

NAME

clog, clogf, clogl - natural logarithm of a complex number

SYNOPSIS

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

```
double complex clog(double complex z);
```

```
float complex clogf(float complex z);
```

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

Link with *-lm*.

DESCRIPTION

The logarithm **clog()** is the inverse function of the exponential [cexp\(3\)](#). Thus, if $y = \text{clog}(z)$, then $z = \text{cexp}(y)$. The imaginary part of y is chosen in the interval $[-\pi, \pi]$.

One has:

$$\text{clog}(z) = \log(\text{cabs}(z)) + I * \text{carg}(z)$$

Note that z close to zero will cause an overflow.

VERSIONS

These functions first appeared in glibc in version 2.1.

CONFORMING TO

C99.

SEE ALSO

[cabs\(3\)](#), [cexp\(3\)](#), [clog10\(3\)](#), [clog2\(3\)](#), [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/>.