



Rocky Enterprise Linux 9.2 Manual Pages on command 'clog.3'

C:\>man clog.3

CLOG(3) Linux Programmer's Manual CLOG(3)

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 $\text{clog}()$ is the inverse function of the exponential $\text{cexp}()$. 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.

ATTRIBUTES

For an explanation of the terms used in this section, see [attributes\(7\)](#).

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?Interface ? Attribute ? Value ?

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

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CONFORMING TO

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

SEE ALSO

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

COLOPHON

This page is part of release 5.05 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 <https://www.kernel.org/doc/man-pages/>.

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