

### Overview:

Over the past several years, videoconferencing has increasingly replaced face-to-face meetings as an effective means for businesses, municipalities, schools and medical facilities to hold conferences between several facilities located in distant locations. In a videoconferencing scenario, each party transmits and receives sound and images through a codec – the heart of the videoconferencing system. Traditionally, the signals received by these codecs were fed to a standard NTSC or PAL television monitor, for viewing by the involved parties. However, in today’s hi-tech boardrooms and videoconferencing facilities, there are often better quality, higher-resolution display devices available for viewing the conference. These include data projectors, LCD panels and plasma displays.

Most of these devices allow for the direct input of an NTSC or PAL signal from the codec. However, this requires the device to perform additional processing in order to display the image. Deuce eliminates this requirement. This TECHniques describes how, by matching the “native resolution” of the device, Deuce generates a videoconferencing image that appears much more crisp, clear and artifact-free, allowing the high-res display device to perform to its maximum potential.

### Details:

A codec outputs a standard, interlaced NTSC or PAL video signal. All Deuce Video Scalers provide the ability to convert these types of signals to a non-interlaced computer video format, at a variety of resolutions and refresh rates. The output from Deuce can then be fed to any number of high-resolution display devices, including data projectors, LCD panels and plasma displays.

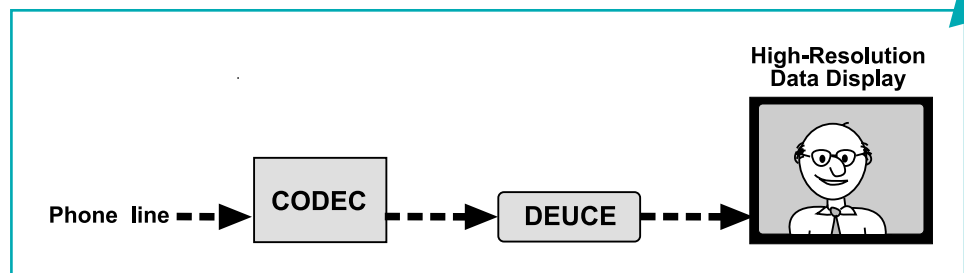
Connecting Deuce to a codec is extremely simple. Instead of connecting the video

output from the codec directly to a TV or video monitor, it is connected to one of Deuce’s video input connectors. The output from Deuce is then fed to the intended display device. Depending on which Deuce model you are using, the unit will allow you to scale to a variety of common computer and fixed display resolutions. When using a CRT display device, you will obtain the best picture by having Deuce output the highest resolution that the display device can support. If using a device that uses fixed-resolution or discrete-resolution technology, such as an LCD or plasma display, then the best picture quality will result if you match Deuce’s output to the “native resolution” of the display device. This resolution is usually listed in the projector’s or monitor’s product manual or on the manufacturer’s web site. (Deuce Pro Deuce MC and Deuce HD all offer output resolutions in both the standard 4:3 and widescreen 16:9 aspect ratios.) Note that a display’s “native resolution” is not always the highest resolution that the device can support. Rather, it is the resolution that exactly matches the number of pixels that comprise the device’s display area.

### Suggestions:

If your codec offers both an S-video and video output, use the S-video output to connect to Deuce. You will benefit from a higher quality converted image.

If trying to determine which Deuce model would best suit your videoconferencing application, consider the highest resolution you would like to display, as well as whether you will want to output to a widescreen display. Specific differences between



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the various models can easily be compared using our convenient DEUCE FAMILY FEATURES COMPARISON CHART included on this CD.

For those videoconferencing applications that require multiple viewing displays to be connected to the receiving end of a codec, Communications Specialties manufactures a full line of VGA splitters. These may be connected to the output of either Deuce or Deuce Pro and are available in models with 2 to 10 outputs.

### Related TECHniques:

- Educational Guides:
  - *Introduction to Video Scaling*
  - *Advanced Video Scaling*
- T-08 Using Scan Do® Scan Converters in Videoconferencing Applications

### CSI Products Used In This TECHnique:

- Deuce MC,HD & SDQ .....2220, 2230, 2240
- Deuce Pro ..... 2210A
- TwinSplit® for VGA ..... 1302
- QuadSplit® for VGA ..... 1304
- HexiSplit® for VGA ..... 1306
- OctoSplit® for VGA ..... 1308