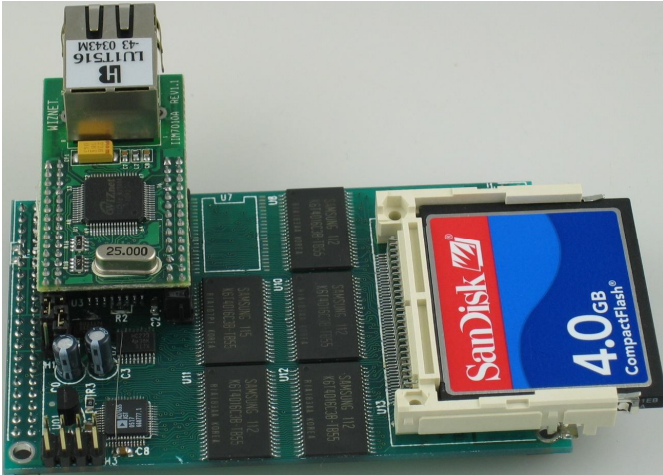# ACU™

16-bit ADCs, CAN-bus , Ethernet and Host USB ports

ACU™ with ADC, CAN-bus, Ethernet and Host USB Ports.

Features and Options:

- Measures 3.58 x 2.30 inches
- Up to 16 ch. 16-bit high speed ADC (0-5V, 1MHz, AD7655)
- 10/100-baseT Ethernet with hardware TCP/IP stack
- Host USB ports for USB Flash disk, USB keyboard/mouse
- CAN bus controller (SJA1000) and CAN transceiver

The *ACU*™ is an expansion card designed for TERN controllers. It can be used to add ADCs, CAN-bus, Ethernet, and Host USB ports to TERN's family of C programmable Engine controllers.

Up to 4 ADC chips (AD7655, 1MHZ, 16-bit, 0-5V) can be installed to provide a total of 16 ADC inputs. Each AD7655 allows *simultaneous* sampling on two channels in hardware.

A Controller Area Network (CAN) controller (SJA1000), running at 20 MHz clock can be installed along with on-board CAN transceiver, supporting baud rates up to 1 Mb/s. CAN interrupt and software programmable hardware reset are available. The *ACU*™ allows TERN controllers to be directly connected to CAN-bus. All registers of the CAN controller are software accessible, and software-buffering drivers are also provided.

A Fast Ethernet Module can be installed to provide 10/100M Base-T network connectivity. This Ethernet module has a hardware LSI TCP/IP stack, implementing TCP/IP, UDP, ICMP and ARP, and is programmed using a software socket interface.

A Host USB controller can be installed to provide two Host USB Ports. Firmware support is provided to allow low-level accesses to select USB devices. Port1 can interface to USB keyboard/mouse, while port 2 supports a USB Flash Disk. Simple AT-style command set is used to support FAT file system applications.

Order Information

ACU™	**$49**	**Qty 1**

Add-on Options:
1) ADC (AD7655) up to 4 chips ……………………….**$40x4**
2) CAN(SJA1000) with transceiver……………………….**$40**
3) 100 BaseT hardware TCP/IP Ethernet ………………**$30**
4) Host USB ports…………….. …………………………**$60**

P100CAN™

96 I/O lines and CAN-bus interface

► 4.4x3.1x0.5 inches.

►Driven by a TERN controller (***586-Engine, A-Engine86,…***)

► Power consumption: < 200 mA @ 9V-12V

► 24x4 PPIs, 7 high voltage sinking drivers

► 5V switching regulator, RS-232 or RS-485 drivers.
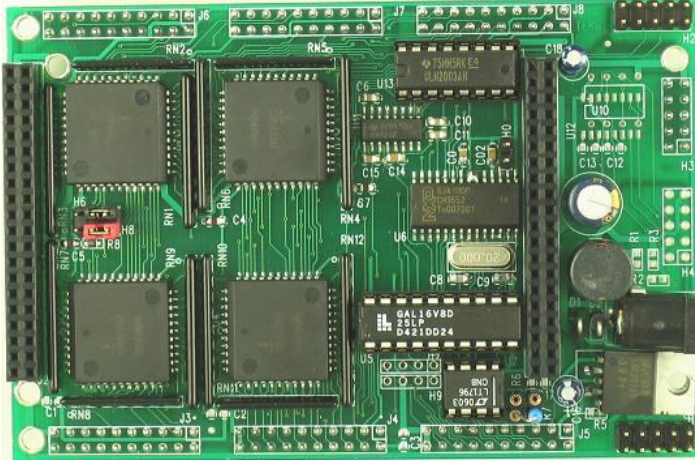
The *P100CAN*™ is designed to be used in automotive and general industrial application. It includes four PPI (82C55) chips, providing a total of 24x4 programmable bi-directional TTL I/O lines. 7 high voltage sinking drivers(ULN2003A) provide up to 50V, 350 mA each.

A Controller Area Network(CAN) controller(SJA1000, 20 MHz clock) with on-board CAN transceiver is available, allowing TERN controllers to be easily connected to a CAN-bus. It supports CAN2.0B protocol and up to 1M-bit baud rate. CAN interrupts and software programmable hardware resets are available. The ***P100CAN*** ™ allows TERN controllers directly connect to CAN-bus. All registers of the CAN controller are software accessible, and software-buffering drivers are provided. Two channels of RS-232 drivers and an optional 3rd RS232 or RS485 driver can be installed. The ***P100CAN*™** requires 8.5V to 12V DC power supply with linear regulator, or up to 30V DC power input with an optional switching regulator without generating excessive heat.

Ordering Information

***P100CAN*™ $99/$69/$39   Qty   1/100/1000**
Includes: 2 RS-232 ports, 24 PPI I/Os, solenoid drivers, linear regulator. Driven by C/C++ programmable Engine controller. NOT including add-on options.

Add-on Options:

1) CAN(SJA1000) with transceiver………………………..**$40**

2) Switching power regulators(SR) ………………………..**$20**

3) 3rd UART driver a)RS232 or b) RS485………………**$10**

Order Example: *P100CAN with CAN controller*

P100CAN +1 = $99+$40

TERN
INC. 1950 5th Street, Davis, CA 95616, USA

Tel: 530-758-0180   Fax: 530-758-0181