## **SYNC**

id="trigger in" name="Trigger In" type=int>| <d>Waits for a pulse on the input BnC of the PCI card before imaging will start. 0=off, 1=acqure scalid="trigger out" name="Trigger Out A" type=int>| <d>Sends a pulse on the output BNC of the PCI card. 0=off, 1=scanline trigger, 2=frame trigger id="trigger out 2" name="Trigger Out B" type=int>| <d>Sends a pulse on the output BNC of the PCI card. 0=off, 1=scanline trigger, 2=frame trigger id="trigger out 2" name="Trigger Out B" type=int>| <u>Hz</u>| <d>The current frame rate of the imaging system.</d>| <l>| <t>freeze</t>| </l>| <t>freeze</t>| </l>| id="max fr" name="FR Limit" type=int>| <u>Hz</u>| <d>Frame rate limiter. If below the calculated imaging frame rate, blank-time is added afte id="frame period" name="Frame Period" type=int>| <u>µs</u>| <d>Period calculation</d>| <l>| <t>freeze</t>| </l>| <t>freeze</t>| </l>| <w>never</w>| | id="prf-adjust" name="PRF Adjust" type=int>| <d/>| <d>| <t>freeze</t>| </l>|

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# **B-IQFILT**

id="b-iq-window factor" name="IQ Window Factor" type=int>| <d>Window size multiplier for the IQ low-pass filter.</d>|
id="b-iq-cutoff freq" name="Cutoff Frequency" type=int>| <d>Frequency of low pass filtering applied after IQ demodulation.</d>|
id="b-iq-top freq" name="Top Frequency" type=int>| <d>Frequency of low pass filtering applied after IQ demodulation.</d>|
id="b-iq-top freq" name="Top Frequency" type=int>| <ud="MHz">Hz</u>| <d>Frequency used at the top of the sliding frequency for IQ demodulation.</d>|
id="b-iq-bottom freq" name="Bottom Frequency" type=int>| <ud="MHz">Hz</u>| <d>Frequency used at the bottom of the sliding frequency for IQ demodulation.
| id="b-iq-bottom freq depth" name="Bottom Frequency Depth" type=int>| <u>| <u<| >MHz">Hz</u>| <d>Frequency used at the top of the sliding frequency for IQ demodulation.
| id="b-iq-bottom freq base" name="Bottom Frequency Base" type=int>| <u<| >MHz">Hz</u>| <d>Frequency used at the top of the sliding frequency for IQ demodulation.
| id="b-iq-bottom freq base" name="Bottom Frequency Base" type=int>| <u<| >MHz">Hz</u>| <d>Frequency used at the top of the sliding frequency for IQ demodulation.
| id="b-iq-bottom freq base" name="Bottom Frequency Base" type=int>| <u<| >MHz">Hz</u>| <d>Frequency used at the top of the sliding frequency for IQ demodulation.
| id="b-iq-bottom freq base" name="Bottom Frequency Base" type=int>| <u<| >MHz">Hz</u>| <d>Frequency used at the bottom of the sliding frequency for IQ demodulation.
| id="b-iq-bottom freq base" name="Bottom Frequency Base" type=int>| <u<| >MHz">Hz</u>| <d>Frequency used at the top of the sliding frequency for IQ demodulation.
| id="b-iq-bottom freq base" name="Bottom Frequency Base" type=int>| <u<| >MHz">Hz</u>| <d>Frequency used at the top of the sliding frequency for IQ demodulation.
| id="b-iq-bottom freq base" name="Bottom Frequency Base" type=int>| <u<| >MHz">Hz</u>| <u<| >MHz">Hz</u>| <u<| >MHz">Hz</u>| <u<| >MHz">Hz</u>| <u<| >MHz">Hz</u>| <u<| >MHz">Hz</u>| <u

