

Parameters Scaling

The **Scales** group of the **Parameters** tab contains options for adjusting the scaling and zooming of parameters:



If no LMD file is open in the current Workspace, the **Scales** group is disabled.

Zoom Tool

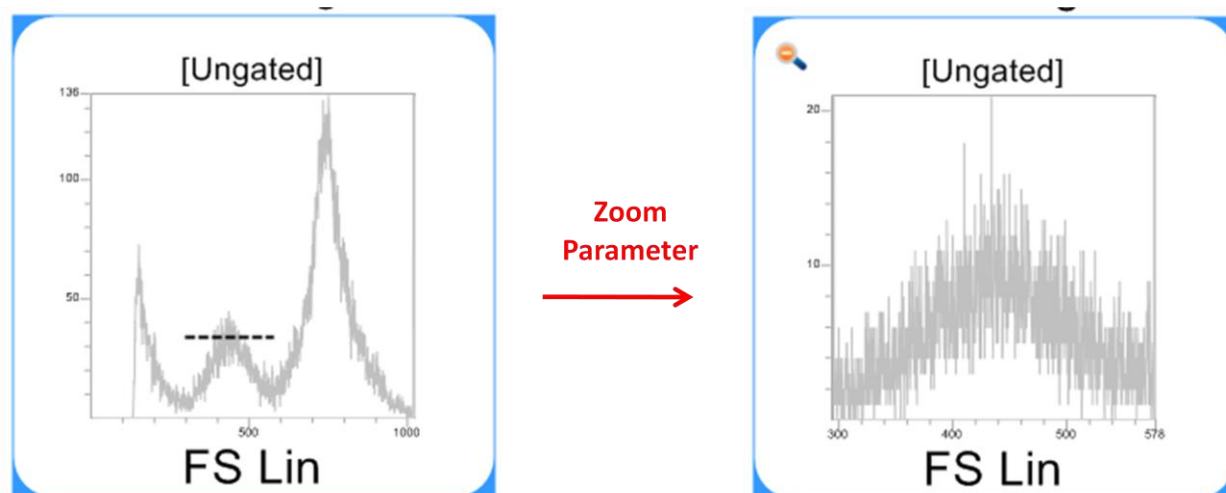
The **Zoom** tool is not available when a low resolution LMD file is currently opened in the **Workspace**.

The **Zoom** tool is only enabled when a Listmode file is loaded and the Plots tab of the Workspace is selected and at least one plot is added to the **Plots** area.

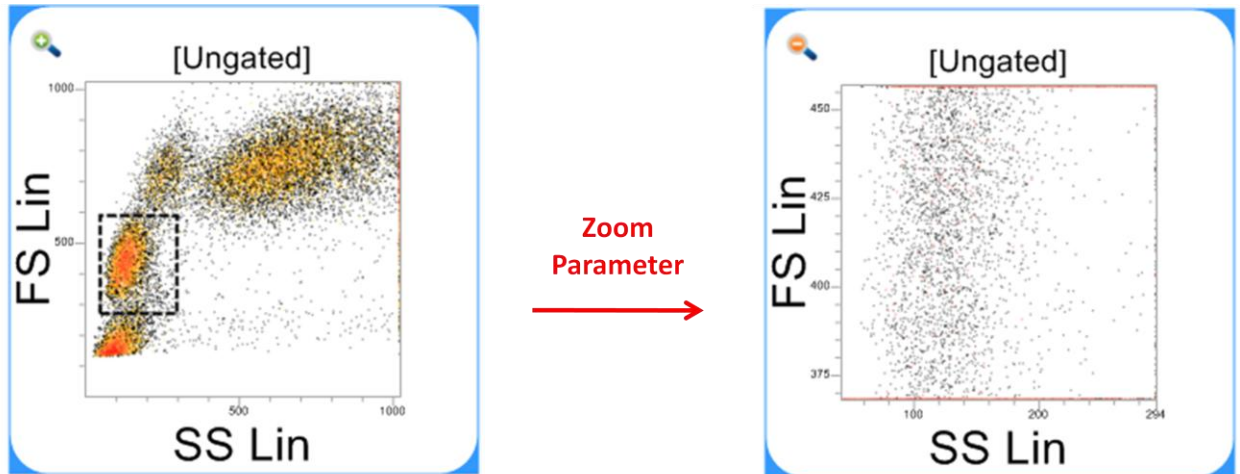
The **Zoom** tool allows you to modify the parameter zoom level for a plot.

