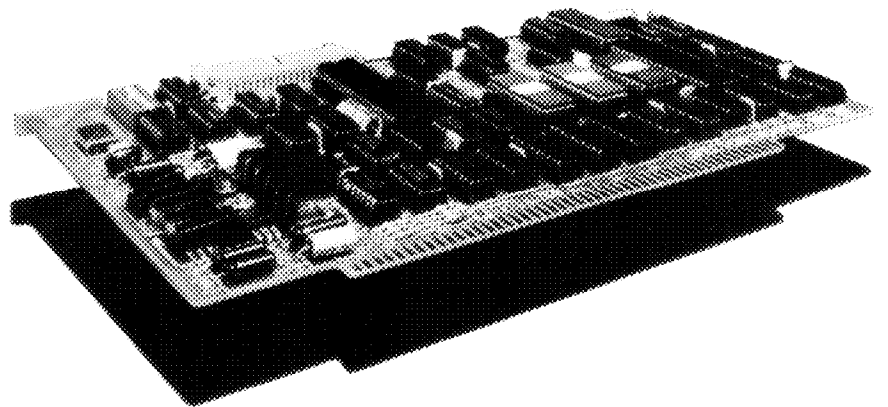
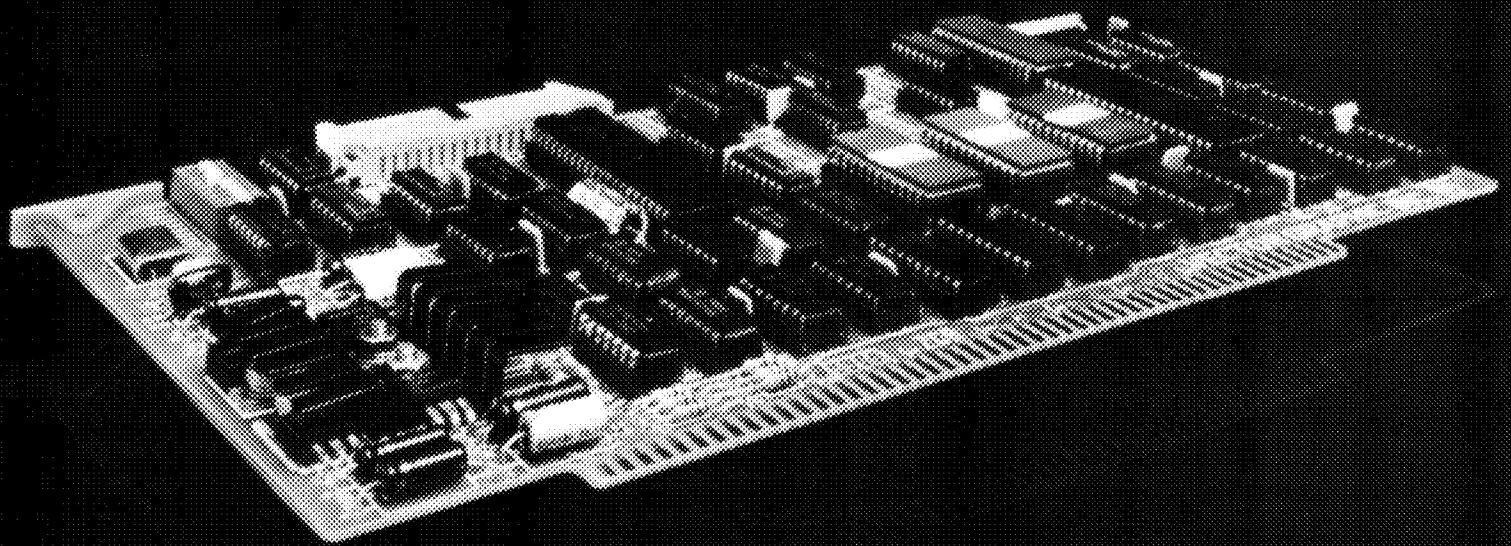


**ZCB Single Board Computer
from Vector.**



ZCB Single Board Computer



Vector Graphic has found a way to make one board do the work of three. The result—the ZCB Single Board Computer—is an 8-bit microcomputer system on a single board.

The ZCB incorporates features and capabilities that normally require a CPU board, a PROM/RAM board, and an I/O board. By doing the job of three, the new S-100 bus compatible ZCB reduces your costs both directly and indirectly.

If, for example, you use it as the heart of a fully integrated microcomputer system, the ZCB reduces the physical size of the sys-

tem by freeing up two S-100 slots. And when you consider the number and variety of boards that can use those slots, two extras can go a long way.