## **B-DYNRNG**

```
id="b-dyn log factor" name="DR Log" type=int>| <u>dB</u>| <d>The dynamic range of the log portion of the B image.</d>|
id="b-dyn log factor offset" name="DR Log Offset" type=int>| <math><u>dB</u>| <d>DR offset for the B image (hardware version specific).</d>|
id="b-dyn log factor sum" name="DR Log Sum" type=int>| <math><u>dB</u>| <d>The sum of dynamic range of the log portion and its HW offset (in B id="b-dyn linear factor" name="DR Linear" type=int>| <math><u>dB</u>| <d>The linear potion of the dynamic range for the B image.</d>|
id="b-reject" name="DR Reject" type=int>| <math><u>dB</u>| <d>Reject level for the B image.</d>|
id="b-reject offset" name="DR Reject Offset" type=int>| <math><u>dB</u>| <d>Reject offset for the B image (hardware version specific).</d>|
id="b-reject sum" name="DR Reject Sum" type=int>| <math><u>dB</u>| <d>Sum of the base reject level and offset for the B image.</d>|
id="b-dyn pivot out" name="DR Pivot Out" type=int>| <math><u>dB</u>| <d>Sum of the base reject level and offset for the B image.</d>|
```

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#### **B-FOCUS**

```
id="b-focus count" name="Focus Count" type=int>| <d>Number of focus markers on the B image. 0=auto-focus.</d>| <l>| <t>freeze</t>| </l>|
id="focus depth" name="Focus Depth" type=int>| <u>µm</u>| <d>The depth of the central focus marker</d>| <l>| <t>freeze</t>| </l>|
id="focus span" name="Focus Span" type=int>| <u>µm</u>| <d>The spacing between focus markers</d>| <l>| <t>freeze</t>| </l>|
id="b-focus count adjusted" name="Focus Count Adj." type=int>| <d>The number of focus markers on the B image (adjusted for harmonic/non-ha
id="focus span adjusted" name="Focus Span Adjusted" type=int>| <u>µm</u>| <d>The spacing between focus markers (adjusted for harmonic/l
id="b-autoFocusPos1" name="AF Depth1" type=int>| \langle ud="">\hat{A}\mu m \langle u>| \langle d>The 1st focus of auto-focusing. Auto-focus is activated if number of
id="b-autoFocusPos2" name="AF Depth2" type=int>| <ud="">µm</u>| <d>The 2nd focus of auto-focusing. Auto-focus is activated if number of
id="b-autoFocusPos3" name="AF Depth3" type=int>| <ud="">µm</u>| <d>The 3rd focus of auto-focusing. Auto-focus is activated if number or
id="b-autoFocusPos4" name="AF Depth4" type=int>| <ud="">µm</u>| <d>The 4th focus of auto-focusing. Auto-focus is activated if number of
id="b-autoFocusPos5" name="AF Depth5" type=int>| <ud="">µm</u>| <d>The 5th focus of auto-focusing. Auto-focus is activated if number of
id="b-autoFocusPos6" name="AF Depth6" type=int>| <ud="">µm</u>| <d>The 6th focus of auto-focusing. Auto-focus is activated if number of
id="b-autoFocusPos7" name="AF Depth7" type=int>| <ud="">µm</u>| <d>The 7th focus of auto-focusing. Auto-focus is activated if number of
id="b-autoFocusPos8" name="AF Depth8" type=int>| <ud="">µm</u>| <d>The 8th focus of auto-focusing. Auto-focus is activated if number of
id="b-autoFocusPos1Off" name="Auto Focus Pos 1 Off" type=int>| <ud=""/>| <d>Sets auto focus position 1 to 0.</d>|
id="b-autoFocusAdjustLineduration" name="AF Lineduration" type=int>| <ud="">%</u>|
id="b-focus blend" name="Focus Blend" type=int>| <d/>| <l>| <t>freeze</t>| </l>|
id="b-focus blend pos" name="Focus Blend Pos" type=int>| <d/>| <l>| <t>freeze</t>| </l>|
id="focus span default in non pulse inv har" name="Focus Span Default in Non Pulse Inv Har" type=int>| <u>µm</u>| <d/>| <l>| <t>freeze</t>
id="focus boundaries" name="Focus Boundaries" type="array">| <d/>| <l>| <t>freeze</t>| </l>|
id="bb-focus boundaries" name="Dual Focus Boundaries" type="array">| <d/>| <l>| <t>freeze</t>| </l>|
id="4b-focus boundaries a" name="Quad Focus Boundaries A" type="array">| <d/>| <l>| <t>freeze</t>| </l>|
id="4b-focus boundaries b" name="Quad Focus Boundaries B" type="array">| <d/>| <l>| <t>freeze</t>| </l>|
```

