
SPECS & FACTS

541 High Resolution Graphics Expander

The model 541 graphics expander is a standard OSI 48 line bus circuit card which expands the capabilities of OSI's 540 video text and character graphics display to include 256x512 individual point addressable graphics.

The 541 uses 8K of on-board memory to memory map the 256x512 points. The output of the display is mixed with the 540's output providing extremely versatile and convenient to program displays which have alpha characters, graphics characters, up to 16 colors and high resolution point graphics on one video screen.

The 541 also has a total of 24K of 2114 type RAMs which allows it to completely emulate OSI's 527 24K RAM board. When placed in the second 24K segment of the address space of a 48K user partition, the board can be used either totally as a program memory card with the graphics turned off or the lower 8K can be used for program memory (yielding 32K workspace) and the upper 16K for memory mapped graphics.

When used in conjunction with Ohio Scientific's "low overhead" OS-65D operating system, the machine provides competitive end user workspace in 48K with graphics turned on, (approximately 20K of BASIC PROGRAM SPACE).

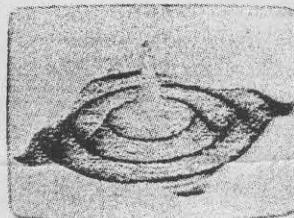
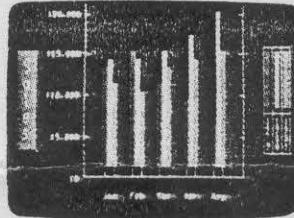
The 541 is specifically designed to expand a 24K C4P or C8P disk system to 48K and high resolution graphics. Other configurations can be only supported by special system modifications.

The 541 is available immediately in specially factory configured C4P and C8P computers:

C4PMF-HR (with 48K, high resolution and one mini-floppy)

C8PDF-HR (with 48K, high resolution and dual 8" floppy)

The 541 can be added to existing C4P and C8P computers, however, it requires several minor modifications to the systems 505 CPU and 540 video boards so it will be only offered as a factory upgrade.



Expected Availability:

C4PMF(HR)
 C8PDF(HR)
 541 upgrades to C4P and
 C8P computers

May 15, 1981
 July 15, 1981

*Contact your local dealer for availability
 and pricing information.*

HIGH RESOLUTION GRAPHICS
FOR YOUR OSI
COMPUTER

The High Resolution Graphics Kit is now available. The kit is designed for use on the C1P, C1P-MF, and Superboard OSI computers. The kit includes a 6 x 6 inch printed circuit board, full set of parts and detailed step by step instructions for assembly and operation. The printed circuit board is ready to solder the parts in place. In addition to one simple change to your 600 board, you will have to solder a few wires from point to point. Holes and solder pads already exist on your 600 board for assembly of these wires. Connection between your 600 board and the kit board is accomplished by means of flat cable and connectors provided with the kit. You merely plug your cable assembly into sockets provided with the kit.

The kit includes 8K of static 250 nanosecond 2114 RAM which resides at the end of your user's memory. This means that your computer user's RAM is increased by 8K and can be used for basic programs when your graphics is not in use. The printed circuit board is designed so you can choose a variety of addresses where you wish the 8K of memory to reside. Some of the possible addresses are:

- 4096 - 12287 for a 4K system
- 8192 - 16383 for a 8K system
- 20480 - 28671 for a 20K system (C1P-MF typical)
- 32768 - 40959 for a 32K system

The Kit includes two 40 pin sockets which are mounted on the kit board. One is used to make the connection between the 600 and kit boards. The second socket has the same pin out pattern assignments as you now have on your 600 board. This means that you retain the same expansion capability and can add other systems to your computer or keep those you now have such as the mini-floppy.

With the 8K RAM provided with the kit, you may implement the GT conversion to double the speed of your computer. You merely exchange the kit RAM with the 600 board RAM. Your computer is equipped with 450 NS 2114's and the kit includes 250 NS 2114's. The graphics do not require the faster RAM so the trade can be readily made. Use the GT conversion procedure outlined in your catalog.

GRAPHICS PERFORMANCE

The 8K of RAM provided with the kit includes 65,536 bits and each bit controls one small spot on your TV screen. Thus the screen contains 65,536 individually controlled points minus overscan. This number of points produces the high resolution thereby enabling the user to create plots, graphs, pictures and drawings. The possibilities are infinite in this easy to program system.

Your OSI video is currently designed to sweep the TV screen 256 times and characters are formed by means of 256 points on each sweep. However, you cannot individually control each point. Control is provided by 255 patterns produced by your character generator. The same 256 x 256 pattern is employed in the kit but the user can control all points. Each sweep line contains 32 addressable bytes. To illuminate one bit, you merely Poke 1,2,4,8,16,32,64, or 128 into the selected address. For example, if you wish to light the 3rd bit within address 36864, the command Poke 36864,4 does the job. If you wish to light the 3rd bit and the 8th bit, you Poke $128+4=132$ into the selected address. Poking 255 illuminates all 8 bits within that address. The kit includes detailed programming instructions and sample programs.

When you have finished installing the High Resolution Graphics Kit, you still retain the 255 character graphics which came with your OSI computer. The kit includes a switch which controls the high resolution graphics. With the switch in one position, both the OSI and kit graphics appear on the screen. In the other position, only the OSI graphics will appear on the screen.