```
**********************************************************
    4047 Fri Aug  8 13:32:23 2014
new/usr/src/man/man5/Makefile
5073 need ieee802.3(5) man page
5074 elxl(7D) page needed
5054 rtls(7D) needed
5053 need iprb(7D) man page
Reviewed by: Eric Sproul <esproul@omniti.com>
Approved by: TBD
**********************************************************
```

```
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#

include         $(SRC)/Makefile.master

MANSECT=        5

MANFILES=       Intro.5                 \
                acl.5                   \
                ad.5                    \
                ascii.5                 \
                attributes.5            \
                audit_binfile.5         \
                audit_remote.5          \
                audit_syslog.5          \
                brands.5                \
                cancellation.5          \
                charmap.5               \
                condition.5             \
                crypt_bsdbf.5           \
                crypt_bsdmd5.5          \
                crypt_sha256.5          \
                crypt_sha512.5          \
                crypt_sunmd5.5          \
                crypt_unix.5            \
                device_clean.5          \
                dhcp.5                  \
                dhcp_modules.5          \
                environ.5               \
                eqn.5                   \
                eqnchar.5               \
                extendedFILE.5          \
                filesystem.5            \
                fnmatch.5               \
                formats.5               \
                fsattr.5                \
                grub.5                  \
                gss_auth_rules.5        \
                hal.5                   \
                iconv.5                 \
                iconv_unicode.5         \
```



```
                ieee802.3.5             \
                ieee802.11.5            \
                ipfilter.5              \
                isalist.5               \
                kerberos.5              \
                krb5_auth_rules.5       \
                krb5envvar.5            \
                largefile.5             \
                lf64.5                  \
                lfcompile.5             \
                lfcompile64.5           \
                locale.5                \
                man.5                   \
                mandoc_char.5           \
                mandoc_roff.5           \
                mdoc.5                  \
                me.5                    \
                mech_spnego.5           \
                mm.5                    \
                ms.5                    \
                mutex.5                 \
                nfssec.5                \
                pam_allow.5             \
                pam_authtok_check.5     \
                pam_authtok_get.5       \
                pam_authtok_store.5     \
                pam_deny.5              \
                pam_dhkeys.5            \
                pam_dial_auth.5         \
                pam_krb5.5              \
                pam_krb5_migrate.5      \
                pam_ldap.5              \
                pam_list.5              \
                pam_passwd_auth.5       \
                pam_rhosts_auth.5       \
                pam_roles.5             \
                pam_sample.5            \
                pam_smb_passwd.5        \
                pam_smbfs_login.5       \
                pam_tsol_account.5      \
                pam_unix_account.5      \
                pam_unix_auth.5         \
                pam_unix_cred.5         \
                pam_unix_session.5      \
                pkcs11_kernel.5         \
                pkcs11_softtoken.5      \
                pkcs11_tpm.5            \
                privileges.5            \
                prof.5                  \
                rbac.5                  \
                regex.5                 \
                regexp.5                \
                resource_controls.5     \
                smf.5                   \
                smf_bootstrap.5         \
                smf_method.5            \
                smf_restarter.5         \
                smf_security.5          \
                smf_template.5          \
                standards.5             \
                sticky.5                \
                tbl.5                   \
                tecla.5                 \
                term.5                  \
                threads.5               \
                trusted_extensions.5    \
```

```
123                 vgrindefs.5             \
124                 zones.5                 \
125                 zpool-features.5

127 MANLINKS=       ANSI.5          \
128                 C++.5           \
129                 C.5             \
130                 CSI.5           \
131                 ISO.5           \
132                 MT-Level.5      \
133                 POSIX.1.5       \
134                 POSIX.2.5       \
135                 POSIX.5         \
136                 RBAC.5          \
137                 SUS.5           \
138                 SUSv2.5         \
139                 SUSv3.5         \
140                 SVID.5          \
141                 SVID3.5         \
142                 XNS.5           \
143                 XNS4.5          \
144                 XNS5.5          \
145                 XPG.5           \
146                 XPG3.5          \
147                 XPG4.5          \
148                 XPG4v2.5        \
149                 advance.5       \
150                 architecture.5  \
151                 availability.5  \
152                 compile.5       \
153                 intro.5         \
154                 pthreads.5      \
155                 stability.5     \
156                 standard.5      \
157                 step.5          \
158                 teclarc.5

160 intro.5         := LINKSRC = Intro.5

162 CSI.5           := LINKSRC = attributes.5
163 MT-Level.5      := LINKSRC = attributes.5
164 architecture.5  := LINKSRC = attributes.5
165 availability.5  := LINKSRC = attributes.5
166 stability.5     := LINKSRC = attributes.5
167 standard.5      := LINKSRC = attributes.5

169 RBAC.5          := LINKSRC = rbac.5

171 advance.5       := LINKSRC = regexp.5
172 compile.5       := LINKSRC = regexp.5
173 step.5          := LINKSRC = regexp.5

175 ANSI.5          := LINKSRC = standards.5
176 C++.5           := LINKSRC = standards.5
177 C.5             := LINKSRC = standards.5
178 ISO.5           := LINKSRC = standards.5
179 POSIX.1.5       := LINKSRC = standards.5
180 POSIX.2.5       := LINKSRC = standards.5
181 POSIX.5         := LINKSRC = standards.5
182 SUS.5           := LINKSRC = standards.5
183 SUSv2.5         := LINKSRC = standards.5
184 SUSv3.5         := LINKSRC = standards.5
185 SVID.5          := LINKSRC = standards.5
186 SVID3.5         := LINKSRC = standards.5
187 XNS.5           := LINKSRC = standards.5
188 XNS4.5          := LINKSRC = standards.5
```



```
189 XNS5.5          := LINKSRC = standards.5
190 XPG.5           := LINKSRC = standards.5
191 XPG3.5          := LINKSRC = standards.5
192 XPG4.5          := LINKSRC = standards.5
193 XPG4v2.5        := LINKSRC = standards.5

195 teclarc.5       := LINKSRC = tecla.5

197 pthreads.5      := LINKSRC = threads.5

199 .KEEP_STATE:

201 include         $(SRC)/man/Makefile.man

203 install:        $(ROOTMANFILES) $(ROOTMANLINKS)
```

```
**********************************************************
   15144 Fri Aug  8 13:32:24 2014
new/usr/src/man/man5/ieee802.3.5
5073 need ieee802.3(5) man page
5074 elxl(7D) page needed
5054 rtls(7D) needed
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Reviewed by: Eric Sproul <esproul@omniti.com>
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```
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.\"
.Dd "Aug 7, 2014"
.Dt IEEE802.3 5
.Os
.Sh NAME
.Nm ieee802.3
.Nd IEEE 802.3 Ethernet parameters and statistics
.Sh DESCRIPTION
The IEEE 802.3 standard specifies the details for Ethernet
networking.  This page describes the various statistics and tunables
that device drivers supporting Ethernet commonly offer.
.
Note that not every device or driver supports every one of these
values, and many devices offer additional statistics and tunables that
are specific to that hardware.  See the device driver's documentation
for those specific details.
.
