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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'sManual      \_\_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 0xFFFFFFFFFFFFFF

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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