



## ***Linux Ubuntu 26.04 Manual Pages on command 'cosf.3'***

**\$ man cosf.3**

cos(3) Library Functions Manual cos(3)

### NAME

cos, cosf, cosl - cosine function

### LIBRARY

Math library (libm, -lm)

### SYNOPSIS

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

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

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

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

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 <= 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 re-

turned.

### 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

## STANDARDS

C11, POSIX.1-2008.

## HISTORY

C89, POSIX.1-2001.

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

## BUGS

Before glibc 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)`

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`cos(3)`