

# Marvell 88DE2750 Digital Video Format Converter

Second-Generation Qdeo Video Processing Solution



## ▶ PRODUCT OVERVIEW

The Marvell® 88DE2750 is a new video format converter with second-generation award-winning Qdeo™ video processing. The 88DE2750 converts any high-definition (HD) or standard-definition (SD) digital video input, or PC graphics input, into the highest quality output, up to Quad-HD (4K x 2K @ 24p).

The 88DE2750 features a complete suite of advanced video processing technologies, delivering quiet and natural video free of noise and artifacts, for a truly immersive viewing experience. The second-generation Qdeo video processing includes enhancements to the entire suite of video technologies and introduces an innovative new technology called Qdeo True Color – a unique solution for using the full dynamic range of 10-bit and 12-bit displays. The use of 65nm technology provides industry leading performance at very low cost.

## ▶ INPUTS

- Video resolutions up to 1080p60
- Graphics resolutions up to 1600x1200 at 60Hz

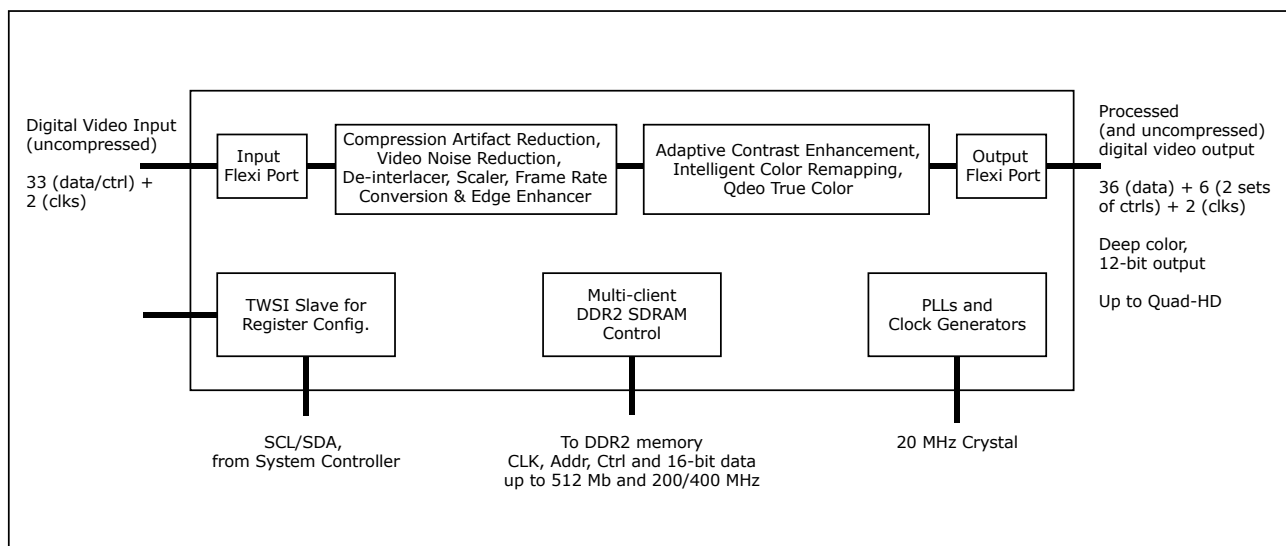
## ▶ OUTPUTS

- Configurable primary HD or SD output port with 10-bit or 12-bit per channel YCbCr/RGB 4:4:4 for true “deep color” support.

## ▶ APPLICATIONS

The 88DE2750 digital video format converter, utilizing Marvell’s award-winning Qdeo video processing, renders the highest quality images, up to Quad-HD resolution, in a variety of devices:

- Blu-ray/DVD players and recorders
- High-definition set-top boxes
- Video processor boxes
- Digital media adapters
- Portable media player DTV docks
- Digital TVs
- A/V receivers



## ▶ KEY FEATURES AND BENEFITS

FEATURES	BENEFITS
<ul style="list-style-type: none"> <li>• Per-pixel motion-adaptive video noise reduction</li> </ul>	<ul style="list-style-type: none"> <li>• Removes the white Gaussian noise present in most types of video</li> </ul>
<ul style="list-style-type: none"> <li>• Content-adaptive block and mosquito noise reduction</li> </ul>	<ul style="list-style-type: none"> <li>• Significantly reduces the blocking and mosquito noise artifacts present in compressed video</li> </ul>
<ul style="list-style-type: none"> <li>• Advanced per-pixel, motion-adaptive, edge-adaptive 3D de-interlacing with support for arbitrary film cadences</li> </ul>	<ul style="list-style-type: none"> <li>• Removes "jaggies" and "feathering" to produce smooth and clear images</li> </ul>
<ul style="list-style-type: none"> <li>• Adaptive scaling</li> </ul>	<ul style="list-style-type: none"> <li>• Produces sharp and clean images at low or high resolutions</li> </ul>
<ul style="list-style-type: none"> <li>• Natural Depth Expansion</li> </ul>	<ul style="list-style-type: none"> <li>• Enhances details and sensation of depth for greater realism and super-resolution effect</li> </ul>
<ul style="list-style-type: none"> <li>• Adaptive Contrast Enhancement (ACE)</li> </ul>	<ul style="list-style-type: none"> <li>• Brings out shadow detail without crushing mid-tones or highlights</li> </ul>
<ul style="list-style-type: none"> <li>• Intelligent Color Remapping (ICR)</li> </ul>	<ul style="list-style-type: none"> <li>• Enables vivid color without hue shifts and clipping while maintaining accurate flesh tone</li> </ul>
<ul style="list-style-type: none"> <li>• Qdeo True Color – a unique solution for using the full dynamic range of 10-bit and 12-bit displays</li> </ul>	<ul style="list-style-type: none"> <li>• Eliminates contouring seen when viewing typical 8-bit consumer video</li> </ul>
<ul style="list-style-type: none"> <li>• Quad-HD output support</li> </ul>	<ul style="list-style-type: none"> <li>• Provides judder-free native 24p output for film at 4K x 2K resolution</li> </ul>

**THE MARVELL ADVANTAGE:** Marvell chipsets come with complete reference designs which include board layout designs, software, manufacturing diagnostic tools, documentation, and other items to assist customers with product evaluation and production. Marvell's worldwide field application engineers collaborate closely with end customers to develop and deliver new leading-edge products for quick time-to-market. Marvell utilizes world-leading semiconductor foundry and packaging services to reliably deliver high-volume and low-cost total solutions.

**ABOUT MARVELL:** Marvell is a leader in storage, communications, and consumer silicon solutions. Marvell's diverse product portfolio includes switching, transceiver, communications controller, processor, wireless, power management, and storage solutions that power the entire communications infrastructure, including enterprise, metro, home, storage, and digital entertainment solutions. For more information, visit our Web site at [www.marvell.com](http://www.marvell.com).



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