



## ***Red Hat Enterprise Linux Release 9.2 Manual Pages on 'sincosl.3' command***

**\$ man sincosl.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 at?

tributes(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/>.