

**NAME**

`csqrt`, `csqrtf`, `csqrtl` - complex square root

**SYNOPSIS**

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

```
double complex csqrt(double complex z);
```

```
float complex csqrtf(float complex z);
```

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

Link with `-lm`.

**DESCRIPTION**

Calculate the square root of a given complex number, with nonnegative real part, and with a branch cut along the negative real axis. (That means that  $csqrt(-1+eps*I)$  will be close to I while  $csqrt(-1-eps*I)$  will be close to -I, if  $eps$  is a small positive real number.)

**VERSIONS**

These functions first appeared in glibc in version 2.1.

**CONFORMING TO**

C99.

**SEE ALSO**

[cabs\(3\)](#), [cexp\(3\)](#), [complex\(7\)](#)

**COLOPHON**

This page is part of release 3.74 of the Linux *man-pages* project. A description of the project, information about reporting bugs, and the latest version of this page, can be found at <http://www.kernel.org/doc/man-pages/>.