

**NAME**

casin, casinf, casinl - complex arc sine

**SYNOPSIS**

```
#include <complex.h>
```

```
double complex casin(double complex z);
```

```
float complex casinf(float complex z);
```

```
long double complex casinl(long double complex z);
```

Link with *-lm*.

**DESCRIPTION**

The **casin()** function calculates the complex arc sine of  $z$ . If  $y = \text{casin}(z)$ , then  $z = \text{csin}(y)$ . The real part of  $y$  is chosen in the interval  $[-\pi/2, \pi/2]$ .

One has:

$$\text{casin}(z) = -i \log(iz + \text{csqrt}(1 - z * z))$$
**VERSIONS**

These functions first appeared in glibc in version 2.1.

**CONFORMING TO**

C99.

**SEE ALSO**

[clog\(3\)](#), [csin\(3\)](#), [complex\(7\)](#)

**COLOPHON**

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