.Lp
Values that are statistics are visible
.Xr kstat 1M ,
whereas properties are visible using the
.Xr dladm 1M
.Sy show-linkprop
subcommand.  Tunables are properties that can be changed using the
.Xr dladm 1M
.Sy set-linkprop
subcommand.  A more useful summary of current operational
state can be seen with the
.Xr dladm 1M
.Sy show-ether
subcommand.
.
.Ss Statistics
The following statistics are accessible with
.Xr kstat 1M .
```



```
Note that some statistics are available in both 32- and 64-bit counters,
in which case the name of the 64 bit statistic will be the same as the
32-bit, but with
.Dq Sy 64
appended.  For example,
.Sy ipackets64
is the 64-bit version of the
.Sy ipackets
statistic. These are indicated with the special suffix
.Op Sy 64
in the table below.
.
.Bl -tag -width tx_late_collisions
.It Sy adv_cap_1000fdx
Advertises 1000 Mbps full-duplex support.
.It Sy adv_cap_1000hdx
Advertises 1000 Mbps half-duplex support.
.It Sy adv_cap_100fdx
Advertises 100 Mbps full-duplex support.
.It Sy adv_cap_100hdx
Advertises 100 Mbps half-duplex support.
.It Sy adv_cap_100T4
Advertises 100BASE-T4 support.
.It Sy adv_cap_10fdx
Advertises 10 Mbps full-duplex support.
.It Sy adv_cap_10gfdx
Advertises 10 Gbps support.
.It Sy adv_cap_10hdx
Advertises 10 Mbps half-duplex support.
.It Sy adv_cap_autoneg
Advertises auto-negotiation support.
.It Sy adv_cap_asmpause
Advertises asymmetric flow control support.
.It Sy adv_cap_pause
Advertises flow control support.
.It Sy adv_rem_fault
Remote fault status sent to peer.
.It Sy align_errors
Mis-aligned frames received.
.It Sy brdcstrcv
Broadcast frames received.
.It Sy brdcstxmt
Broadcast frames transmitted.
.It Sy cap_1000fdx
Device supports 1000 Mbps full-duplex.
.It Sy cap_1000hdx
Device supports 1000 Mbps half-duplex.
.It Sy cap_100fdx
Device supports 100 Mbps full-duplex.
.It Sy cap_100hdx
Device supports 100 Mbps half-duplex.
.It Sy cap_100T4
Device supports 100BASE-T4.
.It Sy cap_10fdx
Device supports 10 Mbps full-duplex.
.It Sy cap_10gfdx
Device supports 10 Gpbs.
.It Sy cap_10hdx
Device supports 10 Mbps half-duplex.
.It Sy cap_asmpause
Device supports asymmetric flow control.
.It Sy cap_autoneg
Device supports auto-negotiation.
.It Sy cap_pause
Device supports symmetric flow control.
.It Sy cap_rem_fault
```

```
Device supports remote fault notification.
.It Sy carrier_errors
Frames dropped due to loss of link.
.It Sy collisions
Collisions.
.It Sy defer_xmts
Transmits deferred due to link activity.
.It Sy ex_collisions
Frames dropped due to too many collisions.
.It Sy fcs_errors
Frames received with bad frame checksum.
.It Sy first_collisions
Frames with at least one collision.
.It Sy ierrors
Receive errors.
.It Sy ifspeed
Link speed in bits per second.
.It Sy ipackets Ns Op Sy 64
Frames received successfully.
.It Sy jabber_errors
Jabber errors.
.It Sy link_asmpause
Asymmetric flow control; works together with
.Sy link_pause .
See the description for it below.
.It Sy link_autoneg
Link was auto-negotiated.
.It Sy link_duplex
Link duplex status, values as follows:
.Bl -column "0" infinity
.It 0 Ta Unknown.
.It 1 Ta Half-duplex.
.It 2 Ta Full-duplex.
.El
.It Sy link_pause
Link flow control available; works together with
.Sy link_asmpause .
The meanings of these bits are:
.Bl -column "pause" "asmpause"
.It Sy pause Ta Sy asmpause Ta Sy meaning
.It 0 Ta 0 Ta "No flow control."
.It 1 Ta 0 Ta Symmetric flow control.
.It 0 Ta 1 Ta Honor received pause frames.
.It 1 Ta 1 Ta Send pause frames when congested.
.El
.It Sy link_state
Link state; 0 for down, 1 for up.
.It Sy link_up
Link is up if 1.
.It Sy lp_cap_1000fdx
Peer supports 1000 Mbps full-duplex.
.It Sy lp_cap_1000hdx
Peer supports 1000 Mbps half-duplex.
.It Sy lp_cap_100fdx
Peer supports 100 Mbps full-duplex.
.It Sy lp_cap_100hdx
Peer supports 100 Mbps half-duplex.
.It Sy lp_cap_100T4
Peer supports 100BASE-T4.
.It Sy lp_cap_10fdx
Peer supports 10 Mbps full-duplex.
.It Sy lp_cap_10gfdx
Peer supports 10 Gbps.
.It Sy lp_cap_10hdx
Peer supports 10 Mbps half-duplex.
.It Sy lp_cap_asmpause
```



```
Peer supports asymmetric flow control.
.It Sy lp_cap_autoneg
Peer supports auto-negotiation.
.It Sy lp_cap_pause
Peer advertises flow control support.
.It Sy lp_rem_fault
Peer announces a remote fault.
.It Sy macrv_errors
Generic receive errors.
.It Sy macxmt_errors
Generic transmit errors.
.It Sy multi_collisions
Frames with more than one collision.
.It Sy multircv
Multicast frames received.
.It Sy multixmt
Multicast frames transmitted.
.It Sy norcvbuf
Receive frames dropped due to lack of resources.
.It Sy noxmtbuf
Transmit frames dropped due to lack of resources.
.It Sy obytes Ns Op Sy 64
Bytes (octets) transmitted successfully.
.It Sy oerrors
Transmit errors.
.It Sy oflo
Overflow errors.
.It Sy opackets Ns Op Sy 64
Frames successfully transmitted.
.It Sy promisc
Interface is in promiscuous mode.
.It Sy rbytes Ns Op Sy 64
Bytes (octets) received successfully.
.It Sy runt_errors
Frames received that were too short.
.It Sy sqe_errors
Squelch errors.
.It Sy toolong_errors
Frames received that were too long.
.It Sy tx_late_collisions
Late collisions on transmit.
.It Sy uflo
Underflow errors.
.It Sy unknowns
Frames received with no local recipient.
.It Sy xcvr_addr
Transceiver address.
.It Sy xcvr_id
Transceiver vendor and device ID.
.It Sy xcvr_inuse
Identifies the type of transceiver in use.  Values are as follows:
.Bl -column "0"
.It 0 Ta Unknown or undefined.
.It 1 Ta None.
.It 2 Ta 10 Mbps
.It 3 Ta 100BASE-T4
.It 4 Ta 100BASE-X
.It 5 Ta 100BASE-T2
.It 6 Ta 1000BASE-X
.It 7 Ta 1000BASE-T
.El
.El
.Ss Properties
The following parameters are accessible with
.Xr dladm 1M .
