ACE™ with 33 ADC, 2 RS232/422, DAC, CF and Ethernet

Features and Options:

- Measures 3.57 x 2.30 inches
- Powered by regulated 5V DC, less than 200 mA
- 33 ch. 12-bit ADC(0-5V, P2543), 2 ch. 12-bit DAC
- 100 M Ethernet with hardware TCP/IP stack
- CompactFlash with FAT file system support
- Two RS232, one can be RS422

Summary

The **ACE™** is an 8-bit expansion card designed for TERN controllers, adding ADC, DAC, RS232/422, CompactFlash and Ethernet capabilities.

Up to 3 ADC chips (P2543, 20KHZ, 12-bit, 0-5V) can be installed to provide a total of 33 ADC inputs with a precision 5V reference. A Dual-UART chip (SC2692) provides two RS232 ports. One of the RS232 can be converted to RS422. A 12-bit DAC chip can be installed (LTC1446) to provide two 12-bit analog outputs (0-4.095V).
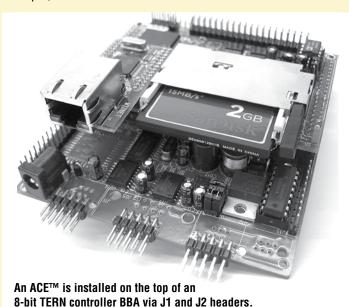
A Fast Ethernet Module can be installed to provide 100M Base-T network connectivity. This Ethernet module has a hardware LSI TCP/IP stack. It implements TCP/IP, UDP, ICMP and ARP in hardware, supporting internet protocol DLC and MAC. It has 16KB internal transmit and receiving buffer which is mapped into host processor's direct memory. The host can access the buffer via high speed DMA transfers. The hardware Ethernet module releases internet connectivity and protocol processing from the host processor, which represents a huge improvement over software-based TCP/IP stacks. No processor cycles are used to track packet transmission/retransmission, timeouts, etc. The resulting system can easily handle transmissions in the 100KB/s+ range in real world applications. It supports 4 independent stack connections simultaneously at a 4Mbps protocol processing speed. An RJ45

8-pin connector is on-board for connecting to 10/100 Base-T Ethernet network. Software libraries and demo project are available for Ethernet connectivity.

ACU™ supports up to 32 GB mass storage CompactFlash cards with Windows compatible FAT filesystem support, allowing user easily transfer large amounts of data to or from a PC. Users can easily add mass data storage to their embedded application.

Complete C/C++ programmable software package includes compiler, remote debugger, samples, and file system libraries.

The **ACU™** needs to be powered with a regulated 5V DC, 200 mA. The **ACU™** interfaces to an 8-bit or 16-bit TERN controller via two 20x2 pin, J1 and J2 header/sockets.

An ACE™ is installed on the top of an 8-bit TERN controller BBA via J1 and J2 headers.

Ordering Information

ACE™ $99 Qty 1

Includes: 2 RS-232 ports, Needs to be driven by a TERN controller, such as 586-Engine, or AE86...

NOT including add-on options.

Add-on Options:

1) 12-bit ADC (P2543), up to 3 chips	$20x3
2) CompactFlash Interface	$20
3) 100 BaseT hardware TCP/IP Ethernet	$30
4) Two 12-bit DACs (LTC1446)	$20
5) RS422 transceiver replacing one RS232	$20
6) Precision 5V Reference	$15