

Converter designed for notebook computers.

The ML4873 converts the input from a battery pack or ac adapter (over a 5 to 30V range) into the 3.3, 5, and 12V values required for portable computer systems. The unit has three built-in regulators that maintain each output within a $\pm 5\%$ accuracy band. The converter achieves 90% efficiency and features a burst mode that lets the converter maintain regulation for loads as low as 1 mA. The converter is available in 28-pin SOICs for \$4.20 and 28-pin SSOPs for \$5.05 (1000). **Micro Linear Corp.**, San Jose, CA. (408) 433-5200. **Circle No. 533**

DC/DC converters. UWR series converters output 3.3V and are available in versions that output either 8 or 16W. All models feature 5-sided metal shielding. Outputs are nonlatching, current-limited with reverse polarity current protection. Overvoltage clamping, continuous autorecovery short-circuit protection, and automatic overvoltage shutdown are standard. Isolation equals 500V dc, and operating range spans -40 to $+100^\circ\text{C}$. The 8W version, \$69; 16W version, \$80 (100). **Datel Inc.**, Mansfield, MA. (508) 339-3000. **Circle No. 534**

Connector acts as re-routeable backplane.

Rather than accepting plug-in boards in the usual way, the Chiprack backplane con-

sists of a matrix, or stack of system boards, ready for component insertion. Each board, or carrier, in the matrix connects to the carriers above and below by special connectors. Available to either custom specifications or as an off-the-shelf product, the carriers will hold through-hole and surface-mount components. The connectors contact the top of one pc board and the bottom of the next, allowing Chiprack to function as a backplane connector while still offering the flexibility to reroute signals between connectors.

Harwin Inc., New Albany, IN. (812) 285-0055.

Circle No. 535

Harwin Plc., Hampshire, UK. (44) 0705-370-451.

Circle No. 536

Harwin PTE Ltd., Singapore. (65) 779-4909.

Circle No. 537

Fiber-optic data link.

The ODL 156 Series data links consist of transmitter and receiver modules housed in 16-pin plastic packages that feature ST connectors. The link is optimized for 62.5/125- μm fiber, but it can work with 50/125-, 85/125-, and 100/140- μm fibers as well. The link handles data rates as high as 156 Mbps over distances of 2 km. Each device, \$108 (1000). **AT&T Microelectronics**, Allentown, PA. (800) 372-2447, ext 854.

Circle No. 538

80486-processor cooling fan.

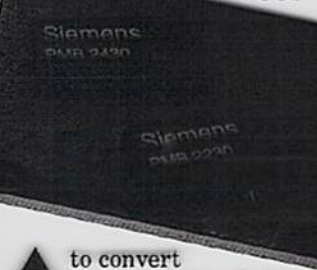
You can mount this fan/heat-sink assembly directly onto an already

socketed 486 chip using an integral stainless-steel saddle clip. The fan requires a 12V, 80-mA supply and runs at 5000 rpm. As an example, the assembly reduces the case temperature of a 25-MHz processor from 76 to 35°C. The fan has a minimum life of 30,000 hours. Overall size is 44x44x20.5 mm. £7.25 (100). **Brookside Technologies**, Kelty, UK. (383) 831528. **Circle No. 539**

DSP IC. The ADNT300 digital frequency discriminator uses zero-crossing detection and period-measurement techniques to demodulate or recover the modulating signal. The chip requires a 5V supply and directly interfaces to Analog Devices' (Norwood, MA) ADSP-21xx family of DSP μPs . It also works with other DSP μPs but requires translation of the software code. \$15 (100). **Numa Technologies**, Naples, FL. (813) 591-8008.

Circle No. 540

Wireless chips. The PMB 2430 and PMB 2230 are receiver and transmitter chips, respectively. They are targeted at cellular telephone and RF wireless communications operating as fast as 1500 MHz. The PMB 2230 has two VCOs



to convert baseband signals into an FM carrier frequency. The PMB 2430 is a narrow-band heterodyne receiver with two mixing stages. PM 2230, \$3.60; PMB 2430, \$4 (10,000). **Siemens Components Inc.**, Santa Clara, CA. (408) 980-4500. **Circle No. 541**

Mixed-signal ASIC. The Hughes Semiconductor mixed-signal system combines a set of standard cell libraries with a set of design tools centered on Mentor Graphics' Release 8 tool set. The system lets you put an RF receiver/transmitter on a single ASIC. The cell libraries include EEPROMs for local nonvolatile storage. EEPROM lets you modify an ASIC circuit after the chip has been built. The libraries provide more than 200 standard cells. The mixed-signal chips, including most analog cells, can operate from 3 to 10V over the full military or automotive temperature ranges. Hughes design services are available for full design or for designing key portions, such as RF or analog. **Hughes Semiconductor Products Center**, Newport Beach, CA. (714) 759-2934. **Circle No. 542**

Memory chips store, play voice messages. The ISD2500 family of chips lets you store voice messages—or other sounds such as music and alarms—that can be as long as 90 seconds. Applications for the voice-storage and playback chips include cellular phones, pocket notepads, and other products in which you would normally use a computer-created voice, a magnetic tape, or an audible annunciator. The 4-chip family offers storage ranges with playback times from 45 to 90 sec. The 45-sec ISD2545 samples at 10.6 kHz and has a cutoff of 4.5 kHz. The 90-sec ISD2590 chip has a 5.33-kHz sampling frequency and a 2.3-kHz cutoff. Thus, as you gain recording and playback time, the fidelity of the recorded voice drops slightly. The DIPs cost \$14.94 (1000), and bare