Some of these are normally read-only.  Other properties that are not
```

```
specific to IEEE 802.3 / Ethernet links are also available via
.Xr dladm 1M ,
and are documented in its man page rather than here.
.
.Bl -tag -width adv_1000hdx_cap
.It Sy speed
Link speed, in Mbps per second (dladm only).
.It Sy duplex
Link duplex, either "full" or "half".
.It Sy state
Link state, either "up" or "down".
.It Sy mtu
Maximum link frame size in bytes. See
.Sx Jumbo Frames .
.It Sy flowctrl
Flow control setting, one of \(dqno\(dq, \(dqtx\(dq, \(dqrx\(dq, or \(dqbi\(dq.
See
.Sx Flow Control .
.It Sy adv_10gfdx_cap
Advertising 10 Gbps support.
.It Sy en_10gfdx_cap
Enable 10 Gbps support.
.
.It Sy adv_1000fdx_cap
Advertising 1000 Mbps full-duplex support.
.It Sy en_1000fdx_cap
Enable 1000 Mbps full-duplex.
.
.It Sy adv_1000hdx_cap
Advertising 1000 Mbps half-duplex support.
.It Sy en_1000hdx_cap
Enable 1000 Mbps half-duplex.
.
.It Sy adv_100fdx_cap
Advertising 100 Mbps full-duplex support.
.It Sy en_100fdx_cap
Enable 100 Mbps full-duplex.
.
.It Sy adv_100hdx_cap
Advertising 100 Mbps half-duplex support.
.It Sy en_100hdx_cap
Enable 100 Mbps half-duplex.
.
.It Sy adv_10fdx_cap
Advertising 10 Mbps full-duplex support.
.It Sy en_10fhdx_cap
Enable 100 Mbps full-duplex.
.
.It Sy adv_10hdx_cap
Advertising 10 Mbps half-duplex support.
.It Sy en_10fhdx_cap
Enable 10 Mbps half-duplex.
.El
.Ss Auto-negotiation
With modern devices, auto-negotiation is normally handled automatically.  With
10 Gbps and 1000 Gbps, it is mandatory.  (10GBASE-T also requires full-duplex
operation.) It is also
.Em strongly
recommended for use whenever possible; without auto-negotiation the link
will usually not operate unless both partners are configured to use the
same link mode.
.Lp
Auto-negotiation, when enabled, takes place by comparing the local capabilities
that have been advertised (which must also be supported by the local device),
with the capabilities that have been advertised by the link partner (peer).
.
```



```
The first of the following modes that is supported by both partners is
selected as the link negotiation result:
.Lp
.Bl -bullet -offset indent -compact
.It
10 Gbps (10gfdx)
.It
1000 Mbps full-duplex (1000fdx)
.It
1000 Mbps half-duplex (1000hdx)
.It
100 Mbps full-duplex (100fdx)
.It
100BASE-T4 (100T4)
.It
100 Mbps half-duplex (100hdx)
.It
10 Mbps full-duplex (10fdx)
.It
10 Mbps half-duplex (10hdx)
.El
.Lp
Advertisement of these modes can be enabled or disabled by setting the
appropriate
.Sy en_
property in
.Xr dladm 1M .
.Lp
Auto-negotation may also be disabled, by setting the
.Sy adv_autoneg_cap
property to 0.  In this case, the highest enabled link mode (using the above
list) is
.Dq forced
for the link.
.Ss Flow Control
Link layer flow control is available on many modern devices, and is mandatory
for operation at 10 Gbps. It requires that the link be auto-negotiated, and
that the link be full-duplex, in order to function.
.Lp
Flow control is applied when a receiver becomes congested.  In this case the
receiver can send a special frame, called a pause frame, to request its
partner cease transmitting for a short period of time.
.Lp
Flow control can be said to be either symmetric, in which case both partners
can send and honor pause frames, or asymmetric, in which case one partner
may not transmit pause frames.
.Lp
The flow control mode used is driven by the
.Sy flowctrl
property.  It has the following meanings:
.Lp
.Bl -column -compact -offset indent Dv
.It \(dqno\(dq Ta Neither send, nor honor pause frames.
.It \(dqtx\(dq Ta Send pause frames, provided that the peer can support them,
but do not honor them.
.It \(dqrx\(dq Ta Receive and honor pause frames.
.It \(dqbi\(dq Ta Both send and receive (and honor) pause frames.
.El
.Lp
The statistics for flow control
.Po Sy adv_cap_pause , adv_cap_asmpause , lp_cap_pause , lp_cap_asmpause ,
.Sy link_pause ,
and
.Sy link_asmpause
.Pc
are based on the properties exchanged in the auto-negotiation and are
```

```
confusing as a result.  Administrators are advised to use the
.Sy flowctrl
property instead.
.
.Ss Jumbo Frames
The IEEE 802.3 standard specifies a standard frame size of 1518 bytes,
which includes a 4-byte frame checksum, a 14-byte header, and 1500 bytes
of payload.  Most devices support larger frame sizes than this, and
when all possible parties on the same local network can do so, it may be
advantageous to choose a larger frame size; 9000 bytes is the most common
option, as it allows a transport layer to convey 8 KB (8192) of data, while
leaving room for various link, network, and transport layer headers.
.Lp
Note that the use of frames carrying more than 1500 bytes of payload is
not standardized, even though it is common practice.
.Lp
The
.Sy mtu
property is used to configure the frame size.  Note that this is the size of
the payload, and excludes the preamble, checksum, and header.  It also excludes
the tag for devices that support tagging (see
.Sx Virtual LANs
below).
.Lp
Care must be taken to ensure that all communication parties agree on the same
size, or communication may cease to function properly.
.Lp
Note that the
.Sy mtu
property refers to the link layer property.  It may be necessary to configure
upper layer protocols such as IP to use a different size when this changes.
See
.Xr ifconfig 1M .
.
.Ss Virtual LANs
Most devices support virtual LANs (and also priority control tagging) though
the use of a 4-byte tag inserted between the frame header and payload.  The
details of configuration of this are covered in the
.Xr dladm 1M
manual.
.
.Ss Data Link Provider Interface (DLPI) Details
.
The correct method for applications to access Ethernet devices directly
is to use the DLPI. See
.Xr dlpi 7P
and
.Xr libdlpi 3LIB
for further information.
.Lp
The following DLPI parameters are presented to applications.
.Bl -column -offset indent "Broadcast address"
.It Maximum SDU Ta 1500 (or larger, as determined by the Sy mtu No property.)
.It Minimum SDU Ta 0
.It Address length Ta 6
.It MAC type Ta Dv DL_ETHER
.It SAP length Ta \(mi2
.It Service mode Ta Dv DL_CLDLS
.It Broadcast address Ta Li ff:ff:ff:ff:ff:ff No (6 bytes with all bits set)
.El
.Lp
Note that if the application binds to SAP of 0, then standard IEEE 802.3
mode is assumed and the frame length is stored in place of the Ethernet type.
Frames that arrive with the type field set to 1500 or less, are delivered
to applications that bind to SAP 0.
.Lp
```



```
Ethernet drivers on the support both DLPI style 1 and style 2 operation.