To set or change a zoom level for parameters of the selected plot select the tool and then use it to define a zoom region.

On a single parameter plot the tool draws a linear zoom region.



On a dual parameter plot the tool draws a rectangular zoom region.



Any change in scale via the **Zoom** tool will update the settings in the **Parameter Zoom** tab of the **Scales Properties** dialog.

Any plots in the **Plots** and **Previews** areas that are already zoomed will update accordingly.

! If you change the zoom status on a plot with a region then the region position does not change, you may need to reposition any regions set on zoomed parameters.

Scaling Button

Click the **Scaling** button to launch the **Scales Properties** dialog.

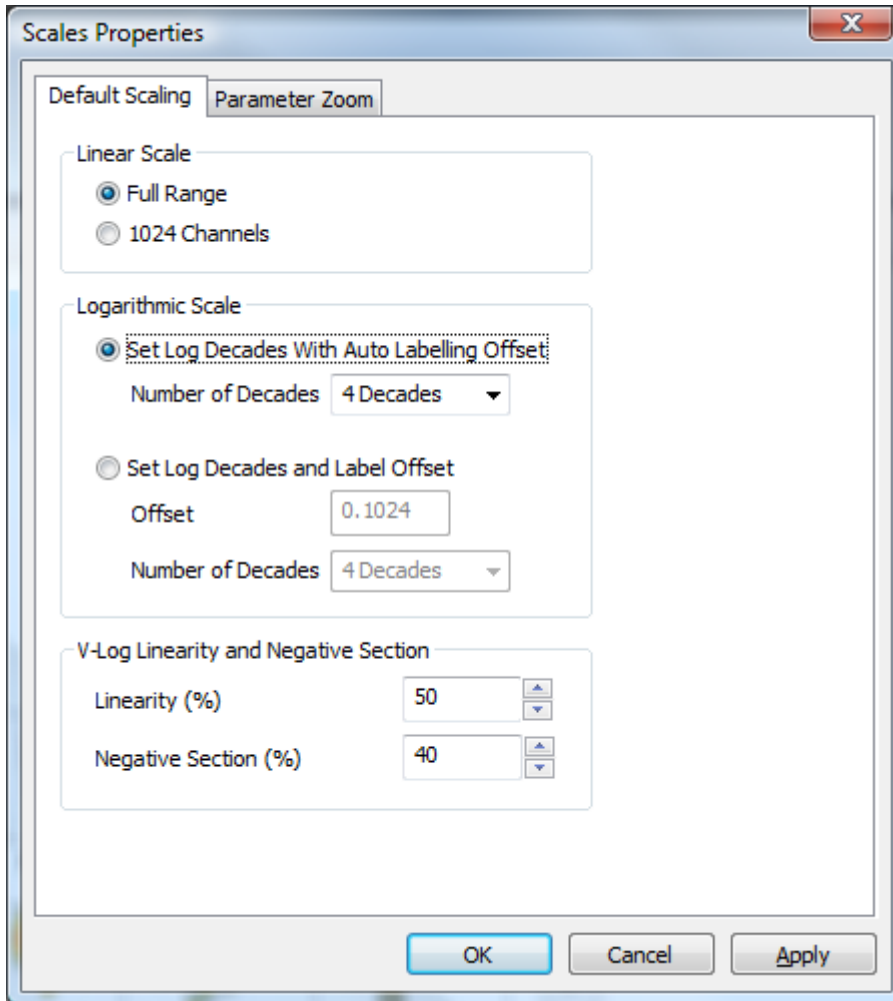
Scales Properties dialog

The **Scales Properties** dialog is launched from the **Scaling** button on the **Parameters** tab.

The **Default Scaling** tab is displayed when the dialog is launched.

Default Scaling Tab

The options in this tab allow you to modify the Linear, Logarithmic and V-Log scaling options for parameters in the **Workspace**.



Linear Scale

The **Linear Scale** group contains 2 radio buttons; **Full Range** and **1024 Channels**.

For FC500 format files the default is 1024. For all other file types the default selection is determined by the \$PnR Keyword in the LMD file.

When you change the Linear scale all associated statistics and results will be updated so they are calculated on the selected range of the linear scale.

