The Video and Image Processing Suite is a collection of intellectual property (IP) cores that you can use to facilitate the development of custom video and image processing (VIP) designs. These cores are suitable for use in a wide variety of image processing and display applications in the broadcast, professional audio video (pro-AV), industrial, automotive, military, and medical market segments. The Video and Image Processing Suite features cores that range from simple building block functions, such as color-space conversion to sophisticated video-scaling functions that can implement programmable polyphase scaling. Together with an easily integrated connectivity portfolio, the Video and Image Processing Suite presents a comprehensive system design philosophy for rapid new design creation and easy integration of custom value-added features.

Application Examples:
- Industrial machine vision
- Surveillance
- Automotive advanced driver assistance system (ADAS) and infotainment
- Medical imaging
- Digital signage
- Audio video (AV) networking
- Video wall and multi-viewers
- Video format converters

Key Features:
- End-to-end FPGA system design philosophy
  - Open-standard block interfaces
- 4K/UHD support
- Easy integration with most connectivity formats, including:
  - Altera IP portfolio (e.g. HDMI, DisplayPort, SDI)
  - Third-party IPs cores (e.g. MIPI, V-by-One, Ethernet video transport)
  - Legacy video components
- Bus functional model simulation
- In-hardware debug using Altera® System Console
Design Resources

A comprehensive suite of video design tutorials, design examples, and development kits are available on www.altera.com

**Video Design Tutorial #1: Build Video Designs Quickly with Altera Video and Image Processing Suite and ALSE AVDB**
7 minutes
This tutorial introduces the Altera Video and Image Processing Suite and ALSE AVDB development kit, and how they can be used to quickly build video designs. The tutorial also gives an overview and demonstration of a simple video design example utilizing the Video and Image Processing Suite on AVDB.

**Video Design Tutorial #2: Video Design Basics and Altera Video Framework**
31 minutes
This tutorial reviews several digital video design basics, as well as an overview of Altera's video framework, including Video and Image Processing Suite, Avalon® interfaces, and Qsys system integration tool. The tutorial also shows how the video framework and ALSE AVDB development kit can accelerate the development of your video designs.

**Video Design Tutorial #3: Hands-on Tutorial on Building Video Designs with Altera Video and Image Processing Suite and ALSE AVDB**
21 minutes
This tutorial shows step-by-step instructions on building a simple video design example utilizing the Altera Video and Image Processing Suite on the ALSE AVDB development kit. The design example is available on the Altera Design Store at https://cloud.altera.com/devstore/platform/15.0.0/avdb-video-and-image-processing-design-example/.

Learn more about Altera video solutions at: www.altera.com/vip.

### Altera VIP Design Example

<table>
<thead>
<tr>
<th>Complexity</th>
<th>Product Name</th>
<th>Supported Devices/ Development Kit</th>
<th>Qsys Compliant</th>
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<tr>
<td>Basic</td>
<td>AVOB Video and Image Processing Design Example</td>
<td>Advanced Video Development Board</td>
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<td></td>
<td>Video and Image Processing Suite Demo on VEEK</td>
<td>Video and Embedded Evaluation Kit</td>
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<tr>
<td>Medium</td>
<td>Altera Video and Image Processing Design Example</td>
<td>Cyclone® V GT FPGA Development Board</td>
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<td>Altera</td>
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**ALSE Advanced Video Development Board**

**Altera Cyclone V GT FPGA Development Board**

**Want to Dig Deeper?**

Learn more about Altera video solutions at: www.altera.com/vip.