Additionally, it is possible to configure provide
.Dq vanity
names to interfaces using the
.Xr dladm 1M
.Sy rename-link
subcommand.  Such vanity names are only accessible using DLPI style 1.
.Sh NOTES
There may be other mechanisms available to configure link layer properties.
Historically the
.Xr ndd 1M
command, and
.Xr driver.conf 4
files could be used to do this.  These methods are deprecated in favor of
.Xr dladm 1M
properties.
.
.Sh INTERFACE STABILITY
When present, the statistics and properties presented here
are
.Sy Committed .
However, note that not every Ethernet device supports all of these,
and some devices may support additional statistics and properties.
.Lp
The DLPI and IEEE 802.3 itself are
.Sy Standard .
.Sh SEE ALSO
.Xr dladm 1M ,
.Xr ifconfig 1M ,
.Xr kstat 1M ,
.Xr netstat 1M ,
.Xr ndd 1M ,
.Xr libdlpi 3LIB ,
.Xr driver.conf 4 ,
.Xr dlpi 7P
.Rs
.%T IEEE 802.3: Ethernet
.%Q IEEE Standards Association
.Re
.Rs
.%B Data Link Provider Interface (DLPI)
.%Q The Open Group
.%D 1997
.Re
.Rs
.%B STREAMs Programming Guide
.%Q Sun Microsystems, Inc.
.%D January 2005
.Re
```

```
**********************************************************
    4562 Fri Aug  8 13:32:24 2014
new/usr/src/man/man7d/Makefile
5073 need ieee802.3(5) man page
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Reviewed by: Eric Sproul <esproul@omniti.com>
Approved by: TBD
**********************************************************
```

```
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#

include         $(SRC)/Makefile.master

MANSECT=        7d

_MANFILES=      aac.7d          \
                afe.7d          \
                audio.7d        \
                audio1575.7d    \
                audioens.7d     \
                audiols.7d      \
                audiop16x.7d    \
                audiopci.7d     \
                audiots.7d      \
                av1394.7d       \
                bge.7d          \
                blkdev.7d       \
                bscv.7d         \
                chxge.7d        \
                console.7d      \
                cpuid.7d        \
                dca.7d          \
                dcam1394.7d     \
                devinfo.7d      \
                dmfe.7d         \
                dtrace.7d       \
                ehci.7d         \
                elxl.7d         \
                fasttrap.7d     \
                fbt.7d          \
                fcip.7d         \
                fcoe.7d         \
                fcoei.7d        \
                fcoet.7d        \
                fcp.7d          \
                fctl.7d         \
                fd.7d           \
                fp.7d           \
                gld.7d          \
                hci1394.7d      \
```



```
                hermon.7d       \
                hid.7d          \
                hme.7d          \
                hubd.7d         \
                hwahc.7d        \
                hwarc.7d        \
                hxge.7d         \
                ib.7d           \
                ibcm.7d         \
                ibd.7d          \
                ibdm.7d         \
                ibdma.7d        \
                ibtl.7d         \
                ieee1394.7d     \
                igb.7d          \
                ii.7d           \
                ipnet.7d        \
                iprb.7d         \
                iscsi.7d        \
                iser.7d         \
                ixgbe.7d        \
                kmdb.7d         \
                kstat.7d        \
                ksyms.7d        \
                llc1.7d         \
                lockstat.7d     \
                lofi.7d         \
                log.7d          \
                md.7d           \
                mediator.7d     \
                mem.7d          \
                mpt_sas.7d      \
                mr_sas.7d       \
                msglog.7d       \
                mt.7d           \
                mxfe.7d         \
                myri10ge.7d     \
                null.7d         \
                nulldriver.7d   \
                nxge.7d         \
                ohci.7d         \
                openprom.7d     \
                pcic.7d         \
                pcmcia.7d       \
                physmem.7d      \
                pm.7d           \
                poll.7d         \
                profile.7d      \
                ptm.7d          \
                pts.7d          \
                pty.7d          \
                qlc.7d          \
                ramdisk.7d      \
                random.7d       \
                rge.7d          \
                rtls.7d         \
                sad.7d          \
                sata.7d         \
                scsa1394.7d     \
                scsa2usb.7d     \
                sd.7d           \
                sdp.7d          \
                sdt.7d          \
                ses.7d          \
                sfe.7d          \
                sgen.7d         \
```

```
123                 srpt.7d         \
124                 st.7d           \
125                 sv.7d           \
126                 sysmsg.7d       \
127                 systrace.7d     \
128                 ticlts.7d       \
129                 tty.7d          \
130                 ttymux.7d       \
131                 tzmon.7d        \
132                 ugen.7d         \
133                 uhci.7d         \
134                 usb_ac.7d       \
135                 usb_as.7d       \
136                 usb_ia.7d       \
137                 usb_mid.7d      \
138                 usba.7d         \
139                 usbftdi.7d      \
140                 usbprn.7d       \
141                 usbsacm.7d      \
142                 usbsksp.7d      \
143                 usbsprl.7d      \
144                 usbvc.7d        \
145                 uwba.7d         \
146                 virtualkm.7d    \
147                 vni.7d          \
148                 vr.7d           \
149                 wscons.7d       \
150                 wusb_ca.7d      \
151                 wusb_df.7d      \
152                 xge.7d          \
153                 yge.7d          \
154                 zcons.7d        \
155                 zero.7d

157 sparc_MANFILES= audiocs.7d      \
158                 bbc_beep.7d     \
159                 ctsmc.7d        \
160                 cvc.7d          \
161                 cvcredir.7d     \
162                 dad.7d          \
163                 dm2s.7d         \
164                 dr.7d           \
165                 eri.7d          \
166                 fas.7d          \
167                 gpio_87317.7d   \
168                 grbeep.7d       \
169                 idn.7d          \
170                 mc-opl.7d       \
171                 n2rng.7d        \
172                 ncp.7d          \
173                 ntwdt.7d        \
174                 oplkmdrv.7d     \
175                 oplmsu.7d       \
176                 oplpanel.7d     \
177                 pcicmu.7d       \
178                 pcipsy.7d       \
179                 pcisch.7d       \
180                 schpc.7d        \
181                 sf.7d           \
182                 smbus.7d        \
183                 socal.7d        \
184                 ssd.7d          \
185                 su.7d           \
186                 todopl.7d       \
