



Linux Ubuntu 26.04 Manual Pages on command 'atan.3'

\$ man atan.3

atan(3) Library Functions Manual atan(3)

NAME

atan, atanf, atanl - arc tangent function

LIBRARY

Math library (libm, -lm)

SYNOPSIS

```
#include <math.h>
```

```
double atan(double x);
```

```
float atanf(float x);
```

```
long double atanl(long double x);
```

Feature Test Macro Requirements for glibc (see feature_test_macros(7)):

atanf(), atanl():

```
_ISOC99_SOURCE || _POSIX_C_SOURCE >= 200112L
```

```
|| /* Since glibc 2.19: */ _DEFAULT_SOURCE
```

```
|| /* glibc <= 2.19: */ _BSD_SOURCE || _SVID_SOURCE
```

DESCRIPTION

These functions calculate the principal value of the arc tangent of x ; that is the value whose tangent is x .

RETURN VALUE

On success, these functions return the principal value of the arc tangent of x in radians; the return value is in the range $[-\pi/2, \pi/2]$.

If x is a NaN, a NaN is returned.

If x is $+0$ (-0), $+0$ (-0) is returned.

If x is positive infinity (negative infinity), +pi/2 (-pi/2) is returned.

ERRORS

No errors occur.

ATTRIBUTES

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

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? Interface ? Attribute ? Value ?

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? atan(), atanf(), atanl() ? Thread safety ? MT-Safe ?

??

STANDARDS

C11, POSIX.1-2008.

HISTORY

C99, POSIX.1-2001.

The variant returning double also conforms to SVr4, 4.3BSD, C89.

SEE ALSO

acos(3), asin(3), atan2(3), carg(3), catan(3), cos(3), sin(3), tan(3)

Linux man-pages 6.17

2026-02-08

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