KONICA MINOLTA

Exa® PACS/RIS

Feature Summary

Viewer Settings

Configure the viewer

In the Viewer Settings dialog box, you can configure a wide variety of viewer options including display, interface, modality, toolbars, and shortcut menus. For details on operations in the Viewer Settings dialog box, see other topics in this section. There are two ways to open the Viewer Settings dialog box.

- In the worklist, on the upper toolbar, select the settings ⚙ button, and then in the button shortcut menu, select **Viewer Settings**.
- In the Exa PACS/RIS viewer, in the upper toolbar, ⚙ select the setting button.

Viewer Settings

GENERAL	**Display Settings**
INTERFACE	Monitors on System 3 ↻ 👁
MODALITY	
MAMMOGRAPHY	
OVERLAYS	
TOOLS	
EXTERNAL TOOLS	

Monitor	Current	Prior	Full Screen	Orders	Type
☐ DISPLAY1	○	○	☐	None ▼	▼
☑ DISPLAY2	⦿	○	☑	None ▼	▼
☑ DISPLAY3	○	⦿	☑	None ▼	▼

Autosave Options

☐ Autosave Image Properties on Close
☐ Autosave Image Annotations on Close
☐ Auto Mark Read Study on Close
☐ Auto Upload Dictation on Close
☐ Autosave Viewer Settings on Close
☐ Auto Open Next Study
☐ Auto Send Annotated Images on Close

Set up connected displays

Configure all connected monitors that you intend to use with Exa PACS/RIS. These settings act as default behavior for what study items open in which monitor. If DMs conflict with the settings you enter here, the DM takes precedence.

Prerequisite: Install the Multi-Screen Presentation extension in Google Chrome.

1. In the Exa PACS/RIS viewer, in the upper toolbar, select the setting ⚙ button.
2. In the **Viewer Settings** dialog box, in the left pane, select **GENERAL**.
3. Under **Display Settings**, in the **Monitors on System** box, select the update ↻ button to update the monitor count, and then select the identify 👁 button.
4. In the table of monitors, enter the settings below.
5. Select **SAVE**.

Setting	Description
Monitor	Select to make monitors available for *image* viewing. To display orders and studies on the monitor, clear this option.
Current	Select to make monitors available to display current studies and thumbnails.
Prior	Select to make monitors available to display prior studies and thumbnails, if available.
Full Screen	Select to default to full screen view.
Orders	Select a section of the patient chart to open in the corresponding monitor when manually opening that section with a viewer tool, or when configured to open automatically. **For example:** If you select **Document** in the **Orders** list for **DISPLAY2**, the Document section of the patient chart will appear in DISPLAY2 when you select the ▣ button in the viewer.
Type	The color or grayscale display type.
Calibration Width/mm	Type a manual calibration width (appears on horizontal calipers)
Calibration Height/mm	Type a manual calibration height (appears on vertical calipers)

Configure autosave options

You can configure how the viewer performs automatic saving and other functions.

1. In the Exa PACS/RIS viewer, in the upper toolbar, select the setting ⚙ button.
2. In the **Viewer Settings** dialog box, in the left pane, select **GENERAL**.
3. Under **Autosave Options**, enter the settings in the table below.
4. Select **Save.**

Setting	Description
Autosave Image Properties on Close	Automatically saves image properties such as the W/L when the image is closed. Saved properties are restored the next time the image is opened.
Autosave Image Annotations on Close	Automatically saves image annotations when the image is closed. Saved annotations are restored the next time the image is opened.
Auto Mark Read Study on Close	Automatically marks the study as "Read" when the study is closed.
Auto Upload Dictation on Close	Automatically uploads recorded dictations to add to the study when the study is closed.
Autosave Viewer Settings on Close	Automatically saves any changed viewer settings such as toolbar configuration when closing the viewer.
Auto Open Next Study	Automatically opens the next study in the worklist when the current study is closed.
Auto Send Annotated Images on Close	Automatically sends images, if they include annotations, back to the AE title from where the study was received.

