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

These functions calculate the complex natural logarithm of *z*, with a branch cut along the negative real axis.

The logarithm **clog**() is the inverse function of the exponential cexp(3). Thus, if *y* = *clog(z)*, then *z* = *cexp(y)*. The imaginary part of *y* is chosen in the interval [−pi,pi].

One has:

clog(z) = log(cabs(z)) + I * carg(z)

Note that *z* close to zero will cause an overflow.

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
clog(), **clogf**(), **clogl**()	Thread safety	MT-Safe

CONFORMING TO

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

SEE ALSO

cabs(3), cexp(3), clog10(3), clog2(3), complex(7)

COLOPHON

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