

NAME

`cexp`, `cexpf`, `cexpl` – complex exponential function

SYNOPSIS

```
#include <complex.h>
```

```
double complex cexp(double complex z);
```

```
float complex cexpf(float complex z);
```

```
long double complex cexpl(long double complex z);
```

Link with `-lm`.

DESCRIPTION

These functions calculate e (2.71828..., the base of natural logarithms) raised to the power of z .

One has:

$$cexp(I * z) = ccos(z) + I * csin(z)$$
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
<code>cexp()</code> , <code>cexpf()</code> , <code>cexpl()</code>	Thread safety	MT-Safe

CONFORMING TO

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

SEE ALSO

[cabs\(3\)](#), [cexp2\(3\)](#), [clog\(3\)](#), [cpow\(3\)](#), [complex\(7\)](#)

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/>.