187                 tsalarm.7d      \
188                 zs.7d           \
```



```
189                 zsh.7d

191 i386_MANFILES=  ahci.7d         \
192                 amd8111s.7d     \
193                 amr.7d          \
194                 arcmsr.7d       \
195                 arn.7d          \
196                 asy.7d          \
197                 ata.7d          \
198                 atge.7d         \
199                 ath.7d          \
200                 atu.7d          \
201                 audio810.7d     \
202                 audiocmi.7d     \
203                 audiocmihd.7d   \
204                 audioemu10k.7d  \
205                 audiohd.7d      \
206                 audioixp.7d     \
207                 audiosolo.7d    \
208                 audiovia823x.7d \
209                 audiovia97.7d   \
210                 bcm_sata.7d     \
211                 bfe.7d          \
212                 cmdk.7d         \
213                 cpqary3.7d      \
214                 dnet.7d         \
215                 ecpp.7d         \
216                 heci.7d         \
217                 i915.7d         \
218                 ipmi.7d         \
219                 ipw.7d          \
220                 iwh.7d          \
221                 iwi.7d          \
222                 mega_sas.7d     \
223                 npe.7d          \
224                 ntxn.7d         \
225                 nv_sata.7d      \
226                 pcn.7d          \
227                 radeon.7d       \
228                 ral.7d          \
229                 rtw.7d          \
230                 rum.7d          \
231                 rwd.7d          \
232                 rwn.7d          \
233                 sda.7d          \
234                 sdhost.7d       \
235                 si3124.7d       \
236                 smbios.7d       \
237                 uath.7d         \
238                 ural.7d         \
239                 urtw.7d         \
240                 wpi.7d          \
241                 zyd.7d

243 _MANLINKS=      1394.7d         \
244                 allkmem.7d      \
245                 bscbus.7d       \
246                 fdc.7d          \
247                 firewire.7d     \
248                 hwa1480_fw.7d   \
249                 i2bsc.7d        \
250                 kmem.7d         \
251                 lo0.7d          \
252                 ticots.7d       \
253                 ticotsord.7d    \
254                 urandom.7d      \
```

```
255                 usb.7d          \
256                 uwb.7d

258 sparc_MANLINKS= drmach.7d       \
259                 ngdr.7d         \
260                 ngdrmach.7d

262 MANFILES =      $(_MANFILES) $($(MACH)_MANFILES)
263 MANLINKS =      $(_MANLINKS) $($(MACH)_MANLINKS)

265 bscbus.7d       := LINKSRC = bscv.7d
266 i2bsc.7d        := LINKSRC = bscv.7d

268 drmach.7d       := LINKSRC = dr.7d
269 ngdr.7d         := LINKSRC = dr.7d
270 ngdrmach.7d     := LINKSRC = dr.7d

272 fdc.7d          := LINKSRC = fd.7d

274 1394.7d         := LINKSRC = ieee1394.7d
275 firewire.7d     := LINKSRC = ieee1394.7d

277 lo0.7d          := LINKSRC = ipnet.7d

279 allkmem.7d      := LINKSRC = mem.7d
280 kmem.7d         := LINKSRC = mem.7d

282 urandom.7d      := LINKSRC = random.7d

284 ticots.7d       := LINKSRC = ticlts.7d
285 ticotsord.7d    := LINKSRC = ticlts.7d

287 usb.7d          := LINKSRC = usba.7d

289 uwb.7d          := LINKSRC = uwba.7d

291 hwa1480_fw.7d   := LINKSRC = wusb_df.7d

293 .KEEP_STATE:

295 include         $(SRC)/man/Makefile.man

297 install:        $(ROOTMANFILES) $(ROOTMANLINKS)
```

```
**********************************************************
    2458 Fri Aug  8 13:32:24 2014
new/usr/src/man/man7d/afe.7d
5073 need ieee802.3(5) man page
5074 elxl(7D) page needed
5054 rtls(7D) needed
5053 need iprb(7D) man page
Reviewed by: Eric Sproul <esproul@omniti.com>
Approved by: TBD
**********************************************************
```

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.\"
.Dd "Aug 3, 2014"
.Dt AFE 7D
.Os
.Sh NAME
.Nm afe
.Nd ADMtek Fast Ethernet device driver
.Sh SYNOPSIS
.Pa /dev/afe
.Sh DESCRIPTION
The
.Nm
driver provides support for the Centaur and Comet families of Fast Ethernet
PCI controllers originally produced by ADMtek and Infineon.
.Lp
These devices generally support the standard Fast Ethernet features, including
10BASE-T and 100BASE-TX, both full and half duplex operation, IEEE 802.3
autonegotiation, etc.  They also support full size MTUs (1500 bytes),
even when used with VLANs.  Most of them also support flow control.
.
.Lp
The device driver supports the
.Xr ieee802.3 5
properties, which can be configured with
.Xr dladm 1M .
.
.\" The driver also has a "forcefiber" driver.conf setting, but this is for
.\" very very obscure hardware, and we are not documenting this option
.\" for now.
.
.Sh FILES
.Bl -tag -width /dev/afe
.It Pa /dev/afe
'\" te
.\" Copyright (c) 2001-2007 by Garrett D'Amore.
```



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.\" Portions Copyright (c) 2007 by Sun Microsystems, Inc.  All Rights Reserved.
.TH AFE 7D "Apr 1, 2007"
.SH NAME
afe \- ADMtek Fast Ethernet device driver
.SH SYNOPSIS
.LP
.nf
\fB/dev/afe\fR
.fi

.SH DESCRIPTION
.sp
.LP
The \fBafe\fR driver is a multi-threaded,  loadable, clonable, GLD-based
STREAMS  driver supporting the Data Link Provider Interface \fBdlpi\fR(7P) on
ADMtek (now Infineon) Centaur and Comet Fast Ethernet controllers.
.SH APPLICATION PROGRAMMING INTERFACE
.sp
.LP
The \fBafe\fR driver can be used as either a "style 1" or a "style 2" Data Link
Service Provider. Physical points of attachment (PPAs) are interpreted as the
instance  number of the \fBafe\fR controller as assigned by the Solaris
operating environment.
.sp
.LP
The relevant fields returned as part of a \fBDL_INFO_ACK\fR response are:
.RS +4
.TP
.ie t \(bu
.el o
Maximum SDU is 1500.
.RE
.RS +4
.TP
.ie t \(bu
.el o
Minimum SDU is 0.
.RE
.RS +4
.TP
.ie t \(bu
.el o
The dlsap address length is 8.
.RE
.RS +4
.TP
.ie t \(bu
.el o
MAC type is \fBDL_ETHER\fR.
.RE
.RS +4
.TP
.ie t \(bu
.el o
SAP length is -2. The 6-byte physical address is followed immediately by a
2-byte SAP.
.RE
.RS +4
.TP
.ie t \(bu
.el o
```

```
Service mode is \fBDL_CLDLS\fR.
.RE
.RS +4
.TP
.ie t \(bu
.el o
Broadcast address is the 6-byte Ethernet broadcast address
(\fBff:ff:ff:ff:ff:ff\fR).
.RE
.sp
.LP
If the SAP provided is zero, then \fIIEEE 802.3\fR mode is assumed and outbound
frames will have the frame payload length written into the type field.
Likewise, inbound frames with a SAP between zero and 1500 are interpreted as
\fIIEEE 802.3\fR frames and delivered to any streams that are bound to SAP zero
(the \fI802.3\fR SAP).
.SH PROPERTIES
.sp
.LP
The following properties  may  be  configured  using  either \fBndd\fR(1M) or
the \fBafe.conf\fR configuration file as described by \fBdriver.conf\fR(4):
.sp
.ne 2
.na
\fB\fBadv_autoneg_cap\fR\fR
.ad
.sp .6
.RS 4n
Enables (default) or disables \fIIEEE 802.3u\fR auto-negotiation of link speed
and duplex settings. If enabled, the device negotiates among the supported (and
configured, see below) link options with the link partner.  If disabled, at
least one of the link options below must be specified. The driver selects the
first enabled link option according to the \fIIEEE 802.3u\fR specified
preferences.
