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

C:\>man acosh.3

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

NAME

acosh, acoshf, acoshl - inverse hyperbolic cosine function

SYNOPSIS

```
#include <math.h>

double acosh(double x);

float acoshf(float x);

long double acoshl(long double x);
```

Link with -lm.

Feature Test Macro Requirements for glibc (see feature_test_macros(7)):

acosh():

_ISOC99_SOURCE || _POSIX_C_SOURCE >= 200112L

|| _XOPEN_SOURCE >= 500

|| /* Since glibc 2.19: */ _DEFAULT_SOURCE

|| /* Glibc versions <= 2.19: */ _BSD_SOURCE || _SVID_SOURCE

acoshf(), acoshl():

_ISOC99_SOURCE || _POSIX_C_SOURCE >= 200112L

|| /* Since glibc 2.19: */ _DEFAULT_SOURCE

|| /* Glibc versions <= 2.19: */ _BSD_SOURCE || _SVID_SOURCE

DESCRIPTION

These functions calculate the inverse hyperbolic cosine of x; that is the value whose hyperbolic cosine is x.

RETURN VALUE

On success, these functions return the inverse hyperbolic cosine of x.

If x is a NaN, a NaN is returned.

If x is +1, +0 is returned.

If x is positive infinity, positive infinity is returned.

If x is less than 1, a domain error occurs, and the functions return a NaN.

ERRORS

See math_error(7) for information on how to determine whether an error has occurred when calling these functions.

The following errors can occur:

Domain error: x is less than 1

errno is set to EDOM. An invalid floating-point exception (FE_INVALID) is raised.

ATTRIBUTES

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

Interface	Attribute	Value
acosh(), acoshf(), acoshl()	Thread safety	MT-Safe

CONFORMING TO

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

The variant returning double also conforms to SVr4, 4.3BSD.

SEE ALSO

asinh(3), atanh(3), cacosh(3), cosh(3), sinh(3), tanh(3)

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/.