Select the **Full Range** radio button if you wish all linear parameters in the workspace and reports to be scaled to the full range of data.

Select the **1024 Channels** radio button if you wish all linear parameters in the workspace and reports to be scaled to 1024 channels, regardless of their full range.

Logarithmic Scale

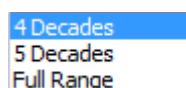
The **Logarithmic Scale** group contains 2 radio buttons: **Set Log Decades with Auto Labelling Offset** and **Set Log Decades and Label Offset**.

When **Set Log Decades with Auto Labelling Offset** is selected the software will scale all Logarithmic parameters in the workspace and reports to a scale based on the number of decades set and the resolution of data within the file.

When the **Set Log Decades and Label Offset** radio button is selected the software will scale all Log parameters in the workspace and reports to a scale based on the offset and number of decades specified.

In both cases the **Number of Decades** drop down list is disabled for low resolution data (less than 12-bits). For low resolution files the log parameter scaling is set according to the \$PnE keyword.

The options in the drop-down list are:



When **4 Decades** is selected the data for all Logarithmic scaled parameters in the workspace and reports will scale to display 4 decades down from the highest value in the LMD file. Statistics and results will update accordingly.

When **5 Decades** is selected the data for all Logarithmic scaled parameters in the workspace and reports will scale to display 5 decades down from the highest value in the LMD file. Stats/results will update accordingly.

When **Full Range** is selected the data for all Logarithmic scaled parameters in the workspace and reports will scale to the full range of the data in the LMD file. Stats/results will update accordingly.

You can also enter a numerical value into the **Number of Decades** field.

The value entered in the **Offset** field determines where the scale starts.

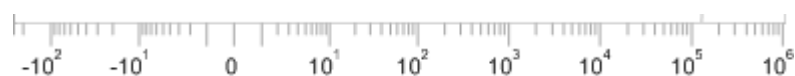
The number entered into the **Offset** field are converted to a Log scale when displayed on the plots e.g. 0.1 in dialog = 10^{-1} on Log scale; 10 in dialog = 10^1 on Log scale; 100 in dialog = 10^2 on Log scale.

V-Log Scale

The **V-Log Scale** group contains 2 input fields: **Linearity (%)** and **Negative Section (%)**.

The **Linearity (%)** spin control is used to enter a value for the Linearity of the scale as a percent. The default value is read from the **Scaling** in **VenturiOne Options** dialog and is 50%.

When the Linearity is set at 0% the V-Log scale has a minimal linear part, as illustrated below:



When the **Linearity** is set at 50% half of the V-Log scale is Linear, as illustrated below:

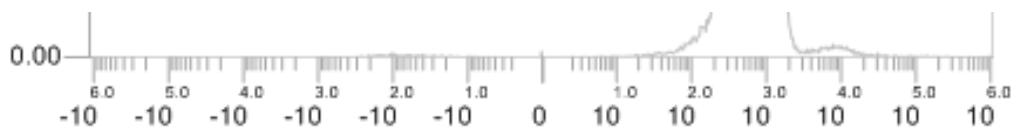


You can use the up and down arrows of the spin control to increase or decrease the value in the field. You can also enter a custom numerical value.

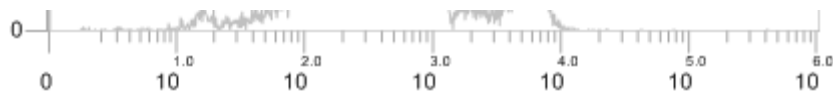
The value entered in the **Linearity** control changes the number of data channels which appear within the linear section of the V-Log scale.

The **Negative Section (%)** spin control is used to enter a value which determines the number of Log decades displayed in the negative section of the scale. By default the value is read in from the **VenturiOne Options** dialog and is 40%.

When set at 100% the number of decades displayed on the negative section of the scale will be the same as the number of decades displayed on the positive side of the scale as illustrated below:



When set at 0% the number of decades displayed on the negative section of the scale will be 0 as illustrated below:



You can use the up and down arrows of the spin control to increase or decrease the value in the field. You can also enter a custom numerical value.

Once you are happy with your changes select the **OK** button to apply the changes made in the dialog to the Workspace and close the dialog.

