



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

**\$ man cos.3**

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

NAME

cos, cosf, cosl - cosine function

SYNOPSIS

```
#include <math.h>
```

```
double cos(double x);
```

```
float cosf(float x);
```

```
long double cosl(long double x);
```

Link with -lm.

Feature Test Macro Requirements for glibc (see feature\_test\_macros(7)):

cosf(), cosl():

```
_ISOC99_SOURCE || _POSIX_C_SOURCE >= 200112L
```

```
|| /* Since glibc 2.19: */ _DEFAULT_SOURCE
```

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

DESCRIPTION

These functions return the cosine of x, where x is given in radians.

RETURN VALUE

On success, these functions return the cosine of x.

If  $x$  is a NaN, a NaN is returned.

If  $x$  is positive infinity or negative infinity, 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 an infinity

`errno` is set to `EDOM` (but see `BUGS`). 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    ?

??

?`cos()`, `cosf()`, `cosl()` ? Thread safety ? MT-Safe ?

??

## CONFORMING TO

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

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

## BUGS

Before version 2.10, the glibc implementation did not set `errno` to `EDOM`  
when a domain error occurred.

## SEE ALSO

`acos(3)`, `asin(3)`, `atan(3)`, `atan2(3)`, `ccos(3)`, `sin(3)`, `sincos(3)`, `tan(3)`

## 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/>.