



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

**\$ man sincos.3**

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

#### NAME

sincos, sincosf, sincosl - calculate sin and cos simultaneously

#### SYNOPSIS

```
#define _GNU_SOURCE      /* See feature_test_macros(7) */  
  
#include <math.h>  
  
void sincos(double x, double *sin, double *cos);  
  
void sincosf(float x, float *sin, float *cos);  
  
void sincosl(long double x, long double *sin, long double *cos);  
  
Link with -lm.
```

#### DESCRIPTION

Several applications need sine and cosine of the same angle  $x$ . These functions compute both at the same time, and store the results in  $*sin$  and  $*cos$ . Using this function can be more efficient than two separate calls to  $\sin(3)$  and  $\cos(3)$ .

If  $x$  is a NaN, a NaN is returned in  $*sin$  and  $*cos$ .

If  $x$  is positive infinity or negative infinity, a domain error occurs, and a NaN is returned in  $*sin$  and  $*cos$ .

## RETURN VALUE

These functions return void.

## 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.

## 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    ?

??

?`sincos()`, `sincosf()`, `sincosl()` ? Thread safety ? MT-Safe ?

??

## CONFORMING TO

These functions are GNU extensions.

## NOTES

To see the performance advantage of `sincos()`, it may be necessary to disable `gcc(1)` built-in optimizations, using flags such as:

```
cc -O -lm -fno-builtin prog.c
```

## BUGS

Before version 2.22, the glibc implementation did not set `errno` to `EDOM` when a domain error occurred.

## SEE ALSO

`cos(3)`, `sin(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/>.

GNU

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SINCOS(3)