Configure the toolbar

You can configure the appearance and other properties of the viewer toolbar. For additional toolbar settings, see "Configure other interface settings."

1. In the Exa PACS/RIS viewer, in the upper toolbar, select the setting ⚙ button.
2. In the **Viewer Settings** dialog box, in the left pane, select **INTERFACE**.
3. Under **Toolbar**, enter the settings in the table below.
4. Select **SAVE**.

    Note: You may need to update the viewer for changes to take effect.

Viewer Settings

GENERAL

INTERFACE

MODALITY

MAMMOGRAPHY

OVERLAYS

TOOLS

EXTERNAL TOOLS

Toolbar

Toolbar Button Scale	120 %
Thumbnail Bar Scale	120 %
Magnifying Glass Size	400 Px. Factor 2
W/L Acceleration	100
Span Sensitivity	Auto Dflt Low ——— High
	☐ Span as Scroll
Thumbnail Column/Rows	1 ⌄
Thumbnail Bar Orientation	Bottom ⌄
Header Menu	Top ⌄
DM Toolbar	Top ⌄

Setting	Description
Toolbar Button Scale	Adjusts the size of toolbar buttons.
Thumbnail Bar Scale	Adjusts the size of the thumbnail bar.
Magnifying Glass Size	Adjusts the size of the area affected by the magnifying glass.
W/L Acceleration	Sets the rate or sensitivity of W/L adjustments. Typical range is 100–600.
Span Sensitivity	Sets the rate or sensitivity of span adjustments.
Thumbnail Column/Rows	Sets the number of columns and rows for the thumbnail bar.
Thumbnail Bar Orientation	Sets the position and resultant orientation of the thumbnail bar.
Header Menu	Sets the position of the toolbar and other header items.
DM Toolbar	Sets the position of the DM toolbar.

Configure calipers

You can configure the number and placement of calipers.

1. In the Exa PACS/RIS viewer, in the upper toolbar, select the setting ⚙ button.
2. In the **Viewer Settings** dialog box, in the left pane, select **INTERFACE**.
3. Under **Caliper Position**, select check boxes for each caliper that you want to display, and then select **SAVE**.

> Caliper Position
>
> ☐ Left ☐ Top ☑ Right ☐ Bottom

Configure other interface settings

You can configure miscellaneous viewer toolbar and other settings. For the main viewer toolbar settings, see "Configure the toolbar."

1. In the Exa PACS/RIS viewer, in the upper toolbar, select the setting ⚙ button.
2. In the **Viewer Settings** dialog box, in the left pane, select **INTERFACE**.
3. Under **Other Toolbar**, enter the settings in the table below.

Setting	Description
Ask on Close	Prompts you to specify which items to save before closing the viewer.
Single Instance Mode	Limits the viewer to one study/transcription per session.
Skip Frames in Cine to Maintain Playback Speed	Skips large images in a cine loop so that the cine plays a fixed speed.
Show Cutlines for First/Last Images	Shows any available cutlines only on the first and last images of a series.
Open Key Images as Single Images	Displays any available key images separately in the thumbnail area. When cleared, shows all series images in the key image thumbnail area.
Use Modified Toolbar	Temporarily hides the thumbnail bar and adds a Prior bar at the top of the screen that displays patient priors in order. You can hover over a prior to display series/image thumbnails and select the thumbnails to open the images..
Caliper Zoom	If selected, you can drag the calipers to zoom the current image.
Auto-Play Cine Loops	Automatically plays cine loops when opened.
Auto Play Cine Wait Time (ms)	Sets a pause time before auto-playing cine loops.
Default Frame Rate for MP4	Sets a default frame rate for MP4 files.
Default Cutline Thickness	Sets a default thickness for cutlines.

