Obsolete Video Cards

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8514/A

8514/A is a standard produced by IBM to work with its MCA bus. It works well, producing high resolutions on interlaced monitors. A later adaption allowed fast refresh rates on noninterlaced monitors, producing high quality flicker free images. 8514/A works quite differently than a VGA, although they both use the same kind of monitor. On a 8514/A, the computer tells the video card what to do and the video card figures out how to do it. For example, it says "Draw a circle" and the card figures it out. These are higher level commands and are quite different than the pixel by pixel instructions which must be calculated by the CPU in standard VGA cards.

8514/A cards are much faster than VGA cards and often provide higher quality images than the VGA card. Nevertheless, IBM discontinued this format in favor of the more advanced XGA.

MCGA

The MultiColor Graphics Array is archaic hardware. It was integrated into the motherboards of old PS/2 models 25 and 30. When coupled with a proper IBM display, it supported all CGA modes, but it was not compatible with previous monitors. MCGA could muster 64 shades or gray, thereby giving it the ability to simulate color images on monochrome monitors.

MDA

The Monochrome Display Adapter, or MDA was text−only and no color. This was the original display adapter on the IBM PC. Technically, it was a character−mapped system, meaning it was capable only of 256 special characters in set positions on the screen. It's not capable of pixel−by−pixel control, therefore no graphics can be shown with it. The only plus points of this system was the high resolution. It was ideal for simple DOS based applications with no graphics, like word processing. As a plus, IBM included an integrated printer port, thereby saving another slot.

CGA

A few months after the release of the MDA, the CGA adapter came out. It worked with an RGB monitor and worked off the bit−mapped method, meaning it was capable of the pixel−by−pixel control needed for graphics. It could also display 16 colors, 4 at a time, on a 320 x 200 display. The pixels are quite large and the resolution was bad, but it could display graphics. CGA offered a high−resolution mode of 640 x 200, but then it could only do two colors. Besides its limitations, this card remained very common for quite a while. It had a couple of annoyances, which were flicker and snow (one would sometimes get random dots appearing on the screen).

EGA

The Enhanced Graphics Adapter was next in line. It stands between the CGA and the good old VGA cards. It was introduced in 1984 and was continued until 1987, when the first IBM PS/2 systems were set to market. It was a nice graphics card at the time, but it couldn't deliver the vast array of colors we all like today, so it is thus forgotten. It could produce 64 colors, but displayed only 16 of them at one time when used with an EGA monitor. It had a high−resolution mode and a monochrome mode, and was compatible with all previous monitors, including CGA and monochrome.

One new feature on the EGA adapter was the memory expansion board. The EGA card came standard with only 64 KB of memory. With a memory expansion card, you got an extra 64 KB, for a total of 128 KB. Then, with the addition of a special IBM memory module kit, you could add another 128 KB, for a total of 256 KB of graphics memory. One good thing, though, was that most aftermarket EGA cards came equipped with the full 256 KB of memory.

PGA

In 1984, IBM introduced the Professional Graphics Array, or PGA. The name gives away its intended audience. This system, priced at almost $5,000 US, was intended for serious scientific or engineering applications. With a built on 8088 processor, it could perform 3D manipulation and animation at up to 60 frames per second. Besides the price, this system took up a total of three motherboard slots. Obviously, the cost precluded this system from ever taking on to the general public, and was later dropped for the VGA adapter.