

**NAME**

`s390_pci_mmio_write`, `s390_pci_mmio_read` – transfer data to/from PCI MMIO memory page

**SYNOPSIS**

```
#include <asm/unistd.h>
```

```
int s390_pci_mmio_write(unsigned long mmio_addr,  
                        void *user_buffer, size_t length);
```

```
int s390_pci_mmio_read(unsigned long mmio_addr,  
                       void *user_buffer, size_t length);
```

**DESCRIPTION**

The `s390_pci_mmio_write()` system call writes *length* bytes of data from the user-space buffer *user\_buffer* to the PCI MMIO memory location specified by *mmio\_addr*. The `s390_pci_mmio_read()` system call reads *length* bytes of data from the PCI MMIO memory location specified by *mmio\_addr* to the user-space buffer *user\_buffer*.

These system calls must be used instead of the simple assignment or data-transfer operations that are used to access the PCI MMIO memory areas mapped to user space on the Linux System z platform. The address specified by *mmio\_addr* must belong to a PCI MMIO memory page mapping in the caller's address space, and the data being written or read must not cross a page boundary. The *length* value cannot be greater than the system page size.

**RETURN VALUE**

On success, `s390_pci_mmio_write()` and `s390_pci_mmio_read()` return 0. On error, `-1` is returned and *errno* is set to one of the error codes listed below.

**ERRORS****EFAULT**

The address in *mmio\_addr* is invalid.

**EFAULT**

*user\_buffer* does not point to a valid location in the caller's address space.

**EINVAL**

Invalid *length* argument.

**ENODEV**

PCI support is not enabled.

**ENOMEM**

Insufficient memory.

**VERSIONS**

These system calls are available since Linux 3.19.

**CONFORMING TO**

This Linux-specific system call is available only on the s390 architecture. The required PCI support is available beginning with System z EC12.

**NOTES**

Glibc does not provide a wrapper for this system call, use `syscall(2)` to call it.

**SEE ALSO**

`syscall(2)`

**COLOPHON**

This page is part of release 5.02 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/>.