

Rendering Hints for EA

Color coding :

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| | To be supported for EA – Hints verified in current repo |
| | To be supported for EA - Hints verified in current repo with failure |

| Hint | Key | Value | Supported for EA? | Status |
|-------------------------|-----------------------|---------------------------------|-------------------|---|
| Rendering Hint | KEY_RENDERING | VALUE_RENDER_DEFAULT | Yes | Done |
| | | VALUE_RENDER_SPEED | No | test/jdk/java/awt/MultipleGradientPaint/MultiGradientTest.java passes for OGL and Metal |
| | | VALUE_RENDER_QUALITY | No | |
| Antialiasing | KEY_ANTIALIASING | VALUE_ANTIALIAS_DEFAULT | Yes | Done |
| | | VALUE_ANTIALIAS_OFF | Yes | Done |
| | | VALUE_ANTIALIAS_ON | Yes | Done. Test passed - jdk/sun/java2d/pipe/Test7027667.java java/awt/geom/Line2D/AALineTest.java Also verified using J2DDemo Some tests fail due to pixel accuracy tolerance. Also, some some combination with AA does not work. Being worked upon separately. |
| Text Antialiasing | KEY_TEXT_ANTIALIASING | VALUE_TEXT_ANTIALIAS_DEFAULT | Yes | Done. Works in Font2D |
| | | VALUE_TEXT_ANTIALIAS_OFF | Yes | Done. Works in Font2D |
| | | VALUE_TEXT_ANTIALIAS_ON | Yes | Done. Works in Font2D |
| | | VALUE_TEXT_ANTIALIAS_GASP | No | Works in Font2D |
| | | VALUE_TEXT_ANTIALIAS_LCD_HRGB | No | Works in Font2D |
| | | VALUE_TEXT_ANTIALIAS_LCD_HBGR | No | Works in Font2D |
| | | VALUE_TEXT_ANTIALIAS_LCD_VRGB | No | Works in Font2D |
| | | VALUE_TEXT_ANTIALIAS_LCD_VBGR | No | Works in Font2D |
| Font Fractional metrics | KEY_FRACTIONALMETRICS | VALUE_FRACTIONALMETRICS_DEFAULT | Yes | Done. Works in Font2D |
| | | VALUE_FRACTIONALMETRICS_OFF | Yes | Done. Works in Font2D |
| | | VALUE_FRACTIONALMETRICS_ON | No | Works in Font2D |
| Dithering | KEY_DITHERING | VALUE_DITHER_DEFAULT | Yes | Dither option not present in Font2D, J2DDemo |

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| | | VALUE_DITHER_DISABLE | Yes | Dither option not present in Font2D, J2DDemo |
| | | VALUE_DITHER_ENABLE | Yes | Dither option not present in Font2D, J2DDemo Test sun/java2d/marlin/OpenJDKFillBug uses this hint and test passes with metal pipeline |
| Interpolation | KEY_INTERPOLATION | VALUE_INTERPOLATION_NEAREST_NEIGHBOR | Yes | test/jdk/sun/java2d/pipe/InterpolationQualityTest.java This test passes for - Nearest Neighbor interpolation for both OGL and Metal. This test fails for - bilinear and bicubic interpolation - for both OGL and Metal. It is a test issue and will be addressed in JDK-8242562 |
| | | VALUE_INTERPOLATION_BILINEAR | Yes | test/jdk/sun/java2d/SunGraphics2D/DrawImageBilinear.java OGL = passed, metal = passed |
| | | VALUE_INTERPOLATION_BICUBIC | No | This was decided to be a non-blocker for EA - and will be worked upon separately - JDK-8242351 test/jdk/sun/java2d/pipe/InterpolationQualityTest.java OGL = failed, metal = failed |
| Alpha interpolation | KEY_ALPHA_INTERPOLATION | VALUE_ALPHA_INTERPOLATION_DEFAULT | Yes | Works - tested by setting this value on a sample program. Test sun/java2d/marlin/OpenJDKFillBug passes with Metal |
| | | VALUE_ALPHA_INTERPOLATION_SPEED | No | |
| | | VALUE_ALPHA_INTERPOLATION_QUALITY | No | |
| Color Rendering | KEY_COLOR_RENDERING | VALUE_COLOR_RENDERER_DEFAULT | Yes | Works - tested by setting this value on a sample program. Test sun/java2d/marlin/OpenJDKFillBug.java passes with Metal |
| | | VALUE_COLOR_RENDERER_SPEED | No | |
| | | VALUE_COLOR_RENDERER_QUALITY | No | |
| Stroke Normalization control | KEY_STROKE_CONTROL | VALUE_STROKE_DEFAULT | Yes | Works - tested by setting this value on a sample program. |
| | | VALUE_STROKE_NORMALIZE | No | Test test/jdk/sun/java2d/marlin/FlipBitTest.java passes with Metal |
| | | VALUE_STROKE_PURE | No | |
| Image Scaling Hint | KEY_RESOLUTION_VARIANT | VALUE_RESOLUTION_VARIANT_DEFAULT | Yes | Works -Jtreg test passes test/jdk/java/awt/image/multiresolution/MultiResolutionRenderingHintsTest.java test/jdk/java/awt/image/MultiResolutionImageTest.java |
| | | VALUE_RESOLUTION_VARIANT_BASE | No | |
| | | VALUE_RESOLUTION_VARIANT_SIZE_FIT | No | |
| | | VALUE_RESOLUTION_VARIANT_DPI_FIT | No | |

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| | <p>KEY_TEXT_ANTIALIAS_LCD_CONTRAST</p> <p>(used private in sun.awt.SunHints)</p> <p>Actual hints to be used is</p> <p>KEY_TEXT_LCD_CONTRAST which is used in Font2D</p> | <p>INTKEY_AATEXT_LCD_CONTRAST</p> | <p>No</p> | <p>LCD Contrast value present in Font2D but since surface seems to be not opaque, even if antialiasing hints LCD_HBGR, LCD_HRGB, are used, the glyphs are rendered via Grayscale so LCD contrast is noop</p> <p>Standalone test written to use this hint is passing the contrast value in the hint to LCD text rendering</p> <p>test/jdk/javafx/swing/UIDefaults/6302464/bug6302464.java passes with Metal</p> |