.RE

.sp
.ne 2
.na
\fB\fBadv_100T4_cap\fR\fR
.ad
.sp .6
.RS 4n
Enables the 100 BaseT4 link option.  (Note that most hardware does not support
this unusual link style.  Also, this uses two pairs of wires for data, rather
than one.)
.RE

.sp
.ne 2
.na
\fB\fBadv_100fdx_cap\fR\fR
.ad
.sp .6
.RS 4n
Enables the 100 Base TX full-duplex link option. (This is generally the fastest
mode if both link partners support it. Most modern equipment supports this
mode.)
.RE

.sp
.ne 2
.na
\fB\fBadv_100hdx_cap\fR\fR
.ad
.sp .6
```



```
.RS 4n
Enables the 100 Base TX half-duplex link option. (Typically used when the link
partner is a 100 Mbps hub.)
.RE

.sp
.ne 2
.na
\fB\fBadv_10fdx_cap\fR\fR
.ad
.sp .6
.RS 4n
Enables the 10 Base-T full-duplex link option.  (This less-frequently used mode
is typically used when the link partner is a 10 Mbps switch.)
.RE

.sp
.ne 2
.na
\fB\fBadv_10hdx_cap\fR\fR
.ad
.sp .6
.RS 4n
Enables the 10 Base-T half-duplex link option.  (This is the fall-back when no
other option is available.  It is typically used when the link partner is a 10
Mbps hub or is an older network card.)
.RE

.SH ATTRIBUTES
.sp
.LP
See \fBattributes\fR(5) for a description of the following attributes:
.sp

.sp
.TS
box;
c | c
l | l .
ATTRIBUTE TYPE  ATTRIBUTE VALUE
_
Architecture    SPARC, x86
_
Interface Stability     Committed
.TE

.SH FILES
.sp
.ne 2
.na
\fB\fB/dev/afe\fR\fR
.ad
.sp .6
.RS 4n
Special character device.
.El
.Sh SEE ALSO
.Xr dladm 1M ,
.Xr ifconfig 1M ,
.Xr pci 4 ,
.Xr ieee802.3 5 ,
.Xr dlpi 7P
.Rs
.%T IEEE 802.3: Ethernet
.%Q IEEE Standards Association
.Re
```

```
.RE

.sp
.ne 2
.na
\fB\fB/kernel/drv/afe\fR\fR
.ad
.sp .6
.RS 4n
32-bit driver binary (x86).
.RE

.sp
.ne 2
.na
\fB\fB/kernel/drv/amd64/afe\fR\fR
.ad
.sp .6
.RS 4n
64-bit driver binary (x86).
.RE

.sp
.ne 2
.na
\fB\fB/kernel/drv/sparcv9/afe\fR\fR
.ad
.sp .6
.RS 4n
64-bit driver binary (SPARC).
.RE

.sp
.ne 2
.na
\fB\fB/kernel/drv/afe.conf\fR\fR
.ad
.sp .6
.RS 4n
Configuration file.
.RE

.SH SEE ALSO
.sp
.LP
\fBndd\fR(1M), \fBdriver.conf\fR(4), \fBattributes\fR(5), \fBstreamio\fR(7I),
\fBdlpi\fR(7P)
.sp
.LP
\fIIEEE 802.3\fR \(em Institute of Electrical and Electronics Engineers, 2002
```

```
**********************************************************
    3271 Fri Aug  8 13:32:24 2014
new/usr/src/man/man7d/elxl.7d
5073 need ieee802.3(5) man page
5074 elxl(7D) page needed
5054 rtls(7D) needed
5053 need iprb(7D) man page
Reviewed by: Eric Sproul <esproul@omniti.com>
Approved by: TBD
**********************************************************
```

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.Dd "Aug 7, 2014"
.Dt ELXL 7D
.Os
.Sh NAME
.Nm elxl
.Nd 3Com Etherlink XL device driver
.Sh SYNOPSIS
.Pa /dev/elxl
.Sh DESCRIPTION
The
.Nm
driver provides support for the 3Com Etherlink XL
family of Ethernet and Fast Ethernet PCI controllers. These are often known
by their part numbers, most often 3c905 or 3c900 variants.
.Lp
The 3c905 devices generally support some form of 100 Mbps Ethernet,
whereas the 3c900 devices usually only support 10 Mbps.  Some devices
support legacy media such as 10BASE-15, 10BASE-2, and even 10BASE-FL.
.
Where applicable, the devices support auto-negotiation, both full and
half duplex, etc.  They also support full size MTUs (1500 bytes),
even when used with VLANs.
.
.Lp
The device driver supports the
.Xr ieee802.3 5
properties, which can be configured with
.Xr dladm 1M .
.Lp
In addition, for devices with multiple external media ports, the driver
supports a driver-specific
.Xr dladm 1M
property called
.Sy media ,
```



```
which can take one of the following values, depending on the available
media options on the device:
.Lp
.Bl -tag -compact -offset indent -width Sy
.It Sy mii
Media Indendent Interface (MII), also 100BASE-TX
.It Sy tp-hdx
10 Mbps twisted pair, half-duplex
.It Sy tp-fdx
10 Mbps twisted pair full-duplex
.It Sy fx-hdx
100BASE-FX (fiber), half-duplex
.It Sy fx-hdx
100BASE-FX (fiber), full-duplex
.It Sy bnc
10BASE-2
.Pq BNC, aka Dq thin-net
.It Sy aui
10BASE-15
.Pq aka Dq thick-net
.It Sy fl-hdx
10BASE-FL (fiber), half-duplex
.It Sy fl-fdx
10BASE-FL (fiber), full-duplex
.El
.Lp
The specific media options available can be queried with the
device-specific
.Sy available_media
.Xr dladm 1M
property.
.Sh FILES
.Bl -tag -width /dev/elxl
.It Pa /dev/elxl
Special character device.
.El
.Sh SEE ALSO
.Xr dladm 1M ,
.Xr ifconfig 1M ,
.Xr pci 4 ,
.Xr ieee802.3 5 ,
.Xr dlpi 7P
.Rs
.%T IEEE 802.3: Ethernet
.%Q IEEE Standards Association
.Re
```

```
**********************************************************
    2424 Fri Aug  8 13:32:24 2014
new/usr/src/man/man7d/iprb.7d
5073 need ieee802.3(5) man page
5074 elxl(7D) page needed
5054 rtls(7D) needed
5053 need iprb(7D) man page
Reviewed by: Eric Sproul <esproul@omniti.com>
Approved by: TBD
**********************************************************
```

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.Dd "Aug 3, 2014"
.Dt IPRB 7D
.Os
.Sh NAME
.Nm iprb
.Nd Intel PRO/100 Fast Ethernet device driver
.Sh SYNOPSIS
.Pa /dev/iprb
.Sh DESCRIPTION
The
.Nm
driver provides support for the Intel PRO/100 family of Fast Ethernet
PCI controllers. This includes support for Intel 82558, 82559, 82550,
and 82551 parts, as well as certain controllers found on certain Intel
southbridge controllers (ICH2 and ICH3).