Select the **Apply** button if you wish to apply the changes made without closing the dialog. Select the **Cancel** button to close the dialog and cancel all changes. Note that only changes made after the Apply button was clicked will be cancelled.

Parameter Zoom Tab

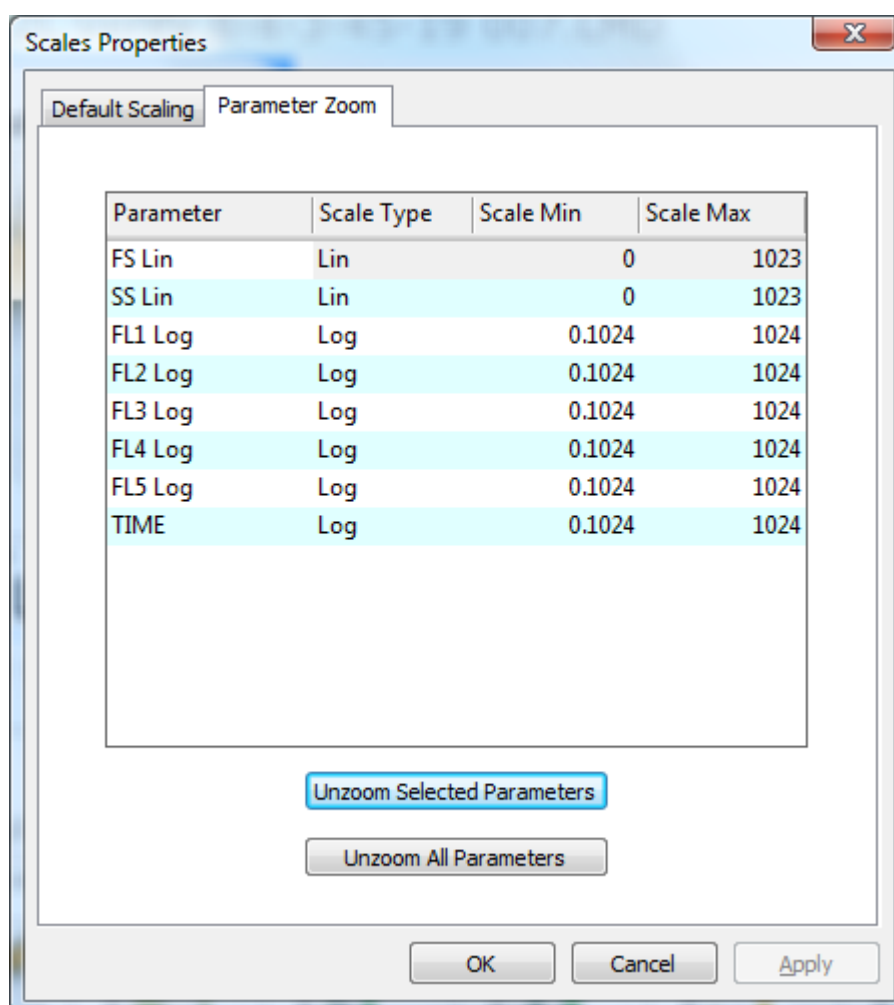
The **Parameter Zoom** tool is not available when a low resolution LMD file is currently opened in the **Workspace**.

The **Parameter Zoom** tab lists all the parameters in the current file and allows you to edit the displayed scale values for each parameter in order to optimize the way in which your data is displayed.

The selected range is only applied to the selected scale type (Lin, Log or V-Log).

The selected zoom values are only applied to plots that have been selected to display zoomed parameters.

! If you change the zoom status on a plot with a region then the region position does not change, you may need to reposition any regions set on zoomed parameters.



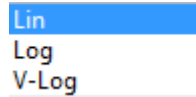
Parameters List Control

The **Parameter** column contains the Display name for each parameter in the Listmode file.

