

**NAME**

`creal`, `crealf`, `creall` – get real part of a complex number

**SYNOPSIS**

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

```
double creal(double complex z);
```

```
float crealf(float complex z);
```

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

Link with `-lm`.

**DESCRIPTION**

These functions return the real part of the complex number `z`.

One has:

$$z = \text{creal}(z) + I * \text{cimag}(z)$$

**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>creal()</code> , <code>crealf()</code> , <code>creall()</code>	Thread safety	MT-Safe

**CONFORMING TO**

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

**NOTES**

The `gcc` supports also `__real__`. That is a GNU extension.

**SEE ALSO**

[cabs\(3\)](#), [cimag\(3\)](#), [complex\(7\)](#)

**COLOPHON**

This page is part of release 5.05 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/>.