.Lp
These devices generally support the standard Fast Ethernet features, including
10BASE-T and 100BASE-TX, both full and half duplex operation, IEEE 802.3
autonegotiation, etc.  They also support full size MTUs (1500 bytes),
even when used with VLANs.  Some of them also support flow control.
.
.Lp
The device driver supports the
.Xr ieee802.3 5
properties, which can be configured with
.Xr dladm 1M .
.
.Sh FILES
.Bl -tag -width /dev/iprb
.It Pa /dev/iprb
Special character device.
.El
.Sh SEE ALSO
.Xr dladm 1M ,
```



```
.Xr ifconfig 1M ,
.Xr pci 4 ,
.Xr ieee802.3 5 ,
.Xr dlpi 7P
.Rs
.%T IEEE 802.3: Ethernet
.%Q IEEE Standards Association
.Re
```

```
**********************************************************
    2244 Fri Aug  8 13:32:24 2014
new/usr/src/man/man7d/mxfe.7d
5073 need ieee802.3(5) man page
5074 elxl(7D) page needed
5054 rtls(7D) needed
5053 need iprb(7D) man page
Reviewed by: Eric Sproul <esproul@omniti.com>
Approved by: TBD
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.\"
.Dd "Aug 7, 2014"
.Dt MXFE 7D
.Os
.Sh NAME
.Nm mxfe
.Nd Macronix Fast Ethernet device driver
.Sh SYNOPSIS
.Pa /dev/mxfe
.Sh DESCRIPTION
The
.Nm
driver provides support for the
Macronix 98715 family (including the Lite-On PNIC-II) of Fast Ethernet
PCI controllers.
.Lp
These devices generally support the standard Fast Ethernet features, including
10BASE-T and 100BASE-TX, both full and half duplex operation, IEEE 802.3
autonegotiation, etc.  They also support full size MTUs (1500 bytes),
even when used with VLANs.
.
.Lp
The device driver supports the
.Xr ieee802.3 5
properties, which can be configured with
.Xr dladm 1M .
.Sh FILES
.Bl -tag -width /dev/mxfe
.It Pa /dev/mxfe
Special character device.
.El
.Sh SEE ALSO
.Xr dladm 1M ,
.Xr ifconfig 1M ,
.Xr pci 4 ,
```



```
.Xr ieee802.3 5 ,
.Xr dlpi 7P
.Rs
.%T IEEE 802.3: Ethernet
.%Q IEEE Standards Association
.Re
'\" te
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.TH MXFE 7D "Aug 31, 2007"
.SH NAME
mxfe \- MXFE Fast Ethernet device driver
.SH SYNOPSIS
.LP
.nf
\fB/dev/mxfe*\fR
.fi

.SH DESCRIPTION
.sp
.LP
The \fBmxfe\fR is a Solaris STREAMS hardware driver supporting the Data Link
Provider Interface (\fBdlpi\fR(7P)) over the Macronix 98715 family (including
the Lite-On PNIC-II) of Fast Ethernet controllers.
.SH DLPI SPECIFICATIONS
.sp
.LP
The \fBmxfe\fR driver supports both style 1 and style 2 modes of operation.
Physical points of attachment (PPAs) are interpreted as the instance number of
the  \fBmxfe\fR controller as assigned by the operating system.
.sp
.LP
The  relevant  fields  returned  as part of a DL_INFO_ACK response are:
.RS +4
.TP
.ie t \(bu
.el o
Maximum SDU is 1500.
.RE
.RS +4
.TP
.ie t \(bu
.el o
Minimum SDU is 0.
.RE
.RS +4
.TP
.ie t \(bu
.el o
DLSAP address length is 8.
.RE
.RS +4
.TP
.ie t \(bu
.el o
MAC type is \fBDL_ETHER\fR.
.RE
.RS +4
.TP
.ie t \(bu
.el o
```

```
\fBSAP\fR length value is \fI-2\fR, meaning the physical address component is
followed immediately by a 2-byte \fBSAP\fR component within the \fBDLSAP\fR
address.
.RE
.RS +4
.TP
.ie t \(bu
.el o
Service mode is DL_CLDLS.
.RE
.RS +4
.TP
.ie t \(bu
.el o
Broadcast address value is the 6-byte Ethernet/IEEE broadcast address
(ff:ff:ff:ff:ff:ff).
.RE
.sp
.LP
If the SAP provided is zero, \fIIEEE 802.3\fR mode is assumed and outbound
frames will have the frame payload length written into the type field Likewise,
inbound  frames with a SAP between zero and 1500 are interpreted as \fIIEEE
802.3\fR frames and delivered to streams that have bound to SAP zero (the
\fI802.3\fR SAP).
.SH FILES
.sp
.ne 2
.na
\fB\fB/dev/mxfe*\fR\fR
.ad
.RS 28n
Special character device
.RE

.sp
.ne 2
.na
\fB\fB/kernel/drv/mxfe\fR\fR
.ad
.RS 28n
32-bit driver binary (x86).
.RE

.sp
.ne 2
.na
\fB\fB/kernel/drv/amd64/mxfe\fR\fR
.ad
.RS 28n
64-bit ELF kernel module (x86).
.RE

.sp
.ne 2
.na
\fB\fB/kernel/drv/sparcv9/mxfe\fR\fR
.ad
.RS 28n
Driver binary (SPARC).
.RE

.SH ATTRIBUTES
.sp
.LP
See \fBattributes\fR(5) for a description of the following attributes:
.sp
```



```
.sp
.TS
box;
c | c
l | l .
ATTRIBUTE TYPE  ATTRIBUTE VALUE
_
Architecture    SPARC, x86
.TE

.SH SEE ALSO
.sp
.LP
\fBifconfig\fR(1M), \fBndd\fR(1M), \fBattributes\fR(5), \fBdlpi\fR(7P)
.sp
.LP
\fIIEEE 802.3\fR \(em Institute of Electrical and Electronics Engineers, 2002
```

```
**********************************************************
    2211 Fri Aug  8 13:32:24 2014
new/usr/src/man/man7d/rtls.7d
5073 need ieee802.3(5) man page
5074 elxl(7D) page needed
5054 rtls(7D) needed
5053 need iprb(7D) man page
Reviewed by: Eric Sproul <esproul@omniti.com>
Approved by: TBD
**********************************************************
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.\"
.Dd "Aug 3, 2014"
.Dt RTLS 7D
.Os
.Sh NAME
.Nm rtls
.Nd RealTek Fast Ethernet device driver
.Sh SYNOPSIS
.Pa /dev/rtls
.Sh DESCRIPTION
The
.Nm
driver provides support for the RealTek 8139 family of Fast Ethernet
PCI controllers.
.Lp
These devices generally support the standard Fast Ethernet features, including
10BASE-T and 100BASE-TX, both full and half duplex operation, IEEE 802.3
autonegotiation, etc.  They also support full size MTUs (1500 bytes),
even when used with VLANs.
