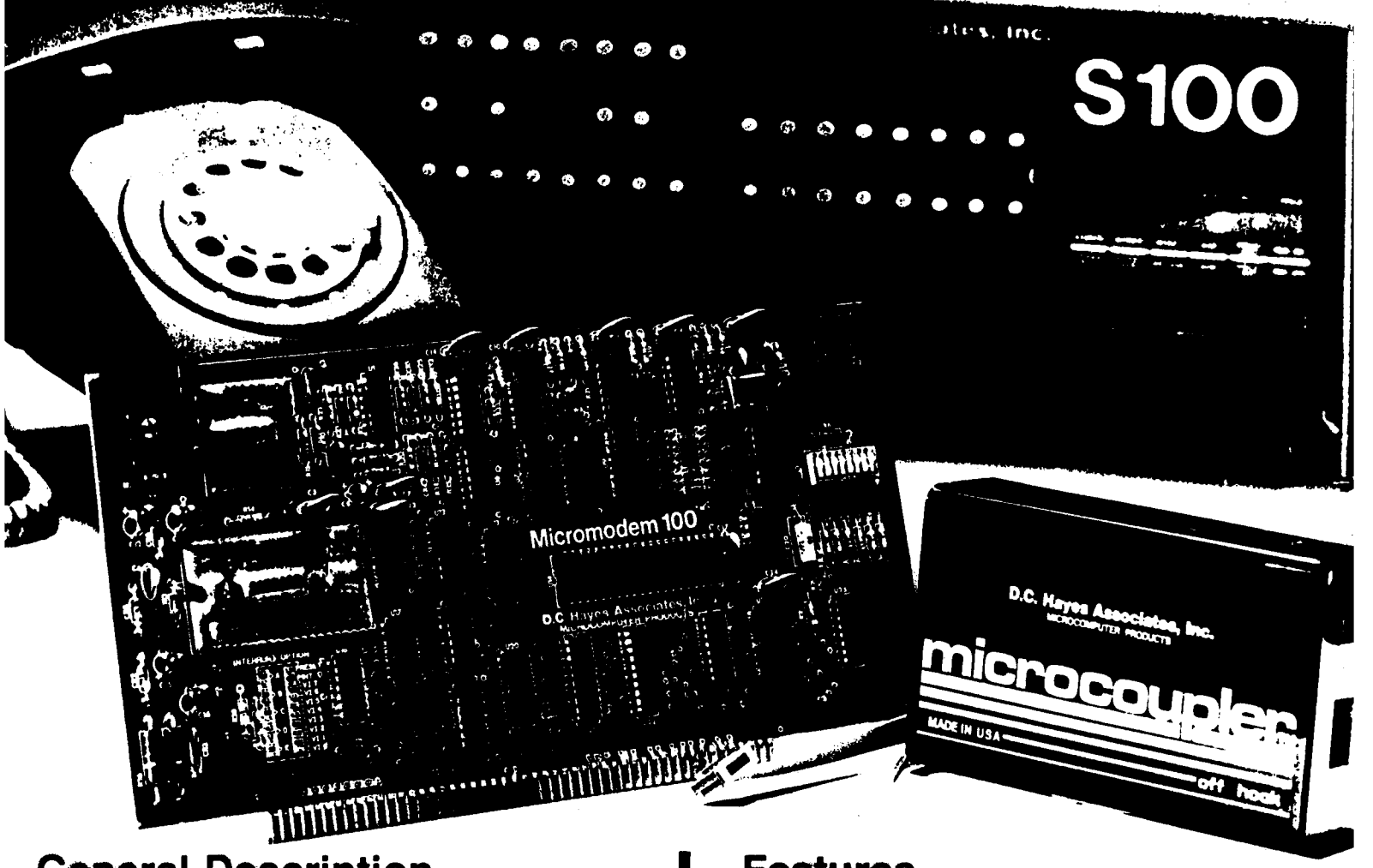
D.C. Hayes Associates, Inc.

MICROCOMPUTER PRODUCTS

MICROMODEM 100™

A data communications system for the S-100 computer!



General Description

The MICROMODEM 100 is a complete data communications system for S-100 microcomputers combining on a single board functions which formerly required a modem, an automatic calling unit and serial and parallel interfaces. The result is a sophisticated computer-to-computer or terminal-to-computer modem for use in small computer systems.

