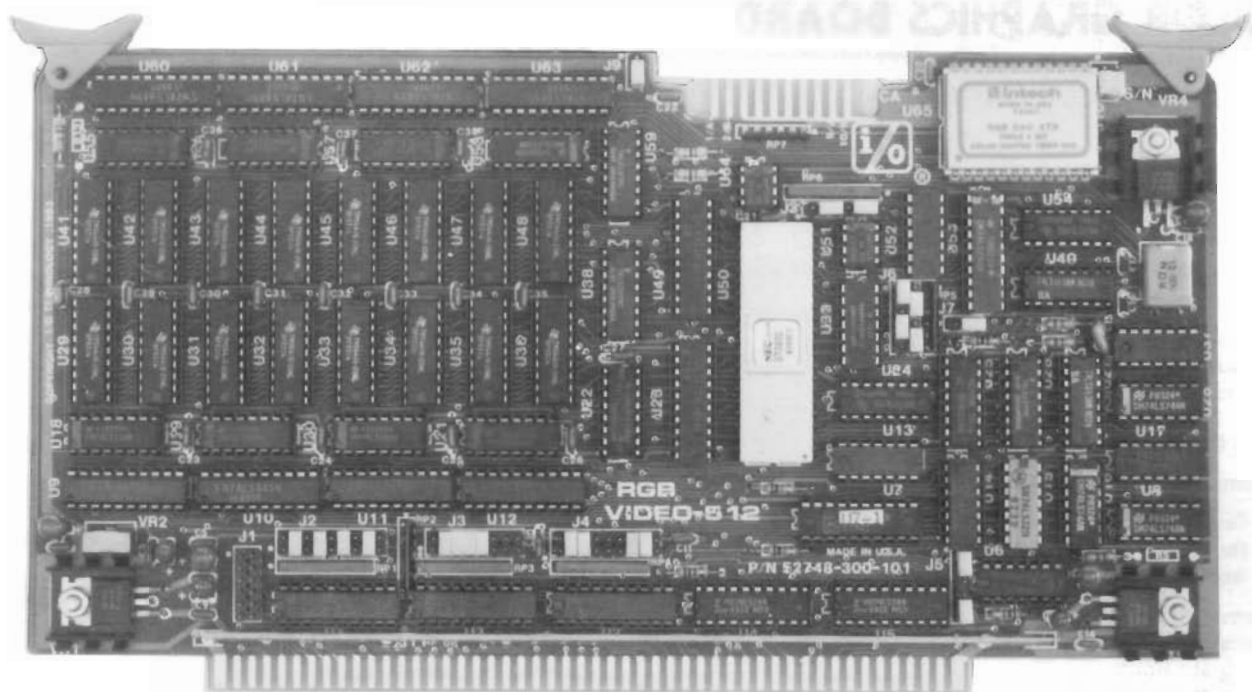# I/O TECHNOLOGY

S-100 PRODUCT SPECIFICATIONS

RGB VIDEO - 512
COLOR GRAPHICS BOARD

"Raster Scan Complex Graphics Simplified" — *easier done than said* with the I/O TECHNOLOGY **RGB VIDEO-512** COLOR GRAPHICS BOARD.

Created as a single board solution for adding color graphics capabilities to IEEE-696/S-100 computer systems, it offers unique features and flexibilities.

The board utilizes the NEC 7220/Intel 82720 Graphics display Controller which, in hardware, generates lines, arcs, rectangles and graphics characters at high speed and provides for programmable display resolutions up to 512 x 512 pixels. Four planes of local video memory and a color mapper allow the selection of 16 colors from a palette of 4096 colors, and each plane can be partitioned into multiple frame buffers. Applications for the **RGB VIDEO-512** include presentation-level graphics, wire-frame animation and computer aided design.

RGB VIDEO - 512
COLOR GRAPHICS BOARD

SPECIFICATIONS (CONTINUED)

INTERFACE SPECIFICATIONS:

VIDEO OUTPUT (Each Channel)

Direct RGB analog output compatible with EIA standards RS-170 and RS-343.

Voltage Range (1%)	0 to 0.6 Volt
Current (Max.)	17 ma
Impedance (± 5%)	75 OHMs

SYNC OUTPUTS

Composite Green Sync

Drives output to a level 286 mV more negative than the Reference Blanking Level, with capability to restore the Green Output Blanking Level to 0V absolute, if required.

Composite TTL*
Composite TTL with Serrations
Separate Horizontal TTL
Separate Vertical TTL

*All above TTL Sync outputs are jumper selectable for active low or active high operation.

LIGHT PEN INPUTS

Strobe TTL*
Switch TTL*
w/5 VDC and GND

*Jumper selectable for active high or active low input.

MASTER/SLAVE EXTERNAL SYNCHRONIZATION INPUT (TTL)

Allows for multiple RGB VIDEO-512 BOARDS to contribute to a single complex video image.

SYSTEM INTERRUPTS (TTL O.C.)

Jumper selectable options for Light Pen and Vertical Sync interrupts to Host System.

HOST SYSTEM ADDRESSING MODES

Jumper selectable for any combination of the following modes:

I/O Port Mode
Memory Mapped I/O Mode
24, 16 or 8 bit Address Fields

DISPLAY CONTROLLER SPECIFICATIONS:

DISPLAY MEMORY

65,536 words of 16 bits, totally independent of Host System memory address space.

GRAPHICS CAPABILITIES

Figure drawing of lines, arcs, circles, rectangles and graphic characters, with individual pixel-by-pixel drawing capability.

Display of up to 512 x 512 pixels with 4 planes of color (16 colors) or greyscale.

Two independently scrollable areas.

VIDEO DISPLAY FORMAT

16 Zoom Magnification factors
Panning
Programmable Video Raster parameters

CONNECTOR DESCRIPTION:

Standard edge connector; two-sided with 10 finger positions on .125 inch centers, on each side.

INTERCONNECT CABLE (OPTIONAL):

A cable assembly consisting of four 75 ohm coax cables with a board mating connector terminated with four bulkhead Female BNC connectors.

ORDER P/N 52748-200-135 (See photo, above).