

eTSEC Ethernet Driver

PRODUCT DESCRIPTION

This driver package applies to Freescale's UCC's Ethernet protocol on eTSEC-based devices (e.g. MPC8544, MPC8548, MPC8572).

The driver abstracts the eTSEC programming model and provides the user application with a simple and easy-to-use API.

A special feature is the support of TCP/IP Offload capabilities of the device. This feature can be purchased separately and deployed on an existing driver (e.g. VxWorks).

PRODUCT FEATURES:

- Standalone driver
- Can be easily adopted to be used with any popular operating system (a hook to WindRiver VxWorks is available)
- Supports 1000/100/10 Mbps
- Supports both single and multi BD rings (up to 8) protocols
- Supports all extended features:
 - Multi MAC addresses (hash and exact match)
 - QoS (including MWFQ)
 - TCP/IP off-load. Application can append/delete/modify filtering rules dynamically.
 - Interrupt coalescing
 - VLAN insertion and deletion
 - RMON counters
- Initializes the eTSEC register parameters using a single C function call
- Very efficient buffer pool handling
 - Module is implemented in assembler



- Two modes of operations:
 - **Safe** - driver checks return buffer to guarantee no double release
 - **Fast** - all extra check are disable
- Mutual Exclusion supported to enable use at interrupt and non-interrupt instances
- Optionally, Rx buffers are managed by DoGav's customized microcode
- Interrupt driver (if desired)
- Supports up to five call-back functions from interrupt handler:
 - Rx buffer (or frame)
 - Tx buffer
 - Rx buffer with an error
 - Tx buffer with an error
 - Global event (e.g. pause message)

- TCP/IP Offload tool can be purchased separately as standalone tool.

Note:

This driver has been successfully deployed in the field.

ABOUT DOGAV SYSTEMS

DoGav Systems is a leading provider of software and hardware consultancy and training services. It specializes in Freescale's processors, in particular the PowerQUICC family of communication processors. It has a proven track record of over 20 years supporting Freescale customers in developing market-leading products for the communications equipment market.

DoGav Systems is Freescale's most experienced and active microcode developer. Since receiving its license in 2000, it has developed numerous customized microcode packages for both small and large Freescale customers. These packages are now successfully deployed in commercial products. In addition, DoGav Systems also offers more than 30 off-the-shelf microcode products for the PowerQUICC I, PowerQUICC II, PowerQUICC III and PowerQUICC II Pro processors.