Setting	Description
Auto Open Orders	Selects the options that appear in the Orders list in the **Viewer Settings** dialog box, General Info. screen, under Display Settings.
Auto Show Priors Bar	Shows all prior studies in a separate bar at the top of the viewer.
Focus-In on Zoom Point	Allows the user can drag on an image to zoom in and out at pointer position.
Fill Empty DM Cells	Fills undefined DM frames with images in the current study.
Setting	**Description**
High-Quality Interpolation	Select to use high-quality image interpolation. Frequently used to enhance X-ray quality. You can use this compression option to remove unwanted "gridlines" if switching between earlier and high-resolution monitors.
Enable RGB/YBR Swap	Makes the color settings supported by the user video settings available.
Enable Developer Mode	Shows development mode logs, and displays a vertical green line in the right side of each frame when the server performs a prefetch.
Show Calibrated Ultrasound Region	Server side setting.
Hide Partial Close Button	Hides the partial close button, an "X" that appears next to the logoff button. Partial closing closes the study, but leaves the viewer open for faster loading of future studies.
Hide All Monitor Layout Change Button	Hides the toolbar's monitor layout change button that appears when two or more monitors are made available.
Show Label in DM Preview	Shows the previews of hanging protocols in the DM bar.
Show Middle Slice Thumbnail	Shows only the thumbnail of the middle slice in a series on the thumbnail list.
Enable Cardio Viewer	Enabled with purchase of Echo viewer
Disable Queuing	Forces synchronous communication; client message and server response occur one at a time. CAUTION: We do not recommend changing this setting. Consult with your Konica-Minolta representative.
Stretch Prior Bar	Extends the prior bar across multiple monitors. If the prior bar exceeds the total available screen width, a scroll bar appears.
Show Prior Index	Displays the Prior index number in the thumbnail and Prior bars.
Auto open STAT	When you open a study in the Exa PACS/RIS viewer, this option automatically opens any STAT images, if included.
Split W/L Region	[Unused]
Color Only asLast Monitor	Chooses the color monitor as the last monitor on which to display images.
Client-Side Window/Level for US	Processes the Window/Level for ultrasounds on the client side. May reduce lag by bypassing the server.

Configure annotation tool functionality

You can configure annotation tool functionality.

1. In the Exa PACS/RIS viewer, in the upper toolbar, select the setting ⚙ button.
2. In the **Viewer Settings** dialog box, in the left pane, select **INTERFACE**.
3. Under **Annotation**, enter the settings in the table below.
4. Select **Save**.

Setting	Description
Show Annotation	Shows annotations by default. The user can still hide them manually in the viewer.
One-Select Annotations	Changes from the selected annotation tool to the default cursor after each use. If cleared, the user can reuse the tool repeatedly without re-selecting the tool.
Show One-Select Annotations Button	Shows a button for turning one-select annotation on and off.
Annotation Edit Mode	Selects the Edit command in the image shortcut menu by default.
Use Dot Cursor	Changes the standard pointer to a dot pointer.
Edit Annotations after Creating	Causes the viewer to enter Edit mode after initial placement of an annotation.
Allow Drag Create	Creates annotations by dragging instead of selecting.
Confirm Annotation Delete	Prompts the user for confirmation when deleting annotations.
Persistent Annotation Tool	Makes a selected annotation tool available until the user selects a different tool. If cleared, the pointer changes to the default operation after using the tool.
Show Measurements In	Sets the units for any length measurements taken.

Configure annotation colors

You can configure the color of annotations to indicate whether they are selected, in edit mode, or applied.

1. In the Exa PACS/RIS viewer, in the upper toolbar, select the setting ⚙ button.
2. In the **Viewer Settings** dialog box, in the left pane, select **INTERFACE**.
3. Under **Colors**, to add an annotation color, select inside a color or grayscale box and then use the color picker to select a color.
4. Select **SAVE**.

Configure annotation size and scaling

You can configure the pixel or font size of annotations, and scale annotation points.

1. In the Exa PACS/RIS viewer, in the upper toolbar, select the setting ⚙ button.
2. In the **Viewer Settings** dialog box, in the left pane, select **INTERFACE**.
3. Under **Miscellaneous**, enter the settings in the table below.
4. Select **Save.**

Setting	Description
Scale in Pixel Size	Determines the annotation font size by the pixel size.
Scale Annotation Font By	Sets the font size for annotations.
Scale Annotation Point By	Sets the line thickness for annotations.

