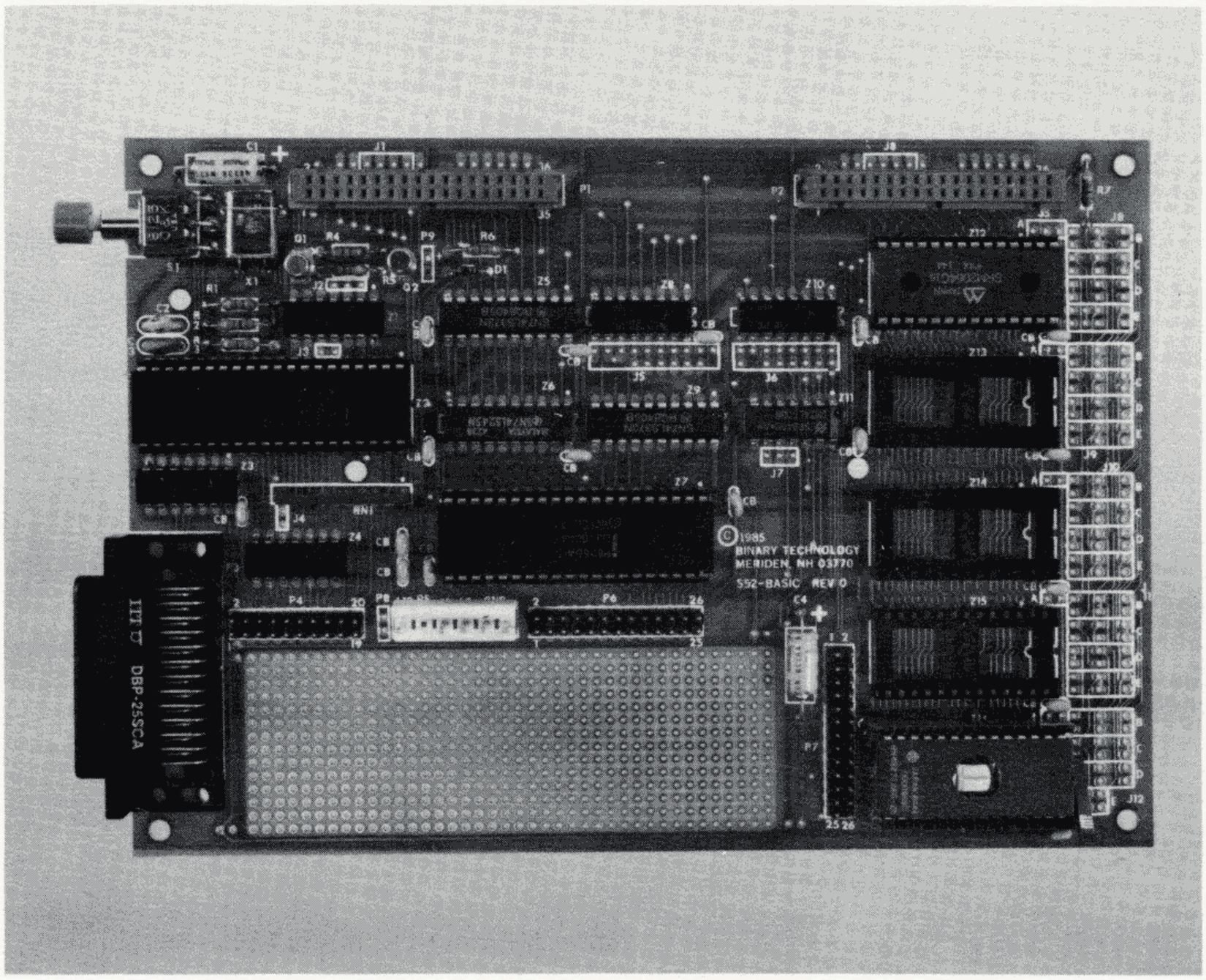
SIBEC·II

Microcontroller Board



- Intel 8052 BASIC CPU
- Full Floating Point "Control" Basic
- Serial Printer Output
- 5, 8 Bit I/O Ports
- Prototyping Area
- Memory Expandable to 48k.
- Auto-Execute Boot Capability
- Buffered Address and Data Expansion
- Accurate, Interrupt Driven Real-Time Clock
- DMA Capability
- Fast Tokenized Interpreter
- Access to All 8052 Registers from BASIC
- "Stand alone" Software Development
- Auto Baud Rate Terminal Connector
- iSBX* Expansion Connectors
- 11 MHz. Execution Speed
- Custom Cabinet and Power Supply Available
- PROM Programmer
- $5\frac{1}{2}$ by $7\frac{3}{4}$ with Mounting Holes
- Extra Chip Selects Provided for Expansion
- Interrupt Handling Capability
- Configurable for all Known Byte-Wide Devices
- Numeric Range: $\pm 1E^{-127}$ to $\pm .99999999E^{+127}$
- User Accessible Function Library

Binary Technology

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DESCRIPTION

The SIBEC-II is a cost-effective controller board capable of replacing personal or microcomputers in many applications. The SIBEC-II utilizes the Intel 8052AH BASIC CPU which was designed specifically for addressing the needs of process control, measurement, and instrumentation applications.

