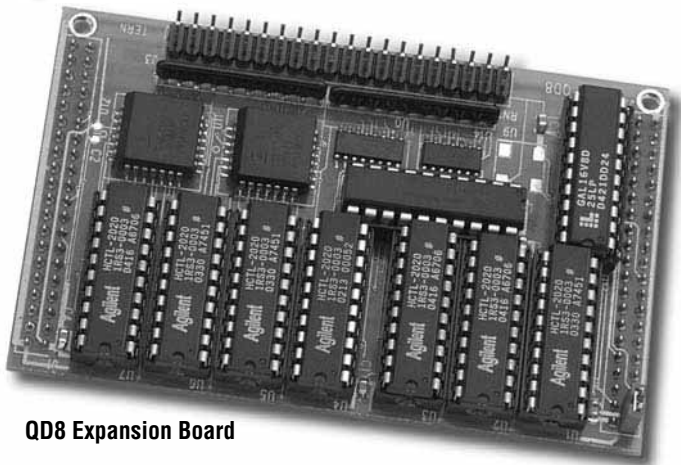# QD8™ 8 channels of Quadrature Decoder Expansion


QD8 Expansion Board

Features:
- Up to 8 Quadrature Decoders and 6 Index Counters
- 8-bit parallel high speed bus to TERN controller
- 3.6x2.3 inches, 5V

With dimension of 3.6x2.3 inches, the **QD8** is an expansion board for a TERN controller. The **QD8** adds up to 8 quadrature decoders(HCTL2020 or HCTL2021) and 6 16-bit hardware counters(82C54, can be used to count Index pulses).

The quadrature decoder allows the host controller to interface to a quadrature encoder, used to generate position pulses in a closed-loop motion control application. The **QD8** interfaces to a TERN controller via 8-bit high speed data bus using J1 and J2 headers.
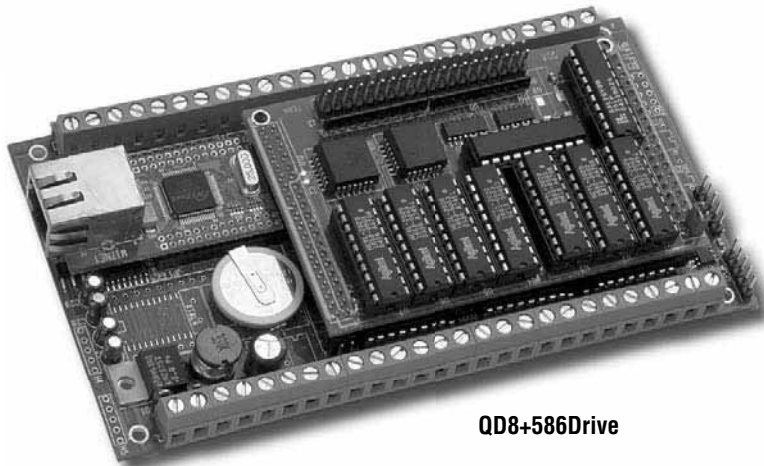
QD8+586Drive

Order Information
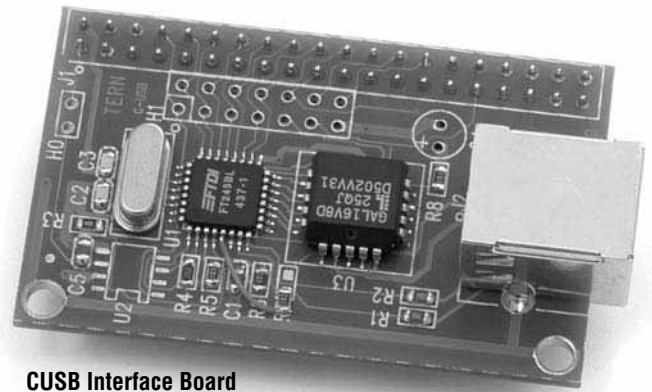**QD8™ $49/$39/$29   Qty 1/100/1K+**

Includes: PAL, schmit-trigger, J1, J2 socket.

Add-on Options

1) Quadrature Decoders, up to 8 chips $30x8
2) 16-bit counters(82C54), up to 2 chips............................ $10x2

CUSB™ Connecting TERN controllers to a PC USB port

CUSB Interface Board

Features:
- Connecting TERN controller to a USB port
- 8-bit parallel high speed bus or I/O support
- Ready to use, royalty free USB drivers
- Eliminate Windows driver development
- 2.1x1.3", USB bus powered
- USB 1.1 and USB2.0 compatible
- Tx/Rx buffer FIFO for parallel high speed I/O
- Data transfer rate to 150 KB/sec with VCP driver
- Data transfer rate to 500KB/sec with D2xx driver

Introduction

The **CUSB™** is a low cost USB solution for TERN C/C++ programmable controllers.

The **CUSB™** integrates a high-performance USB stack chip to provide an easy to program USB 1.1/2.0 slave interface. The onboard hardware fully handles USB stack processing, and provides for high-speed bi-directional 8-bit parallel communication. The hardware interface includes 384 bytes of FIFO transmit buffer, and 128 bytes of FIFO for the receiving buffer, making this an ideal low-overhead solution for all embedded applications.

The **CUSB™** exposes a slave USB interface, and connects to a PC via USB-B connector. The CUSB interface to TERN controller via J1 expansion header.

Firmware programming on the controller side is simple and straight-forward. The USB interface is seen as a transparent parallel FIFO buffer tasked with transferring data back and forth with the remote host.

Order Information
CUSB™ $69/$49/$29   Qty 1/100/1K+

Includes: USB interface + USB 'B' connector, default type 'B' J1 header.

Add-on Options

1) J1 20x2 pin flat cable.. $10
2) USB A-B connector cable $10