

**NAME**

ctan, ctanf, ctanl – complex tangent function

**SYNOPSIS**

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

```
double complex ctan(double complex z);
```

```
float complex ctanf(float complex z);
```

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

Link with `-lm`.

**DESCRIPTION**

These functions calculate the complex tangent of  $z$ .

The complex tangent function is defined as:

$$\text{ctan}(z) = \text{csin}(z) / \text{ccos}(z)$$
**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
ctan(), ctanf(), ctanl()	Thread safety	MT-Safe

**CONFORMING TO**

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

**SEE ALSO**

[cabs\(3\)](#), [catan\(3\)](#), [ccos\(3\)](#), [csin\(3\)](#), [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/>.