## **B-GAIN**

```
id="b-gain auto curve" name="Gain Auto B Curve (Percent)" type="array">|<d>The auto gain curve</d>||<w>never</w>|| id="b-gain" name="Gain: Overall" type=int>|<d>Overall user gain.</d>|<fastupdate>1</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fastupdate>|</fast
```

```
id="b-gain-digirange offset" name="Gain: Range (Offset)" type=int>| <ud="">dB</u>| <d>The range digital gain offset in dB. (frequency specific)
id="b-gain-initramp" name="Gain: Init Ramp" type=int>| <d/>| <l>| <t>freeze</t>| </l>|
id="b-gain-pa-comp" name="Gain: PA Compensation" type=int>| <d/>| <l>| <t>freeze</t>| </l>|
id="b-tgc" name="TGC: Analog" type="curve">| <d>Analog gain curve. Should be fixed for a preset.</d>| <l>| <t>freeze</t>| </l>|
id="b-tgc-depth" name="TGC: Depth" type=int>| <u>µm</u>| <d>Depth that the system TGC curve is calculated to. Depths beyond will use the
id="gain curve" name="TGC: Sliders" type="gaincurve">| <d>TGC slider values from the console.</d>| | <w>only on user</w>| | <fasti
id="b-tgc-sensitivity" name="TGC: Sensitivity" type=int>| <d>The effect of the user TGC to the overall TGC.</d>|
id="b-tgc lateral" name="TGC: Lateral" type="curve">| <d>Lateral gain curve. Applied digitally per scanline. Represents half transducer, applied
id="b-tgc lateral offset" name="TGC: Lateral Offset" type="array">| <d>Lateral gain curve that offers finer resolution control than the four point c
id="b-tgc-autoenable" name="TGC: Auto Enable" type=int>| <d>Toggles auto-gain function.</d>| <l>| <t>freeze</t>| </l>| <m>never</m>
id="b-tgc-automethod" name="TGC: Auto Method (debug)" type=int>| <d>For automatically adjusting gain (debug purpose)</d>| <l>| <t>freeze
id="vca-amp" name="VCA Amplification" type=int>| <d>Amplification setting sent to the VCA. Datasheet should be referenced.</d>| <l>| <t>f|
id="vca-lpf" name="VCA LPF" type=int>| <d>Sets the cutoff frequency of the low-pass filter on the VCA. 0 = 10MHz, 1 = 15MHz, 2 = 20MHz, 3
id="vca lna input clamp" name="VCA LNA Input Clamp" type=int>| <d/>| <l>| <t>freeze</t>| </l>|
id="vca active termination" name="VCA Active Termination" type=int>| <d>VCA preset active termination values 0-no, 1-50, 2-100, 3-200, 4-400
id="lna integrator enable" name="LNA Integrator Enable" type=int>| <d>Turns the lna integrator on = 1 off = 0.</d>|
id="pga integrator enable" name="PGA Integrator Enable" type=int>| <d>Turns the pga integrator on = 1 off = 0.</d>|
id="hpf digital enable" name="HPF Digital Enable" type=int>| <d>Turns the digital hpf on = 1 off = 0.</d>|
id="hpf digital value" name="HPF Digital Value" type=int>| <d>Sets the digital hpf bits 1 to 4 value from 2 to 10.</d>
id="autoBGain-ROIWidth" name="AutoBGain ROI Width" type=int>| <u>%</u>| <d>The ROI width. It is the percentage of the original line den
id="autoBGain-Loc-top" name="AutoBGain Location (TOP)" type="rectangle">| <u>%</u>| <d>The region of interest in bottom of image. </d>|
id="autoBGain-Loc-bottom" name="AutoBGain Location (BOTTOM)" type="rectangle">| <u>%</u>| <d>The region of interest in top of image.
id="autoBGain-brightnessCurve" name="AutoBGain Brightness" type="curve">| <d>Ideal image brightness curve.</d>| <l>| <t>freeze</t>| </l>
```