Configure recording

You can configure audio recording options for Exa Dictation.

1. In the Exa PACS/RIS viewer, in the upper toolbar, select the setting ⚙ button.
2. In the **Viewer Settings** dialog box, in the left pane, select **INTERFACE SETTINGS**.
3. Under **Record Control**, enter the settings in the table below.
4. Select **Save**.

Setting	Description
Hold for Record	Requires you to hold down the button for the duration of recording.
Beep on Record	Beeps when recording starts.
Blink on Record Pause	Causes the microphone light to blink when recording is paused.
Monkey Chatter on Rewind	Plays "monkey chatter" sound when rewinding.
FFWD/RWD Factor (200–500)	Changes the rate offast forward and rewind.
Lag (0–5000)	Delays the response after selecting play or record by the specified amount of time.

Show or hide tool buttons

1. In the Exa PACS/RIS viewer, in the upper toolbar, select the setting ⚙ button.
2. In the **Viewer Settings** dialog box, in the left pane, select **INTERFACE**.
3. Under **Tool Buttons**, select the check boxes of the items that you want to hide.
4. Select **SAVE**.

Configure fusion, ROI, and SUV options

You can configure options for fusion, ROI, and SUV.

1. In the Exa PACS/RIS viewer, in the upper toolbar, select the setting ⚙ button.
2. In the **Viewer Settings** dialog box, in the left pane, select **INTERFACE**.
3. Under **Fusion**, and under **ROI & SUV**, enter the settings in the table below.
4. Select **Save.**

Group	Setting	Description
Fusion	Auto Adjust for CT/PT Frame Count Mismatch	Select to reconstruct PET anatomy on fusion overlays between absent slices. Disable to display PET overlays only for slices originally included in the PT series.
ROI & SUV	ROI Show Size	Adds length and area measurements to ROI.
	Show Number of Pixels in ROI Selection	Select to show the number of pixels selected when annotating an ROI or selecting with the freehand tool.
	Show Number of Slices in ROI Selection	Select to show the number of slices selected when annotating an ROI or selecting with the freehand tool.
	ROI Selection Weighting	Select which pixels are included in an ROI. **Weighted**: Include only full pixels **Inclusive**: Include pixels touching or within the ROI border **Exclusive**: Include only pixels completely within the ROI border
	Enable SUV Calculations	Select to add SUV calculations to ROI annotations of PET SUV series and CT-PET fusion studies. **Prerequisite**: Your system administrator must also enable SUV in a separate procedure.
	Show SUV Type and Measurements in the ROI Header	Select to include the SUV type and measurements in the ROI header.
	Show SUV Units after Measurements	Select to include the SUV units following the measured values in the ROI header.
	Use Standard SUV Type Units (g/ml, cm^2/ml)	Select to display SUV values using standard units for the SUV type. Clear to use the values stored in the DICOM file.
	Default SUV Type	Select the type of SUV calculation to perform.

Configure modality-specific viewing options

You can configure how studies appear in the viewer for all modalities, or for each specific modality.

1. In the Exa PACS/RIS viewer, in the upper toolbar, select the setting ⚙ button.
2. In the **Viewer Settings** dialog box, in the left pane, select **MODALITY**.
3. In the modality list, select a modality to configure.

