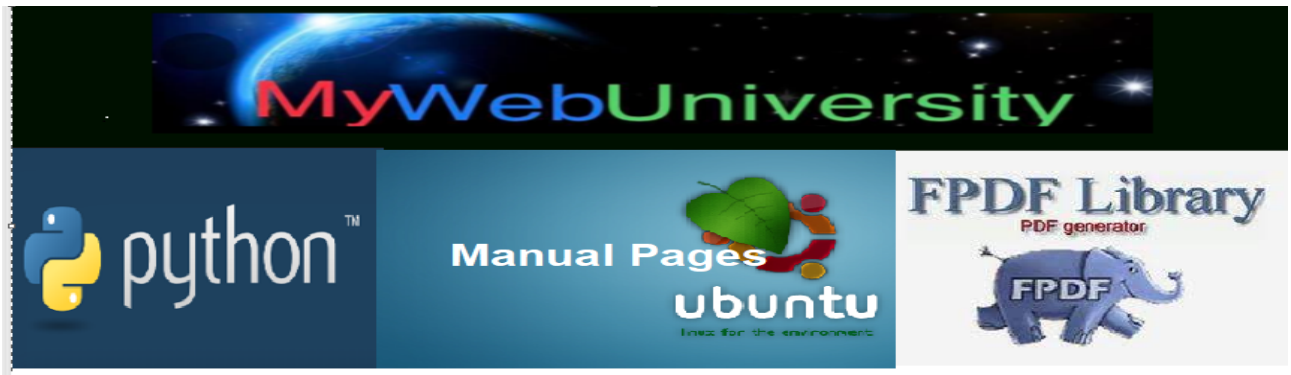

Full credit is given to the above companies including the OS that this PDF file was generated!

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

$ man fmaf.3

fma(3) Library Functions Manual fma(3)

NAME

fma, fmaf, fmal - floating-point multiply and add

LIBRARY

Math library (libm, -lm)

SYNOPSIS

```
#include <math.h>

double fma(double x, double y, double z);

float fmaf(float x, float y, float z);

long double fmal(long double x, long double y, long double z);
```

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

fma(), fmaf(), fmal():

_ISOC99_SOURCE || _POSIX_C_SOURCE >= 200112L

DESCRIPTION

These functions compute x * y + z. The result is rounded as one ternary operation according to the current rounding mode (see fenv(3)).

RETURN VALUE

These functions return the value of x * y + z, rounded as one ternary operation.

If x or y is a NaN, a NaN is returned.

If x times y is an exact infinity, and z is an infinity with the opposite sign, a domain er?

ror occurs, and a NaN is returned.

If one of x or y is an infinity, the other is 0, and z is not a NaN, a domain error occurs, and a NaN is returned.

If one of x or y is an infinity, and the other is 0, and z is a NaN, a domain error occurs, and a NaN is returned.

If x times y is not an infinity times zero (or vice versa), and z is a NaN, a NaN is re? turned.

If the result overflows, a range error occurs, and an infinity with the correct sign is re? turned.

If the result underflows, a range error occurs, and a signed 0 is returned.

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 * y + z or x * y is invalid.

An invalid floating-point exception (FE_INVALID) is raised.

Range error: result overflow

An overflow floating-point exception (FE_OVERFLOW) is raised.

Range error: result underflow

An underflow floating-point exception (FE_UNDERFLOW) is raised.

These functions do not set errno.

ATTRIBUTES

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

Interface	Attribute	Value
fma(), fmaf(), fmal()	Thread safety	MT-Safe

STANDARDS

C11, POSIX.1-2008.

HISTORY

glibc 2.1. C99, POSIX.1-2001.

SEE ALSO

remainder(3), remquo(3)