

**NAME**

casin, casinf, casinl – complex arc sine

**LIBRARY**

Math library (*libm*, *-lm*)

**SYNOPSIS**

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

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

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

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

**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 were added in glibc 2.1.

**ATTRIBUTES**

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

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

**STANDARDS**

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

**SEE ALSO**

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