

Unraveling Apple's Video Adapter and Cabling Confusion

As most loyal Mac users know, Apple products often have a longer lifespan than many of their competitors' counterparts -- which can be a mixed blessing at times, since the related peripherals like cables, power supplies, and other adapters may wear out sooner than the computer itself, and replacement parts can sometimes be difficult to find. Thanks to many progressive-thinking online vendors, such as Optimized Cable Company, and auction sites like eBay, Mac enthusiasts can keep their trusty legacy Macs up and running for many years and get the most out of their investment.

One particular component of Mac systems that has undergone a number of changes over the years, and has led to some confusion and frustration when it comes to finding suitable replacement parts, is the external display port -- especially with Mac laptops. The first PowerBooks were equipped with a standard 15-pin VGA port for connecting to an external video source. This made it relatively easy to connect to an external monitor or projector when giving a presentation in a classroom or a conference room, since VGA was and -- to some extent -- still remains the default standard for most hardware. But as Apple continued to develop and advance their product lines, always trying to stay ahead of the curve with their technology, their laptop form factors became sleeker in design. As a result, the ever evolving MacBooks, MacBook Pros -- and now MacBook Airs -- started coming equipped with a series of different proprietary ports that all require unique adapters to connect to the standard VGA and DVI cabling interfaces that remain the norm for most classroom and conference room audio/video systems.

Even the most devout Mac enthusiast can become confused by the dizzying array of display adapter options. The following chart will hopefully dispel some of that confusion by listing some of the more common Mac display port adapters in chronological order.

VGA (Video Graphics Array): the "standard" format with a 15-pin connector. 640x480 pixels was the initial supported resolution back in the late 1980's and early 1990's, but obviously, newer video cards can obviously higher resolutions up to 1280x1024 pixels -- and even up to 2048x1536 on some systems.



DVI (Digital Visual Interface): a higher resolution than VGA with a seemingly confusing array of pins and slots. Compatible with HDMI and supports resolutions ranging from 1280x1024 pixels up to 3840x2400.



Mini-VGA: This type of port was found on Apple's iBooks, eMacs, PowerBooks & flat-panel iMacs from 2002-2003.



Mini-DVI: Replaced Mini-VGA on the PowerBook G4, iMac, MacBook, and 2009 Mac Mini. Mini-DVI does not support dual-link connections and cannot support resolutions higher than 1920x1200 @60Hz.



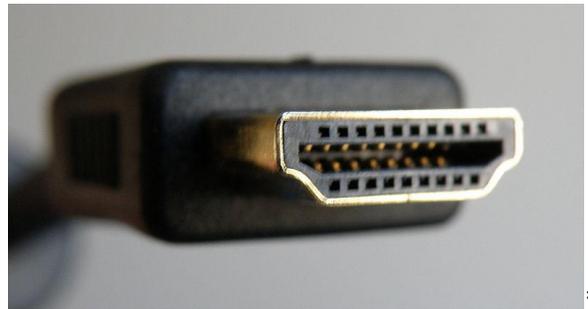
Micro-DVI: Also replaced Mini-VGA, but was found mainly on the 2008 MacBook Air.



Mini DisplayPort: Standard on Apple systems from late 2008 to present



HDMI (High-Definition Multimedia Interface): even higher resolution uncompressed hi-definition video bundled with digital audio.



Some of the more commonly found video adapters for Mac laptops -- and most other laptops, too -- use these ports in different combinations, such as:

- DVI to VGA
- Mini-VGA to VGA
- Mini-DVI to VGA
- Mini-DVI to DVI
- Micro-DVI to VGA
- Micro-DVI to DVI
- Mini DisplayPort to VGA
- Mini DisplayPort to DVI
- Mini DisplayPort to HDMI
- DVI to HDMI

Once you find the type of adapter that works with your computer, the next step would be to give some consideration to how it will be used. For example, if you take your laptop on business trips to give presentations, you'll probably be best served by purchasing the appropriate VGA adapter since most conference rooms still seem to use VGA as their standard -- or at least as an option.

Will your laptop also be part of a home office set-up or an entertainment system -- or a combination of both? Most displays still come with standard VGA and DVI inputs, so it then becomes a matter of personal preference as to which you choose. One suggestion to save some money is to take advantage of the different inputs on most displays and switch between

them to get the most out of your investment without the additional cost and added complication of external video switchers. For example, in your home office/den, a single LCD or plasma display can serve not only as a secondary (or primary) monitor for your laptop through the VGA or DVI port, but the display's additional HDMI port can accommodate your gaming system for those much-needed breaks from working -- just switch between inputs when shifting from work to play mode.

And don't forget the audio. Especially when planning a home entertainment system -- but also in the case of presentations for work -- think about how you'll need to address your audio needs. HDMI is particularly convenient in this regard, since audio and video are all in one cable. But in the example of giving a business presentation in a hotel conference room, their facility may not support HDMI yet, so you'll need a plan B. Fortunately, many facilities provide an 1/8" mini-pin audio connection for your laptop's headphone jack, and the problem is solved. A home theater solution might require a little more thought.

Through some careful planning and consideration of possible future upgrades, selecting the right video adapters for your current or legacy Mac system can extend the value of your investment and offer you some interesting options when planning your home office or entertainment system.

Optimized Cable Company offers many different types of adapters to accommodate a wide range of audio-video needs for your laptop or desktop computer -- as well as other a/v hardware.

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