## **B-GEOM**

id="b-image rect" name="B Box" type="rectangle">| <d>Width of rectangle is number of scanlines (percentage of the line density based on the sectid="hd-image rect" name="HD Zoom Box" type="rectangle">| <d>Width of rectangle is number of elements. Height is number of samples, which id="b-sampl freq" name="BSF" type=int>| <u>Hz</u>| <d>Sampling frequency output of the envelope detector for B data. Always decimated from id="b-deviation" name="Steer" type=int>| <u>m°</u>| <d>Steer angle for B mode.</d>| <|>| <t>freeze</t>| </l>| id="b-ldensity" name="Line Density" type=int>| <d>Specifies the number of raylines that will be used to form an image when sector is maximized id="hd-ldensity" name="Line Density (HD Zoom)" type=int>| <d>Specifies the number of raylines that will be used in HD Zoom mode</d>| <|>| <|>| <|>| <|

id="asr weight" name="ASR Weight" type=int>| <d/>| id="asr contrast" name="ASR Contrast" type=int>| <d/>| id="asr lp cut" name="ASR LP Cut" type=int>| <d/>|

```
id="b-hd-ldensity" name="Line Density (B/HD Zoom)" type="integer.alias">| <d>Specifies the number of raylines that will be used in B/HD Zoon
  id="b-accumulator" name="Accumulator" type=int>| <d>Number of lines to repeat per scanline. For averaging and/or PIH. If Fast PIH mode is tur
  id="b-accumulator out" name="Accumulator Out (B)" type=int>| <d/>| <l>| <t>freeze</t>| </l>| | <w>never</w>| |
  id="b-fastPIH out" name="Fast PIH Mode Out (B)" type=int>| <l>| <t>freeze</t>| </l>| | <w>never</w>| |
  id="b-fastPIH" name="Fast PIH Mode (B)" type=int>| <d>-1: non PIH Mode 0: normal PIH mode. 1: Fast PIH. 2: Fast PIH (interp). 3: Experimen
  id="b-depth" name="Depth" type=int>| <u>mm</u>| <d>The imaging depth.</d>| <l>| <t>freeze</t>| </l>|
  id="other-sampl freq" name="BSF-OM" type=int>| <u>Hz</u>| <d>See the B description, applied in smaller B displays.</d>| <l>| <t>freeze</t>
  id="b-extension angle" name="Extension Angle" type=int>| \langle u \rangle m\hat{A}^{\circ} \langle u \rangle| \langle d \rangleExtends the image on both sides for trapezoidal imaging, for larger
  id="sector" name="Sector" type=int>| <u>%</u>| <d>The sector used for the B image. This is a percentage of the line density.</d>| <l>| <t>free:
  id="b-mla" name="MLA" type=int>| <d/>| <l>| <t>freeze</t>| </l>|
  id="ldensity adjust" name="LD Adjust" type=int>| <d/>| <l>| <t>freeze</t>| </l>| | <w>never</w>| |
  id="b-decimation" name="Decimation" type=int>| <d>The decimation applied to the RF data returned. 0=40MHz, 1=20MHz,2=10MHz,3=5MHz.
B-IMT
  id="imt-high-thres" name="IMT high Threshold" type=int>| <ud=""/>|
  id="imt-low-thres" name="IMT Low Threshold" type=int>| <ud=""/>|
_____
B-POSTP
  id="b-persistence" name="Persistence" type=int>| <d>The number of frames to apply frame averaging on the B display.</d>
  id="b-filter type" name="PP Filter Type" type=int>| <ud=""/>| <d>Clarity used on the B image. (0=None, 1=ASR, 2=CV)</d>|
  id="b-cv index" name="CV Index" type=int>| <d>Index of the CV filter used.</d>|
  id="b-cvgop index" name="CV GOP Index" type=int>| <d>Index of the CV GOP filter file used.</d>|
  id="invert map" name="Invert Map" type=int>| <d>Inverts the B display map.</d>|
  id="b-chroma" name="Chroma" type=int>| <d>Chroma colorization index.</d>|
  id="b-cv percent" name="CV Percent" type=int>| <d>Processing intensity of the Clarity filter. (Not current used, see Clarity Index)</d>|
  id="flash suppress" name="Flash Suppress" type=int>| <d/>|
  id="asr smooth level" name="ASR Smooth Level" type=int>| <d/>|
  id="asr line strength" name="ASR Line Strength" type=int>| <d/>|
```

```
id="gps-average-times" name="GPS Average Times" type=int>| <ud=""/>| id="gps-scale-factor" name="GPS Scale Factor" type=int>| <ud=""/>| id="gps-21-scale-factor" name="GPS 21 Scale Factor" type=int>| <ud=""/>| id="gps-median-process" name="GPS Median Process" type=int>| <ud=""/>| id="gps-up-offset" name="GPS Up Offset" type=int>| <ud=""/>| id="gps-21-up-offset" name="GPS 21 Up Offset" type=int>| <ud=""/>| id="gps-update-data-rate" name="GPS Update Data Rate" type=int>| <ud=""/>|
```