PROGRAMMING

All program development, including interrupt routines and real-time clock handlers, can be done in BASIC. Critical sections may be done in machine code if desired.

Once a program performs to the users satisfaction it can be saved in the PROM using a single command. It will automatically be appended to the programs already in the PROM and assigned a number. The program can then be recalled by that number for further development or it can be assigned as the default program causing it to begin execution automatically each time the board is powered up.

EXPANSION CAPABILITIES

The SIBEC-II has 2 iSBX expansion connectors with space for either two half size iSBX cards, or one full size card. Numerous iSBX cards are available from several manufacturers allowing for almost unlimited expansion of the SIBEC-II.

The SIBEC-II can be expanded with A/Ds, D/As, voice synthesizers, disk controllers, high power switches, bubble memorys, additional serial ports, parallel ports, motor controllers, IEEE-488 ports, etc. without the need for large, expensive card cages.

PROTOTYPING CAPABILITIES

The five square inch prototyping area on the SIBEC-II provides enough space for several additional chips. There are four uncommitted chip selects available eliminating most of the "glue" required to interface any of the common LSI chips.

GENERAL INFORMATION

The SIBEC-II is one of the fastest methods for progressing from the idea stage to operating hardware. No exotic development equipment is required. Only a terminal and access to a 21 volt power supply (for PROM programming) are necessary. Once an application is completed, it is no longer necessary for a console or 21 volt power supply to be attached. The board will operate stand-alone — a powerful feature for control environments.

OPTIONAL ACCESSORIES

A high quality extruded aluminum cabinet is available to house the SIBEC-II. It is finished in white enamel with clear coated aluminum end panels and black plastic bezels. One end panel is machined to fit the DB-25 terminal connector and reset button. The other panel is blank, giving the user the option of mounting displays, switches, push buttons, etc. as desired. The cabinet is provided with all requisite hardware including DB-25 lock screws and rubber feet.

A "wall charger" style power supply with a mating connector for the SIBEC-II is also available from Binary Technology completing a total package suitable for any project.

WARRANTY

The SIBEC-II is built to the highest standards and is guaranteed against manufacturing and hardware defects for a full one-year period from date of shipment.

CPU	8052-AH BASIC
Clock Rate	11.0592 MHz.
Memory	8k. CMOS RAM , 16k. EPROM. Expandable to 48k. total
Parallel I/O	5, 8 Bit Ports
Serial Ports	1 Console, and 1 (Unidirectional) Printer Port
Size	$5\frac{3}{8}$ In. x $7\frac{3}{4}$ In.
Power Requirements	5 V. @ 300 ma.; ± 12 V. @30 ma.; 21 V. @ 50 ma. (For PROM Programming)
Expansion	2, iSBX* Expansion Connectors; 5 in^2. Prototyping area
Prom Programmer	ZIF Socket for 2764 or 27128 EPROM
BASIC Commands & Statements	RUN CONT LIST LIST# LIST@ NEW NULL RAM ROM XFER PROG PROG1-6 FPROG FPROG1-6 BAUD CALL CLEAR CLEARS CLEARI CLOCK1 CLOCK0 DATA READ RESTORE DIM DO UNTIL WHILE END FOR-TO-STEP NEXT GOSUB RETURN GOTO ON-GOTO ON-GOSUB IF-THEN-ELSE INPUT LET ONERR ONTIME ONEX1 PRINT PRINT# PH0. PH1. PH0.# PH1.# PRINT@ PH0.@ PH1.@ PGM PUSH POP PWM REM RETI STOP STRING UI1 UI0 UO1 UO0 ST@ LD@ IDLE RROM
BASIC Operators	+ / ** * − .AND. .OR. .XOR. .NOT. ABS() INT() SGN() SQR() RND() LOG() EXP() SIN() COS() TAN() ATN() = > >= < <= <> ASC() CHR() CBY() DBY() XBY() GET IE IP PORT1 PCON RCAP2 T2CON TCON TMOD TIME TIMER0 TIMER1 TIMER2 XTAL MTOP LEN FREE PI
Numeric Range	Floating Point: $\pm 1E^{-127}$ to $\pm .99999999E^{+127}$

* iSBX is a Trademark of the Intel Corporation

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