4. Enter the settings in the table below.

Section	Setting	Description
Layout	Screen Layout	Changes the layout of frames.
	Series Layout	Changes the layout of series frames within screen layout frames.
Mouse Buttons	Left/Right/Middle/ Left+Right	Assigns functions to mouse buttons. This is frequently used by CAD users to assign functions to extra mouse buttons.
Compression		Sets the image quality, which inversely affects viewer performance.
Presets	Key	Assigns shortcut keys to W/L presets.
	Description	Type a name for the W/L preset.
	Window Width	Sets the window width of the W/L preset.
	Window Center	Sets the window center of the W/L preset.
	Set	Select when finished entering Preset settings.
Options	Auto Linking	Turns on the Auto Linking function.
	Assume Color Study	Forces studies of the selected modality to appear in the default color monitor set in the display settings regardless of color.
	Assure All Viewed	Displays a check mark in thumbnails of images that were opened.
	Auto CLAHE	Turns on the CLAHE function.
	Auto Hang DM	Enables the use of DMs. Makes the first instance on the DM preview available to hang on the viewer.
	Auto Hang Priors	Automatically loads the first prior when the viewer opens. Works in conjunction with Auto Open Priors.
	Auto Replace Priors	Automatically replaces prior images in the current layout.
	Auto-Invert SC Images	Inverts white and black of scanned documents such as reports. Reduces eye fatigue.
	Auto Next Series	When moving beyond the last image of the current series, automatically opens the next series.
	Auto Next Series Cine	Automatically starts cine play of the next series when the user opens it.
	Auto Next Series Wrap	Automatically opens the first series after viewing the last image of the last series in a study.
	Auto Next Study	Automatically opens the next study in the worklist after closing the current study.
	Auto Swap Red/Blue	Inverts colors that may not be displayed from the modality properly (such as with non-DICOM ultrasounds).

Section	Setting	Description
	Auto Show DICOM Overlays	Automatically displays DICOM overlays, if present.
	Auto Show SR Overlays	Automatically displays SR overlays, if present.
	Auto Show Cutlines	Automatically displays cutlines, if present. Note, this setting also applies to synthesized mammogram views, in which the cutlines indicate the position of the currently viewed image on the corresponding BTO view.
	Auto Show Cine	Shows the media control bar when a series is opened.
	Auto Show W/L Bar	Shows the window/level bar when the viewer opens.
	Detect Pixel Padding	Turns detection of pixel padding ON/OFF.
	DM Allow Missing Cell	Shows a blank cell in the DM if the assigned image is not available.
	DM Save W/L	Saves the window/level with the DM.
	Save Study DM on Close	Creates a new DM for each study when it closed, or when the next study auto- opens. The DM is named with the accession number, and contains the last displayed stack and monitor position.
	Show PDF in Last Stack	Moves PDF files to the last place in the stack: in the viewer, they are loaded last, if an empty cell is available.
	Instance Window/Level	Shows each image with its own W/L, rather than using the W/L of the first instance.
	Do Not Skip Images	Prevents scrolling forward if subsequent images are not yet loaded.
	Ignore Frame of Reference within Study	Disables referencing of the study's DICOM frame of reference UID when performing linking and cutline functionality.
	Ignore LUT	If LUT values are corrupted, Exa PACS/RIS ignores the LUT values, and attempts to render the best image possible.
	Ignore Presentation LUT	Same as Ignore LUT, but select for certain vendors that use a "Presentation LUT."
	Keep Rotate	Applies the current rotation to all images in the series.
	Keep W/L	Applies the current W/L to all images in the series.
	Keep Zoom	Applies the current zoom level to all images in the series.
	Extend Image Display (if Stretch)	When Stretch Across Monitors is selected, extends a single image across multiple monitors.
	Pixel Padding as Background	Interpolates missing pixel data to fill in "dead" spots in an image. **Note**: When using this feature, reading physicians should be aware that some pixels may be synthesized.
	Pre-generate Bitmaps	Pre-generates bitmaps automatically if imported into PACS.
	Reset W/L for Individual Images	Resets the W/L for each image. Frequently used to optimize MRI images. Clear to use the first W/L sent by the modality for all images.

Section	Setting	Description
	Select Last Contrast Entry	When DICOM tags include multiple W/L values, uses the last value for all images in the series. Clear to use the first value.
	Show 3D Spine Labels	Shows the 3D spine label tool on the toolbar.
	Show 'Bone Enhance' on Toolbar	Shows the Bone Enhance tool on the toolbar.
	Show DM Toolbar	Shows/hides the DM toolbaron initial load.
	Show Spine Labels	Shows the spine labels tool on the toolbar.