`vDSP_rect`

Converts single-precision polar coordinates to rectangular coordinates, using the specified stride.

`vDSP_rectD`

Converts double-precision polar coordinates to rectangular coordinates, using the specified stride.

Converting rectangular coordinates to polar coordinates

```
static func rectangularToPolar<U>(U) -> [Float]
```

Returns single-precision polar coordinates converted from rectangular coordinates.

```
static func rectangularToPolar<U>(U) -> [Double]
```

Returns double-precision polar coordinates converted from rectangular coordinates.

```
static func convert<U, V>(rectangularCoordinates: U, toPolarCoordinates : inout V)
```

Converts single-precision rectangular coordinates to polar coordinates.

```
static func convert<U, V>(rectangularCoordinates: U, toPolarCoordinates : inout V)
```

Converts double-precision rectangular coordinates to polar coordinates.

vDSP_polar

Converts single-precision rectangular coordinates to polar coordinates, using the specified stride.

vDSP_polarD

Converts double-precision rectangular coordinates to polar coordinates, using the specified stride.

See Also

Vector conversion functions

Conversion to decibel equivalents

Convert vectors that contain power or amplitude data to decibels.

Type conversion

Perform element-wise floating-point to integer and integer to floating-point conversion.

Complex vector conversion

Perform element-wise split-complex to interleaved and interleaved to split-complex conversion.