

# VLAN SUPPORT FOR THE POWERQUICC I

## DATA SHEET

JUNE 2007

## PRODUCT DESCRIPTION

The standard PowerQUICC I (PQI) Ethernet protocol supports 10baseT rate with a 7-wire interface. It does not, however, support VLAN tagging.

This microcode module complements the above Ethernet protocol by offering VLAN support. The module requires only minor modifications to the Host processor's existing software.

Main features:

- Transmit direction:
  - The user can set each transmitted frame to become a VLAN frame. This can be done on a per-frame basis
  - User has the option to assign each frame into one of 8 available VLAN tags (subnets)
  - Nine 32-bits statistics counters are available to the user, counting the number of outgoing frames (eight for VLAN frames, and one for non-VLAN frames)
  
- Receive direction:
  - VLAN tag can optionally be removed or kept. Policy can be changed on-the-fly
  - All VLAN frames can be optionally routed to the standard RxBD ring or to a special RxBD ring
  - The Receive VLAN BD ring has its unique event and mask bit

- Nine 32-bits statistics counters, counting the number of incoming frames (one for none-VLAN frames and eight for VLAN frames - one per PRI value)
- Compact and efficient implementation, hence impact on the CPM performance is negligible

## **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.