

# Codonics Virtua DICOM JPEG Compression

**Technical Brief**

## Overview

This Codonics® Virtua® Medical Disc Publisher can receive and process various types of DICOM JPEG compressed images. This DICOM JPEG Compression feature is supported in Version 2.3.0 software or higher.

## Operational Description

DICOM JPEG compressed images are created on medical devices. Typically one mode of compression is enabled per system. Thus, if Virtua receives images from many devices, multiple compression types could be received. Virtua can preserve the selected compression, or decompress the image files recorded to discs to support viewers that do not accept DICOM JPEG compressed images.

**NOTE:** Not all viewers support DICOM JPEG compression formats. Color images can be compressed in a RGB or a YBR method. Image distortion occurs if color images are compressed using a different compression scheme than that expected by the viewer.

## Compression Profile Settings

Job Profiles can be configured to accept various DICOM JPEG compression formats. To control the DICOM JPEG compression format, edit the desired format's Job Profile parameter as shown below. Job Profiles are in the \profiles\job folder on the SmartDrive.

**NOTE:** Each Job Profile that is intended to support compression must be modified.

Parameter: **jpegBaselineSupport**  
Settings: **None, Preserve, Decompress**  
Default: **None**  
Description: If the parameter is set to **None**, Virtua does not accept images that are JPEG Baseline. If the value is **Preserve**, Virtua accepts JPEG Baseline images. If the value is **Decompress**, Virtua accepts JPEG Baseline images and decompresses the images on Virtua.

**NOTE:** Virtua expects color images are compressed using RGB when **Decompress** is selected.

Parameter: **jpegExtendedSupport**  
Settings: **None, Preserve, Decompress**  
Default: **None**  
Description: If the parameter is set to **None**, Virtua does not accept images that are JPEG Extended.

If the value is **Preserve**, Virtua accepts JPEG Extended images. If the value is **Decompress**, Virtua accepts JPEG Extended images and decompresses the images on Virtua.

Parameter: **jpegLosslessSupport**  
Settings: **None, Preserve, Decompress**  
Default: **None**  
Description: If the parameter is set to **None**, Virtua does not accept images that are JPEG Lossless. If the value is **Preserve**, Virtua accepts JPEG Lossless images. If the value is **Decompress**, Virtua accepts JPEG Lossless images and decompresses the images on Virtua.

Parameter: **jpeg2000LosslessSupport**  
Settings: **None, Preserve, Decompress**  
Default: **None**  
Description: If the parameter is set to **None**, Virtua does not accept images that are JPEG2000 Lossless. If the value is **Preserve**, Virtua accepts JPEG2000 Lossless images. If the value is **Decompress**, Virtua accepts JPEG2000 Lossless images and decompresses the images on Virtua.

Parameter: **jpegLossySupport**  
Settings: **None, Preserve, Decompress**  
Default: **None**  
Description: If the parameter is set to **None**, Virtua does not accept images that are JPEG2000 Lossy. If the value is **Preserve**, Virtua accepts JPEG2000 Lossy images. If the value is **Decompress**, Virtua accepts JPEG2000 Lossy images and decompresses the images on Virtua.

**NOTE:** Use of lossy compression with medical images may not result in clinically acceptable images.

Refer to the Virtua DICOM Conformance Statement (Codonics Part No. 900-332-007) for additional information.

## Technical Support

If problems occur during software installation, contact Codonics Technical Support between the hours of 8:30AM and 5:30PM EST (weekends and U.S. holidays excluded).

Phone: 440-243-1198  
Email: [support@codonics.com](mailto:support@codonics.com)  
Website: [www.codonics.com](http://www.codonics.com)

*Get it all with just one call*  
**1-800-444-1198**

All registered and unregistered trademarks are the property of their respective owners. Specifications subject to change without notice. Patents pending.

Copyright © 2007 by Codonics, Inc. Printed in the U.S.A. Part No. 901-183-001.01.



17991 Englewood Drive  
Middleburg Heights, OH 44130 USA  
(440) 243-1198  
(440) 243-1334 Fax  
Email [info@codonics.com](mailto:info@codonics.com)  
[www.codonics.com](http://www.codonics.com)

Codonics Limited KK  
New Shibaura Bldg. F1  
1-3-11, Shibaura  
Minato-ku, Tokyo, 105-0023 JAPAN  
Phone: 81-3-5730-2297  
Fax: 81-3-5730-2295