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Rocky Enterprise Linux 9.2 Manual Pages on command '`__ppc_get_timebase.3`'

\$ man __ppc_get_timebase.3

`__PPC_GET_TIMEBASE(3)` Linux Programmer's Manual `__PPC_GET_TIMEBASE(3)`

NAME

`__ppc_get_timebase`, `__ppc_get_timebase_freq` - get the current value of the Time Base Register on Power architecture and its frequency.

SYNOPSIS

```
#include <sys/platform/ppc.h>

uint64_t __ppc_get_timebase(void)

uint64_t __ppc_get_timebase_freq(void);
```

DESCRIPTION

`__ppc_get_timebase()` reads the current value of the Time Base Register and returns its value, while `__ppc_get_timebase_freq()` returns the frequency in which the Time Base Register is updated.

The Time Base Register is a 64-bit register provided by Power Architecture processors. It stores a monotonically incremented value that is updated at a system-dependent frequency that may be different from the processor frequency.

RETURN VALUE

`__ppc_get_timebase()` returns a 64-bit unsigned integer that represents the current value of the Time Base Register.

`__ppc_get_timebase_freq()` returns a 64-bit unsigned integer that represents the frequency at which the Time Base Register is updated.

VERSIONS

GNU C Library support for `__ppc_get_timebase()` has been provided since version 2.16 and `__ppc_get_timebase_freq()` has been available since version 2.17.

CONFORMING TO

Both functions are nonstandard GNU extensions.

EXAMPLES

The following program will calculate the time, in microseconds, spent between two calls to `__ppc_get_timebase()`.

Program source

```
#include <inttypes.h>

#include <stdint.h>

#include <stdio.h>

#include <stdlib.h>

#include <sys/platform/ppc.h>

/* Maximum value of the Time Base Register: 2^60 - 1.
   Source: POWER ISA. */
#define MAX_TB 0xFFFFFFFFFFFFFFFF

int
main(void)
{
    uint64_t tb1, tb2, diff;

    uint64_t freq = __ppc_get_timebase_freq();

    printf("Time Base frequency = %"PRIu64" Hz\n", freq);

    tb1 = __ppc_get_timebase();

    // Do some stuff...

    tb2 = __ppc_get_timebase();

    if (tb2 > tb1) {
        diff = tb2 - tb1;
    } else {
        /* Treat Time Base Register overflow. */
        diff = (MAX_TB - tb2) + tb1;
    }

    printf("Elapsed time = %1.2f usecs\n",
           (double) diff * 1000000 / freq );

    exit(EXIT_SUCCESS);
}
```

SEE ALSO

`time(2)`, `usleep(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/>.

GNU C Library

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