



## Ethernet Daughter Card for eZdsp™ F2812 and eZdsp™ F28335

- Dual Speed 10/100 MBit/s Ethernet Media Access Controller
- Fully integrated IEEE 802.3/802.3u 100Base-Tx/10Base-T physical layer
- Auto negotiation: 10/100 , Full/ Half duplex
- Optimized TCP/IP Protocol Stack, does not require a RTOS, but can run as a DSP/BIOS task
- Supported protocols: ARP, UDP, TCP, ICMP, DHCP, DNS, HTTP, FTP
- Glueless Interface

## General Description

The eZdsk.91C111 is a networking peripheral daughter card for the Spectrum Digital eZdsp™ TMS320F2812 and TMS320F28335 development kits. It extends your DSP system with an industry standard 100Base TX /10-Base-T Ethernet interface for distributed control applications, networking, web-based remote configuration and maintenance, and a high speed link for realtime data visualization.

TCP/IP software protocol stack is available, which has been carefully optimized for the special memory and real-time constraints of DSP systems. No underlying real-time operating system is required to integrate the TCP/IP protocol into your DSP system, however, the TCP/IP stack will also run on DSP/BIOS.

The DS.eZdsk.91C111 includes a single-user development license for the TCP/IP software library. OEM licenses are available too.

The TCP/IP object code library has carefully been tailored to meet the constraints of a DSP system. Code and data memory size have been minimized, and no additional resources like DSP interrupts or timers are required.

The TCP/IP protocol stack can be used in a 'linear' C program, just as running as a task in DSP/BIOS. The protocol stack supports the following protocols:

- ARP - Address Resolution Protocol, resolves the IP address to a hardware MAC address. No user-action is required. If an address is unknown, an ARP request is generated automatically.
- RARP - reverse ARP
- IP - Internet Protocol. All data transferred by DNS, DHCP, ICMP, UDP and TCP is automatically packed into IP packets.
- ICMP - Internet Control Message Protocol. The protocol stack for the DSK91C111 responds to "ping" requests to test a connection.
- UDP - User Datagram Protocol. UDP provides a one-to-one or one-to-many connectionless data path. Data transmitted via UDP is not guaranteed to reach it's destination. This protocol has very low overhead and is especially useful for transmitting non-critical data like audio and video data.
- TCP - Transmission Control Protocol, provides reliable, connection-oriented, one-to-one con-

