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***Rocky Enterprise Linux 9.2 Manual Pages on command 'ctanh.3'***

**\$ man ctanh.3**

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

NAME

ctanh, ctanhf, ctanh1 - complex hyperbolic tangent

SYNOPSIS

```
#include <complex.h>

double complex ctanh(double complex z);

float complex ctanhf(float complex z);

long double complex ctanh1(long double complex z);

Link with -lm.
```

DESCRIPTION

These functions calculate the complex hyperbolic tangent of z.

The complex hyperbolic tangent function is defined mathematically as:

$$\text{ctanh}(z) = \text{csinh}(z) / \text{ccosh}(z)$$

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    ?

????????????????????????????????????????????????????????????????

?ctanh(), ctanhf(), ctanh1() ? Thread safety ? MT-Safe ?

????????????????????????????????????????????????????????????????

CONFORMING TO

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

#### SEE ALSO

`cabs(3)`, `catanh(3)`, `ccosh(3)`, `csinh(3)`, `complex(7)`

#### COLOPHON

This page is part of release 5.10 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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CTANH(3)