



Linux Ubuntu 26.04 Manual Pages on command 'acosf.3'

\$ man acosf.3

acos(3) Library Functions Manual acos(3)

NAME

acos, acosf, acosl - arc cosine function

LIBRARY

Math library (libm, -lm)

SYNOPSIS

```
#include <math.h>

double acos(double x);

float acosf(float x);

long double acosl(long double x);
```

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

```
acosf(), acosl():

    _ISOC99_SOURCE || _POSIX_C_SOURCE >= 200112L
    || /* Since glibc 2.19: */ _DEFAULT_SOURCE
    || /* glibc <= 2.19: */ _BSD_SOURCE || _SVID_SOURCE
```

DESCRIPTION

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

RETURN VALUE

On success, these functions return the arc cosine of x in radians; the return value is in the range $[0, \pi]$.

If x is a NaN, a NaN is returned.

If x is +1, +0 is returned.

If x is positive infinity or negative infinity, a domain error occurs, and a NaN is re?

turned.

If x is outside the range [-1, 1], a domain error occurs, and a NaN is returned.

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 outside the range [-1, 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)`.

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? Interface ? Attribute ? Value ?

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? `acos()`, `acosf()`, `acosl()` ? Thread safety ? MT-Safe ?

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STANDARDS

C11, POSIX.1-2008.

HISTORY

C99, POSIX.1-2001.

The variant returning double also conforms to C89, SVr4, 4.3BSD.

SEE ALSO

`asin(3)`, `atan(3)`, `atan2(3)`, `cacos(3)`, `cos(3)`, `sin(3)`, `tan(3)`

Linux man-pages 6.17

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`acos(3)`