

Features and Options:

- 4.4x3.1x0.5 inches.
- Driven by **586-Engine™**, **i386-Engine™**, **A-Engine86™**.
- Power consumption: < 200 mA @ 9V-12V
- 24 PPIs, 14 high voltage sourcing or sinking drivers
- CS8900 10 Base-T Ethernet Controller*.
- 8 ch. 12-bit 300KHz ADC(ADS7852) with 4 input ops*.
- 4 ch. 12-bit 300KHz DAC(DAC7625) with buffer ops*.
- 8 opto-isolators and 2 quadrature decoders*
- 5V switching regulator*, RS-232 or RS-485* drivers.

Measuring 4.4 x 3.1 inches, the **P50™** is an I/O expansion board designed for and driven by a 586-Engine™. 16-bit external data bus is required to run the parallel ADC and DAC on the P50.

Many embedded applications demand high speed ADC and DAC with buffered operational amplifiers supporting variable gains or offset for analog signals. The P50 supports four 12-bit, 300KHz, parallel DACs (DAC7625, 2.5V) buffered by 4 ops with gain=2 (hardware adjustable), providing 0-5V analog output by default. A resistor pot is used to adjust the DAC analog output offset. It also supports eight 12-bit 300KHz parallel ADC (ADS7852, 0-5V) with four inputs buffered by 4 ops. A precision voltage reference (LT1019) with build-in temperature sensor can be installed.

The 586-Engine has 32 0-3.3V PIOs on the J2 header. The P50 can buffer PIOs with 16 sourcing drivers (UDN2982), or 14 sinking drivers (ULN2003). These drivers can source or sink 350 mA at 50V per line to directly drive solenoids, relays, or lights. Seven high voltage drivers can be re-configured as high voltage inputs. Eight Opto-couplers (PS2701, NEC) can be installed to provide optical isolation.

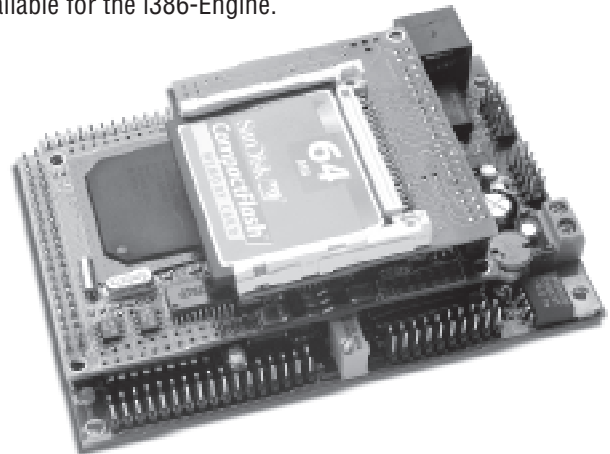
Two quadrature decoders, (HCTL2020, Hewlett Packard) can be installed to interface incremental motion encoders.

24 bi-directional TTL PPI I/Os (82C55) are software programmable and free to use.

An Ethernet LAN controller (CS8900) can be installed to provide network connectivity. A RJ45 8-pin connector is used to connect to a 10-baseT Ethernet network. A software stack library is available, supporting network protocols like ARP, DHCP, UDP, ICMP, and of course TCP over the Ethernet network.

Two channels of RS-232 drivers and a 5V linear regulator are on-board. An optional RS232 or RS485 driver can be installed for the 3rd UART of the 586-Engine. The **P50** 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.

A i386-Engine, or a A-Engine86 can be installed on the P50 with limitations of lacking proper PIO lines on the J2 header. Only 8 high voltage drivers and 5 opto-couplers are available for the A-Engine86. Only 9 high voltage drivers and 8 opto-couplers are available for the i386-Engine.



Ordering Information

P50	\$99/\$69/\$39	Qty 1/100/1000
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Includes: 2 RS-232 ports, 24 PPI I/Os, solenoid drivers, linear regulator. Must be driven by a 586-Engine, or driven by AE86, i386E with limited HV I/O. NOT including add-on options.

Add-on Options:

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| 1) 8 channels 12-bit 300KHz ADC(ADS7852) | \$40 |
| 2) 4 channels 12-bit 300KHz DAC(DAC7625) | \$60 |
| 3) Opto-couplers (PS2701) | \$20 |
| 4) Quadrature decoders (up to 2) | \$30 each |
| 5) Switching power regulators(SR) | \$30 |
| 6) 3 rd UART driver a)RS232 or b) RS485 | \$10 |
| 7) Ethernet Interface (CS8900) | \$50 |

Order Example

P50 with ADC, DAC, SR

P50+1+2+5 = \$99+\$40+\$60+\$30



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