This column has a tooltip detailing the acceptable range for the Scale Min and Scale Max with respect to the Scale Type Selected. For example:

FL1 - FL1 Log: Permissible Lin Range: 0.00000 - 1048576.00000

The **Scale Type** column contains a combo box that allows the selection of the scale type (Lin, Log or V-Log) to which the range will be applied. The options in the drop down list are:

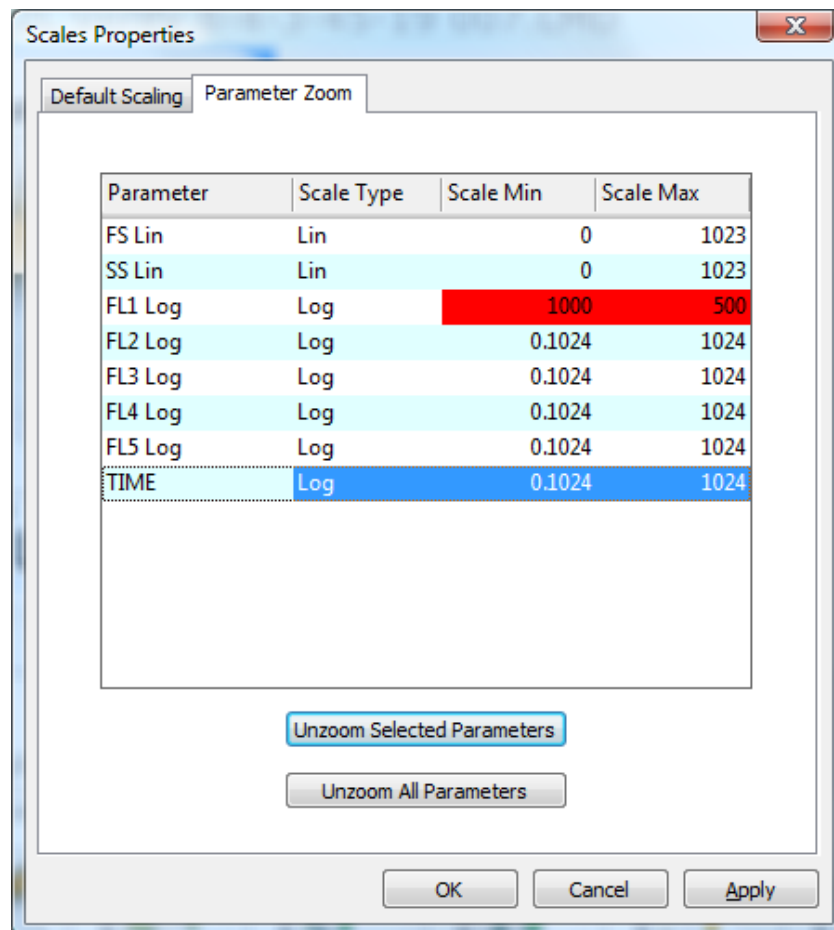


The default scale type is set from the current **Workspace**.

For low resolution LMD files only the scale type specified in the listmode file is available. It is displayed in the scale type column and the combo box is read only.

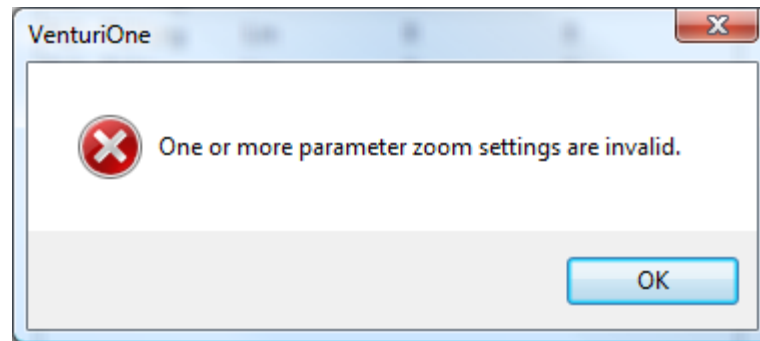
The **Scale Min** and **Scale Max** columns display the current minimum and maximum values for the scaling of a parameter, you can manually change these values. The values allowed for **Scale Min** and **Scale Max** are limited to the range indicated by the settings in the **Default Scaling** tab.

When editing the **Scale Min** and **Scale Max** fields if an error occurs, an indication of this will be given in red as illustrated below:



If you hover over any of the error values a tool tip indicating the reason for error will be displayed.

If the range you have entered is invalid and you press the **OK** button an error message will be displayed:



Unzoom Selected Parameters and Unzoom All Parameters Buttons

Select the **Unzoom Selected Parameters** button to reset the values for the currently selected parameters to their defaults.

Select the **Unzoom All Parameters** button to reset the values for all parameters to their defaults.

! If you change the zoom status on a plot with a region then the region position does not change, you may need to reposition any regions set on zoomed parameters.