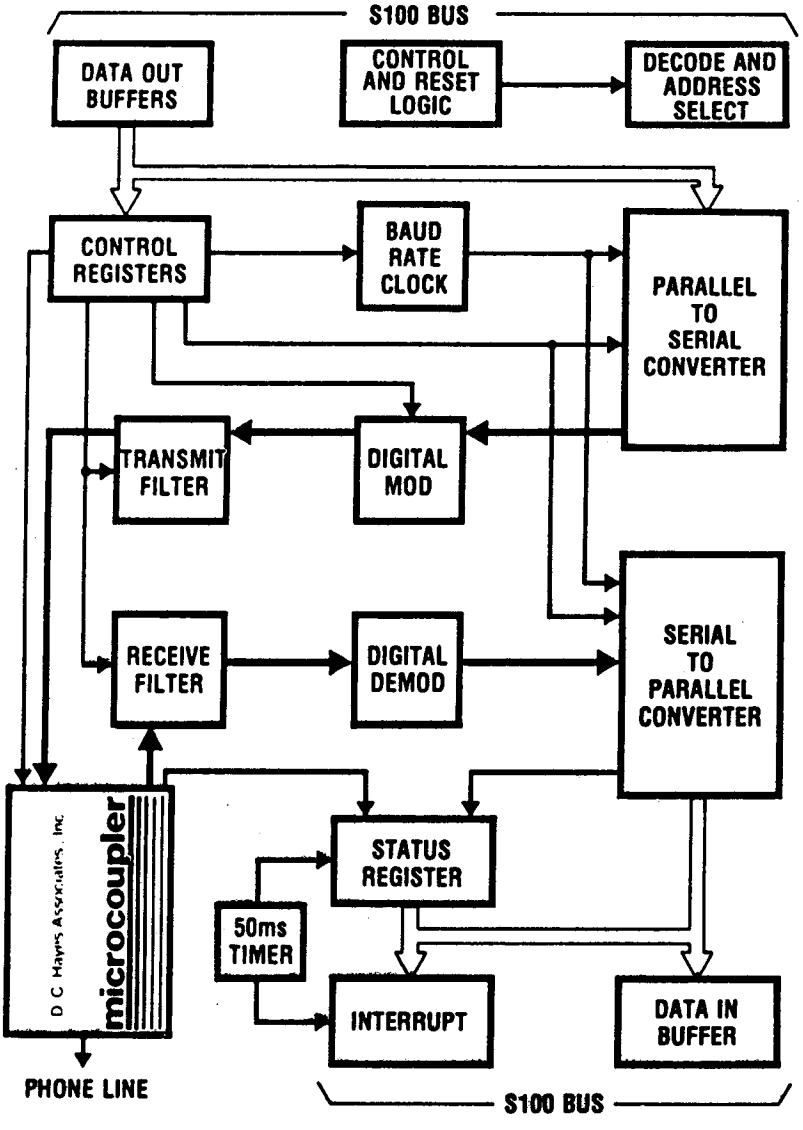
The MICROMODEM 100 provides all the capabilities of a serial interface card and an acoustic coupler, with the addition of programmable automatic dialing and answer.

The MICROMODEM 100 comes with the MICROCOUPLER™, an exclusive new device that allows you to connect your S-100 computer directly into any modular jack provided by your local telephone company.

Features

- Fully S-100 bus compatible including 16-bit machines and 4 MHz processors.
- Two software selectable baud rates — 300 baud and a jumper selectable speed from 45 to 300 baud. (110 standard). Supports originate and answer modes.
- Direct-connect Microcoupler. This FCC-registered device provides direct access into your local telephone system, with none of the losses or distortions associated with acoustic couplers and without a telephone company supplied data access arrangement.
- Auto-Answer/Auto-Call. The MICROMODEM 100 can automatically answer the phone and receive input; it can also dial a number automatically.
- Software compatible with the D.C. Hayes Associates 80-103A Data Communications Adapter

Micromodem 100™ Functional Block Diagram



Specifications

Data Format	Serial, binary, asynchronous 5, 6, 7 or 8 data bits, 1 or 2 stop bits, odd, even, or no parity.
Power consumption	+8 VDC at 250ma, +16 VDC at 25 ma and -16 VDC at 25 ma, typical.
Card Size	5⅜" x 10" including connector fingers.
Microcoupler™ Size	5½" x 3¼" x 1⅜"
Modem Compatibility	Bell System 103-compatible originate or answer mode, dial pulse dialing and auto-answer -50 dBm receive sensitivity -40 or -50 dBm carrier detect level, switch selectable -10 dBm transmit level 45 to 300 baud data rates
FCC Registration	FCC registration No. BI986H-62226-PC-E Ringer equivalence 0.4B Connects with modular jacks RJ11W or RJ11C.

Specifications subject to change without notice

Programming the Micromodem 100™

Registers and Addressing:

The operation of the MICROMODEM 100 is controlled by software. It occupies 4 consecutive I/O port addresses on the S-100 bus. The first port is the data register. All data sent to or received from the phone line goes through this register. Modes of operation are established by setting or resetting bits in 3 control registers. Register #1 controls: parity, word length, number of stop bits and enables interrupts from the 50ms timer. Register #2 controls: baud rate, on/off hook, dialing, transmit carrier, mode, send break, self-test and transmit or receive interrupt enable. Register #3 starts the 50ms timer. The MICROMODEM 100 also has a status register which can be read by software. Status bits available are: carrier present, phone ringing, 50ms time-up, character received, transmit buffer empty, parity error, framing error and overrun error.

Automatic Reset and Disconnect:

The MICROMODEM 100 has circuits which, if enabled, can generate an interrupt or reset the CPU if the received carrier is lost. This is useful in systems which are unattended and must cold start if the connection is lost.

Interrupts:

5 interrupts are provided: character received, transmit buffer empty, phone ringing, 50ms time-up and lost carrier. All except lost carrier are individually maskable under program control.

Applications

- Convenient data communications between home and office.
- Automatic data collection from remote terminals.
- Send programs, letters, and other data over the telephone.
- Intelligent terminal.
- Access to remote data base.
- Remote software maintenance and customer support.

Ordering Information:

The MICROMODEM 100™ is supplied with:

- Modem interface card
- Microcoupler™
- Connector cables
- Manual including 8080 assembler listing of dumb terminal program

Ask your local computer retail outlet for price and availability information.

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