.
.Lp
The device driver supports the
.Xr ieee802.3 5
properties, which can be configured with
.Xr dladm 1M .
.
.Sh FILES
.Bl -tag -width /dev/rtls
.It Pa /dev/rtls
Special character device.
.El
.Sh SEE ALSO
.Xr dladm 1M ,
.Xr ifconfig 1M ,
.Xr pci 4 ,
```



```
.Xr ieee802.3 5 ,
.Xr dlpi 7P
.Rs
.%T IEEE 802.3: Ethernet
.%Q IEEE Standards Association
.Re
```

```
**********************************************************
    2419 Fri Aug  8 13:32:24 2014
new/usr/src/pkg/manifests/driver-network-elxl.mf
5073 need ieee802.3(5) man page
5074 elxl(7D) page needed
5054 rtls(7D) needed
5053 need iprb(7D) man page
Reviewed by: Eric Sproul <esproul@omniti.com>
Approved by: TBD
**********************************************************
```

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# global zone only.  See the include file for greater detail, as well as
# information about overriding the defaults.
#
<include global_zone_only_component>
set name=pkg.fmri value=pkg:/driver/network/elxl@$(PKGVERS)
set name=pkg.description value="3Com Etherlink XL Ethernet Driver"
set name=pkg.summary value="3Com Etherlink XL Ethernet Driver"
set name=info.classification \
    value=org.opensolaris.category.2008:Drivers/Networking
set name=variant.arch value=i386
dir path=kernel group=sys
dir path=kernel/drv group=sys
dir path=kernel/drv/$(ARCH64) group=sys
dir path=usr/share/man
dir path=usr/share/man/man7d
driver name=elxl clone_perms="elxl 0666 root sys" perms="* 0666 root sys" \
    alias=pci10b7,9000 \
    alias=pci10b7,9001 \
    alias=pci10b7,9004 \
    alias=pci10b7,9005 \
    alias=pci10b7,9006 \
    alias=pci10b7,9050 \
    alias=pci10b7,9051 \
    alias=pci10b7,9055 \
    alias=pci10b7,9056 \
    alias=pci10b7,905a \
    alias=pci10b7,9200 \
    alias=pci10b7,9201 \
```



```
    alias=pci10b7,9202 \
    alias=pci10b7,9800 \
    alias=pci10b7,9805
file path=kernel/drv/$(ARCH64)/elxl group=sys
file path=kernel/drv/elxl group=sys
file path=usr/share/man/man7d/elxl.7d
legacy pkg=SUNWelxl desc="3Com Etherlink XL Ethernet Driver" \
    name="3Com Etherlink XL Ethernet Driver"
license usr/src/uts/common/io/elxl/THIRDPARTYLICENSE \
    license=usr/src/uts/common/io/elxl/THIRDPARTYLICENSE
```

```
**********************************************************
    2452 Fri Aug  8 13:32:24 2014
new/usr/src/pkg/manifests/driver-network-iprb.mf
5073 need ieee802.3(5) man page
5074 elxl(7D) page needed
5054 rtls(7D) needed
5053 need iprb(7D) man page
Reviewed by: Eric Sproul <esproul@omniti.com>
Approved by: TBD
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#

#
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# global zone only.  See the include file for greater detail, as well as
# information about overriding the defaults.
#
<include global_zone_only_component>
set name=pkg.fmri value=pkg:/driver/network/iprb@$(PKGVERS)
set name=pkg.description value="Intel 8255x Fast Ethernet Driver"
set name=pkg.summary value="Intel 8255x Fast Ethernet Driver"
set name=info.classification \
    value=org.opensolaris.category.2008:Drivers/Networking
set name=variant.arch value=i386
dir path=etc group=sys
dir path=kernel group=sys
dir path=kernel/drv group=sys
dir path=kernel/drv/$(ARCH64) group=sys
dir path=usr/share/man
dir path=usr/share/man/man7d
driver name=iprb clone_perms="iprb 0666 root sys" perms="* 0666 root sys" \
    alias=pci8086,1029 \
    alias=pci8086,1030 \
    alias=pci8086,1031 \
    alias=pci8086,1032 \
    alias=pci8086,1038 \
    alias=pci8086,1039 \
    alias=pci8086,103d \
    alias=pci8086,1050 \
    alias=pci8086,1059 \
    alias=pci8086,1068 \
```



```
    alias=pci8086,1069 \
    alias=pci8086,1092 \
    alias=pci8086,1209 \
    alias=pci8086,1229 \
    alias=pci8086,2449 \
    alias=pci8086,27dc
file path=kernel/drv/$(ARCH64)/iprb group=sys
file path=kernel/drv/iprb group=sys
file path=usr/share/man/man7d/iprb.7d
license lic_CDDL license=lic_CDDL
license usr/src/uts/common/io/iprb/THIRDPARTYLICENSE \
    license=usr/src/uts/common/io/iprb/THIRDPARTYLICENSE
```

```
**********************************************************
    2026 Fri Aug  8 13:32:24 2014
new/usr/src/pkg/manifests/driver-network-rtls.mf
5073 need ieee802.3(5) man page
5074 elxl(7D) page needed
5054 rtls(7D) needed
5053 need iprb(7D) man page
Reviewed by: Eric Sproul <esproul@omniti.com>
Approved by: TBD
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#

#
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# global zone only.  See the include file for greater detail, as well as
# information about overriding the defaults.
#
<include global_zone_only_component>
set name=pkg.fmri value=pkg:/driver/network/rtls@$(PKGVERS)
set name=pkg.description value="RTL Fast NIC"
set name=pkg.summary value="REALTEK Fast NIC"
set name=info.classification \
    value=org.opensolaris.category.2008:System/Hardware
set name=variant.arch value=$(ARCH)
dir path=kernel group=sys
dir path=kernel/drv group=sys
dir path=kernel/drv/$(ARCH64) group=sys
dir path=usr/share/man
dir path=usr/share/man/man7d
driver name=rtls clone_perms="rtls 0666 root sys" perms="* 0666 root sys" \
    alias=pci10ec,8139 \
    alias=pci1113,1211 \
    alias=pci1186,1300 \
    alias=pci1186,1301
file path=kernel/drv/$(ARCH64)/rtls group=sys
$(i386_ONLY)file path=kernel/drv/rtls group=sys
file path=usr/share/man/man7d/rtls.7d
legacy pkg=SUNWrtls desc="RTL Fast NIC" name="REALTEK Fast NIC"
license cr_Sun license=cr_Sun
license lic_CDDL license=lic_CDDL
```

```
**********************************************************
     610 Fri Aug  8 13:32:25 2014
new/usr/src/pkg/manifests/system-kernel.man5.inc
5073 need ieee802.3(5) man page
5074 elxl(7D) page needed
5054 rtls(7D) needed
5053 need iprb(7D) man page
Reviewed by: Eric Sproul <esproul@omniti.com>
Approved by: TBD
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  15 file path=usr/share/man/man5/fsattr.5
  16 file path=usr/share/man/man5/ieee802.11.5
  17 file path=usr/share/man/man5/ieee802.3.5
```