Data handling

RAM combines bipolar, MOS

14-chip, 2,048-bit memory with beam leads offers 125-ns access time

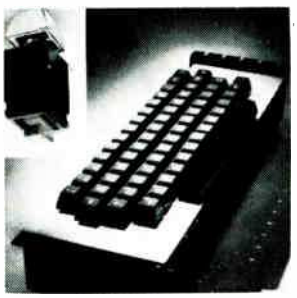
"The multichip approach is the future of semiconductor memories," says Robert R. Kressler, marketing manager for logic and memory functions at Texas Instruments Inc. Why does he say so? "This design provides low interconnection and packaging costs, and permits us to choose the optimum chip size for best yield."

TI used the multichip approach in developing a 2,048-bit random access memory with static MOS storage and TTL inputs and outputs. It is aimed at applications requiring relatively small memory capacities, such as peripheral equipment.

Compared to monolithic memories, Kressler says, the hybrid types offer high speed (125-nanosecond access time in this case) at low dissipation (9.65 milliwatts per bit, 1.3 watts total). The largest monolithic RAMs available, says Kressler, are 1,024-bit devices with access times of 300 ns and above.

The TI memory's storage elements are eight low-threshold, 256-bit MOS chips; six bipolars are used for decoding, sending, writing, and control. Power can be removed from the decoders during standby for 30% less dissipation. All of the chips are beam-leaded, as are all of TI's hybrid memory products; the ceramic substrate has two layers of metal interconnections.

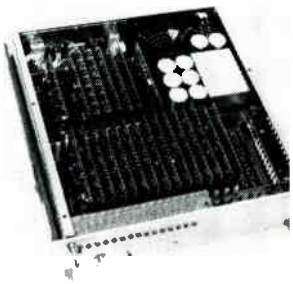
Two organizations are available: 2k by one bit (SMA 2001), and 1k by two bits (SMA 2002). Four chip-select inputs permit easy expansion



Modular solid state keyboard FS 300 eliminates encoding electronics and electrical contacts, and reduces component count. A ferrite key switch with one moving part develops the code. Power consumption is as low as 50 mA at 5 V for a full 88-key board. Logic level outputs are DTL- and TTL-compatible. Port Electronics Products, 133 Brimbal Ave., Beverly, Mass. 01915. [401]

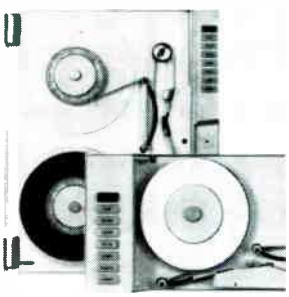
Code generator produces all 128 characters of the 7-bit ASCII code without a full-size keyboard. It is wired for positive logic, with a bounce-free, TTL-compatible output, and requires a 5-Vdc power supply. Light-emitting diodes display bit levels. Generator requires no special skill to operate. Price is $98. Mechanical Enterprises Inc., 5249 Duke St., Alexandria, Va. 22304 [402]

Acoustic coupler model DD 103 AC converts EIA or TTY signals to standard frequency shift keyed signals for transmission over phones. Bit serial data is transmitted in a form compatible with 103A data set. Features include half/full duplex circuitry, coherent switching, accurate carrier detect. Digi-Data Corp., 4315 Baltimore Ave., Bladensburg, Md. 20710 [403]



Analog-to-digital conversion system offers three ranges of speed up to 10 MHz, narrow aperture sample and hold devices, 15-bit resolution, and single end or differential input multiplexing capabilities. Features include buffered output data register, multimegohm input impedance. Preston Scientific Inc., 805 E. Cerritos Ave., Anaheim, Calif. 92805 [404]

Computer/cassette system, designed for use with peripherals and with programable digital controllers, consists of an Interdata cassette tape unit and the company's Model One computer. System is applicable wherever medium speed input-output and large storage capacity are important. System uses standard cassettes. Interdata Inc., 2 Crescent Pl., Oceanport, N.J. 07757 [405]



Magnetic tape transports, Mod 310 and 311 series, designed for use with minicomputers, peripherals, and data communications systems, eliminate take-up reel, enabling unskilled operators to handle tape at high speeds. The two series are provided in both 9- and 7-track configurations. Tape format is IBM compatible. UniComp Inc., 18219 Parthemia St., Northridge, Calif. 91324 [406]

Modem with a symbolic status display is insensitive to virtually all bit patterns. The 4,800-b/s modem, designated the model 248A, is macromodular in construction, and the multicolored display instantly indicates the condition of the modem. Packaging is stand-alone or for cabinets. Information Exchange Systems Inc., 3312 Gorham Ave., Minneapolis, Minn. [407]

Automated data input system reads documents of any size or format, printed in any font. The OCR system, called Grafix I, reads from filmed document images rather than directly from paper, using film in the same way that tapes and disks are input media. Keystroking of source data is eliminated. Information International, 12435 W. Olympic Blvd., Los Angeles, Calif. 90064 [408]