

NAME

timegm, timelocal – inverses of gmtime and localtime

SYNOPSIS

```
#include <time.h>
```

```
time_t timelocal(struct tm *tm);
```

```
time_t timegm(struct tm *tm);
```

Feature Test Macro Requirements for glibc (see [feature_test_macros\(7\)](#)):

timelocal(), **timegm()**: Since glibc 2.19: `_DEFAULT_SOURCE` Glibc 2.19 and earlier: `_BSD_SOURCE` || `_SVID_SOURCE`

DESCRIPTION

The functions **timelocal()** and **timegm()** are the inverses of [localtime\(3\)](#) and [gmtime\(3\)](#). Both functions take a broken-down time and convert it to calendar time (seconds since the Epoch, 1970-01-01 00:00:00 +0000, UTC). The difference between the two functions is that **timelocal()** takes the local timezone into account when doing the conversion, while **timegm()** takes the input value to be Coordinated Universal Time (UTC).

RETURN VALUE

On success, these functions return the calendar time (seconds since the Epoch), expressed as a value of type *time_t*. On error, they return the value *(time_t) -1* and set *errno* to indicate the cause of the error.

ERRORS**E_OVERFLOW**

The result cannot be represented.

ATTRIBUTES

For an explanation of the terms used in this section, see [attributes\(7\)](#).

Interface	Attribute	Value
timelocal() , timegm()	Thread safety	MT-Safe env locale

CONFORMING TO

These functions are nonstandard GNU extensions that are also present on the BSDs. Avoid their use.

NOTES

The **timelocal()** function is equivalent to the POSIX standard function [mktime\(3\)](#). There is no reason to ever use it.

SEE ALSO

[gmtime\(3\)](#), [localtime\(3\)](#), [mktime\(3\)](#), [tzset\(3\)](#)

COLOPHON

This page is part of release 4.16 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/>.