Rocky Enterprise Linux 9.2 Manual Pages on command 'ilogbf.3'

$ man ilogbf.3

ILOGB(3) Linux Programmer's Manual ILOGB(3)

NAME

ilogb, ilogbf, ilogbl - get integer exponent of a floating-point value

SYNOPSIS

#include <math.h>

int ilogb(double x);

int ilogbf(float x);

int ilogbl(long double x);

Link with -lm.

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

ilogb():

_ISOC99_SOURCE || _POSIX_C_SOURCE >= 200112L

|| _XOPEN_SOURCE >= 500

|| /* Since glibc 2.19: */ _DEFAULT_SOURCE

|| /* Glibc versions <= 2.19: */ _BSD_SOURCE || _SVID_SOURCE

ilogbf(), ilogbl():

_ISOC99_SOURCE || _POSIX_C_SOURCE >= 200112L

|| /* Since glibc 2.19: */ _DEFAULT_SOURCE

|| /* Glibc versions <= 2.19: */ _BSD_SOURCE || _SVID_SOURCE

DESCRIPTION

These functions return the exponent part of their argument as a signed integer. When no error occurs, these functions are equivalent to the corresponding logb(3) functions, cast to int.

RETURN VALUE

On success, these functions return the exponent of x, as a signed inte? ger.

If x is zero, then a domain error occurs, and the functions return FP_ILOGB0.

If x is a NaN, then a domain error occurs, and the functions return FP_ILOGBNAN.

If x is negative infinity or positive infinity, then a domain error oc? curs, and the functions return INT_MAX.

ERRORS

See math_error(7) for information on how to determine whether an error has occurred when calling these functions.

The following errors can occur:

Domain error: x is 0 or a NaN

An invalid floating-point exception (FE_INVALID) is raised, and errno is set to EDOM (but see BUGS).

Domain error: x is an infinity

An invalid floating-point exception (FE_INVALID) is raised, and errno is set to EDOM (but see BUGS).

ATTRIBUTES

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

Interface	Attribute	Value
ilogb(), ilogbf(), ilogbl()	Thread safety	MT-Safe

CONFORMING TO

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

BUGS

Before version 2.16, the following bugs existed in the glibc implemen? tation of these functions:

* The domain error case where x is 0 or a NaN did not cause errno to be set or (on some architectures) raise a floating-point exception.
* The domain error case where x is an infinity did not cause errno to be set or raise a floating-point exception.

SEE ALSO

log(3), logb(3), significand(3)

COLOPHON

This page is part of release 5.10 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/.