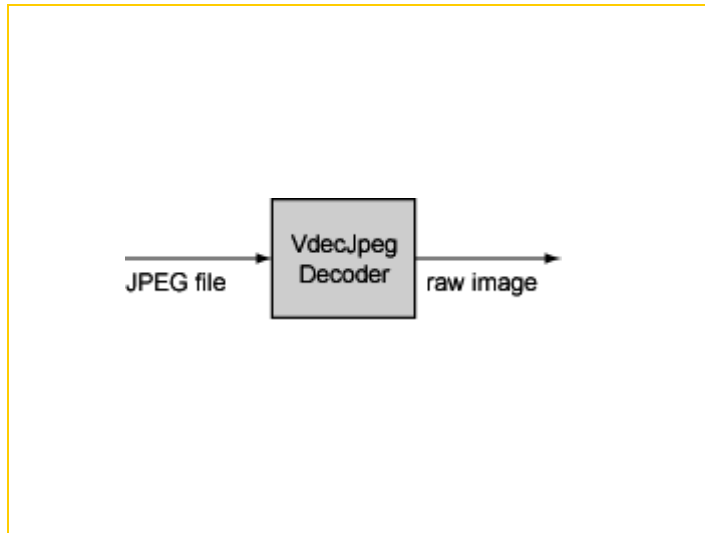
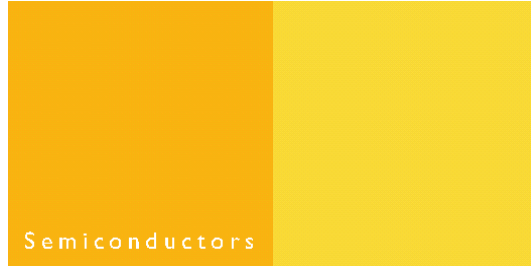


# VdecJpeg

# JPEG Decoder

## Introduction

The VdecJpeg component is a JPEG image decoder. It decodes a baseline, extended sequential or progressive JPEG image file as per standard ISO/IEC 10918-1 and outputs YUV 4:2:0 and 4:2:2 image data.



## Key features

- Decodes baseline, extended sequential or progressive JPEG image file
- Output is YUV 4:2:0 and 4:2:2
- Supports decoding of multiple JPEG files
- Supports downscaling
- TSSA compatible
- Supports decoding of thumbnail
- Supports rotation of image

## General Information

The VdecJpeg component is a JPEG image decoder. It decodes a baseline or progressive JPEG image file and outputs YUV image data as per the standard ISO/IEC 10918.

JPEG is a widely used lossy image compression standard to store continuous tone images.

The same JPEG decoder instance can be used to decode multiple JPEG files. After decoding one JPEG image we can feed a new JPEG file to it and VdecJpeg will decode that. It does not decode more than one image simultaneously.

The VdecJpeg decoder is capable of decoding images of any dimension as long as the number of pixels in the image is restricted to a maximum of 16M pixels.

The component can perform downscaling of the baseline JPEG image. The scaling dimensions are only limited by the available memory.

## Applications

- Photo Album Viewer

## Documentation

Detailed documentation of the VdecJpeg component is available.

# PHILIPS

# VdecJpeg

## JPEG Decoder



### Technical Information

#### Memory Usage

<b>Static Memory</b>	403 KBytes
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#### Dynamic Memory (excluding pSOS task stack size, input packet and output packet)

Baseline JPEG	160 Kb (image size 2592x1944)
Extended Sequential JPEG	160 Kb (image size 2592x1944)
Progressive JPEG (4:2:2/ 4:4:4 )	980 Kb (image size 720x576)
Progressive JPEG (4:2:0/mono )	780 Kb (image size 720x576)

#### Processor Load (MIPS)

The VdecJpeg component can decode image sizes of up to 6M pixels/second.

### Other Information

Supported Processors	PNX1500
Built with Compiler Version	tmcc 7.0.1 of TCS 4.5

### Example Programs

1. The example program, exolPicture, reads a JPEG file, decodes it and displays it on a TV.
2. The example/test program, exolVdecJpeg, reads a JPEG file, decodes it and saves the output as a YUV file. It does the following tests:
  1. Open and Close test
  2. Start and Stop tests
  3. Downscaling tests for user specified dimensions
  4. Decoding of thumbnail
  5. Rotation of image

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