What's more, the ZCB's single board approach significantly reduces the demands on the system's power supply. So it makes much more efficient use of power resources.

But the ZCB's real power and versatility come from within. Based on the powerful Z-80A microprocessor, the ZCB contains 1024 bytes of high-speed static RAM and can accommodate up to 12K of PROM. It also contains the circuitry to support both static and dynamic memories.

On the I/O side, the ZCB offers three 8-bit parallel ports and one serial RS-232C port.

Even more flexibility comes from the ZCB's advanced address decoding logic, which opens the door to a wide variety of addressing options.

The PROM can be implemented on the ZCB using either 2708s, 2716s, or 2732s. This gives you a great deal of choice when it comes to operating systems, languages, etc.

In fact, Vector uses the ZCB as the core of their own complete computer systems. Each of which contains the strongest body of

software/hardware prototyping tools available in any small computer.

So you can do all your ZCB prototyping entirely within a Vector system. And when your job's complete, you simply move the ZCB to its final chassis. With no downloading or in-circuit-emulation required.

Now what could be easier than that?

Specifications-System

Compatibility

Most S-100 systems.

Power Requirements

+8 VDC @ 970 ma. (typ.)

+16 VDC @ 120 ma.

-16 VDC @ 80 ma.

Availability

Shipped assembled, tested, burned in; no kits.

Specifications-PROM/RAM

Memory

65536 bytes addressable,

1024 bytes RAM on board,

3 PROM sockets on board,

up to 12K addressable

PROMs included with board

None

Memory Speed

RAM: 300 ns.

PROM: User selected

(450 ns. typical)

Memory Types

RAM: 2114 static

PROM: 2708, 2716, 2732

Standard Location of

Systems Monitor PROM

E000H-E7FFH

Power-On/Reset Jump Options

Auto boot on power on/reset, jumps to memory location E000H. Shipped enabled.

Specifications-CPU

Processor

Z-80A

Number of Data Bits

8

Number of Address Bits

16

Instructions

158, including all 78 8080 instructions

Clock speed

2 or 4 MHz, jumper selectable, enabled for 4 MHz.

Interrupts

Z-80 Mode 0 (8080 mode), MODE 1, MODE 2

I/O devices

256 I/O addresses

Dynamic RAM

Supports dynamic memory by sending Z-80 RFSH on bus line 66, fast reset/power on clear signal generated on board.

MWRITE

Jumper option to generate MWRITE on board

Standard: option enabled.

Wait state generation for memories slower than 300 ns.

Jumper option to generate one wait state each time memory is addressed.

Standard: Generated one wait state after each M1 instruction.

Bus Load

1 standard TTL load on all inputs

Buffering

Fan out: 15 standard (60 low power schottky)

Phantom

Output buffer disable compatible with Vector Graphic PROM/RAM Boards, which generate phantom in response to Power-on-clear (POC). Jumper selectable: on/off

Standard: enabled

Address Mirroring

Standard: enabled, can be disabled.

Specifications-I/O

Capacity

1 serial RS-232 and 3 8-bit parallel ports programmable as input or output.

Serial Port

1, using 8251 controller chip.

Port Addresses

Any increment of four from 00H to FCH. Preset addresses are: Data, 04H (echoed on 06H); Control, 05H (echoed on 07H).

Signal levels

EIA RS-232C

RS-232 handshaking

Typical handshaking is provided, i.e. RTS, CTS, DTR, DSR, etc.

Asynchronous

Rates

110-9600 baud (switch selectable)

Data bits

5-8, programmable

Stop bits

1, 1½, or 2,

programmable

Parity

Even, odd, or none, programmable

Synchronous

Rates

DC-56K.

Synch detect

Can be wired for internal or external synch. 8251 SYNDET line is not connected.

Clock

Not now connected to the external world as required for synchronous operation.

Parity

Even, odd, or none, programmable

Data Bits

5-8, programmable

Synch character

Single or double synch character can be programmed.

Parallel Ports

2-8 bit, 2-4 bit can be programmed as 3-8 bit. Uses an 8255 I/O controller chip.

Port Addresses

Any increment of four from 00H to FCH. Preset addresses are: Port A, 08H; Port B, 09H; Port C, 0AH; and the control register at 0BH.

Latching

Output latched, input latched.

Signal level

TTL (input = 1 low power TTL load; output drives 1 TTL load).

Number of lines

8 lines per channel, programmable for input or output. +5 VDC and GND are also provided.

Data Transfer

Over 100K bytes/second.

Cable

Optional. Has 34-pin female connector and 34-line ribbon cable. No connector is at the other end, allowing user to configure as required. Must be ordered separately.

Above specifications are subject to change without notice.

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