

**NAME**

ether\_aton, ether\_ntoa, ether\_ntohost, ether\_hostton, ether\_line, ether\_ntoa\_r, ether\_aton\_r – Ethernet address manipulation routines

**SYNOPSIS**

```
#include <netinet/ether.h>

char *ether_ntoa(const struct ether_addr *addr);

struct ether_addr *ether_aton(const char *asc);

int ether_ntohost(char *hostname, const struct ether_addr *addr);

int ether_hostton(const char *hostname, struct ether_addr *addr);

int ether_line(const char *line, struct ether_addr *addr,
               char *hostname);

/* GNU extensions */
char *ether_ntoa_r(const struct ether_addr *addr, char *buf);

struct ether_addr *ether_aton_r(const char *asc,
                                struct ether_addr *addr);
```

**DESCRIPTION**

**ether\_aton()** converts the 48-bit Ethernet host address *asc* from the standard hex-digits-and-colons notation into binary data in network byte order and returns a pointer to it in a statically allocated buffer, which subsequent calls will overwrite. **ether\_aton()** returns NULL if the address is invalid.

The **ether\_ntoa()** function converts the Ethernet host address *addr* given in network byte order to a string in standard hex-digits-and-colons notation, omitting leading zeros. The string is returned in a statically allocated buffer, which subsequent calls will overwrite.

The **ether\_ntohost()** function maps an Ethernet address to the corresponding hostname in */etc/ethers* and returns nonzero if it cannot be found.

The **ether\_hostton()** function maps a hostname to the corresponding Ethernet address in */etc/ethers* and returns nonzero if it cannot be found.

The **ether\_line()** function parses a line in */etc/ethers* format (ethernet address followed by whitespace followed by hostname; '#' introduces a comment) and returns an address and hostname pair, or nonzero if it cannot be parsed. The buffer pointed to by *hostname* must be sufficiently long, for example, have the same length as *line*.

The functions **ether\_ntoa\_r()** and **ether\_aton\_r()** are reentrant thread-safe versions of **ether\_ntoa()** and **ether\_aton()** respectively, and do not use static buffers.

The structure *ether\_addr* is defined in *<net/ethernet.h>* as:

```
struct ether_addr {
    uint8_t ether_addr_octet[6];
}
```

**ATTRIBUTES**

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

Interface	Attribute	Value
<b>ether_aton()</b> , <b>ether_ntoa()</b>	Thread safety	MT-Unsafe
<b>ether_ntohost()</b> , <b>ether_hostton()</b> , <b>ether_line()</b> , <b>ether_ntoa_r()</b> , <b>ether_aton_r()</b>	Thread safety	MT-Safe

**CONFORMING TO**

4.3BSD, SunOS.

**BUGS**

In glibc 2.2.5 and earlier, the implementation of **ether\_line()** is broken.

**SEE ALSO**

[ethers\(5\)](#)

**COLOPHON**

This page is part of release 4.16 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/>.