

**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**

These functions calculate 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.

**ATTRIBUTES**

For an explanation of the terms used in this section, see **attributes(7)**.

Interface	Attribute	Value
<code>casin()</code> , <code>casinf()</code> , <code>casinl()</code>	Thread safety	MT-Safe

**CONFORMING TO**

C99, POSIX.1-2001, POSIX.1-2008.

**SEE ALSO**

**clog(3)**, **csin(3)**, **complex(7)**

**COLOPHON**

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