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## B-RX

```
id="rx aperture curve" name="Rx Aperture" type="curve">| <d>Represents the receive aperture as a function of elements vs depth.</d>| <l>| <t>
id="b-rx aperture max" name="Rx Aperture Max" type=int>| <d>Maximum number of elements that can be in the receive aperture. Value represen
id="b-rx curve depth" name="Rx Curve Depth" type=int>| <u>µm</u>| <d>Depth at which the Rx Aperture Curve is valid for. All depths beyon
id="soundvelocity" name="Sound Velocity" type=int>| <d>The speed of sound used in the system.</d>| <l>| <t>freeze</t>| </l>|
id="b-weight type" name="B Weight Type" type=int>| <d>The appodization weight for b mode imaging.</d>| <l>| <t>freeze</t>| </l>|
id="use 2nd rx curve" name="Use Rx Aperture (Accum)" type=int>| <d>Toggles the use of the second aperture curve. Accumulator must be set to
id="rx aperture curve 2" name="Rx Aperture (Accum)" type="curve">| <d>Represents the receive aperture as a function of elements vs depth. Use
id="b-rx aperture max 2" name="Rx Aperture Max (Accum)" type=int>| <d>Maximum number of elements that can be in the receive aperture for t
id="b-rx window id" name="Rx Window ID" type=int>| <d/>| <l>| <t>freeze</t>| </l>|
id="b-rx window id 2" name="Rx Window ID (Accum)" type=int>| <d/>| <l>| <t>freeze</t>| </l>|
id="b-tempoInhib" name="Tempo Inhib" type=int>| <ud=""/>|
id="b-rx f number" name="Rx F Number" type=int>| <d>F Number for receive aperture</d>| <l>| <t>freeze</t>| </l>|
id="tempo delay curve" name="Tempo Delay Curve" type="curve">| <d>A curve that adjusts the transmit delay based on the transmit angle used.<
id="td curve max" name="TD Curve Max" type=int>| <d>The maximum delay that the skinline curve will interpolate to.</d>| <l>| <t>freeze</t>
id="b-td zero value" name="TD Zero Value" type=int>| <d>Adjusts the delay before storing the data.</d>| <l>| <t>freeze</t>| </l>|
id="b-td zero value ext" name="TD Zero Value Ext" type=int>| <d>Adjusts the delay before storing the data when there is an extension angle.</d>
id="b-lineduration adjust" name="Line Duration Adjust" type=int>| <d/>| <l>| <t>freeze</t>| </l>|
id="b-lineduration ref depth" name="Line Duration Ref Depth" type=int>| <u>mm</u>| <d/>| <l>| <t>freeze</t>| </l>|
```

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## **B-SCVT**

id="origin" name="Origin" type="point">| <d>Origin in pixels of the horizontal center (X) and apex (Y) of the B image.</d>| | <w>never</w| id="microns" name="MPP" type="point">| <d>Lateral (X) and Axial (Y) microns per pixel value in standard large display imaging. This typically

id="b-initial zoom" name="Initial Zoom" type=int>| <u>%</u>| <d>The initial zoom factor used in regular B mode. When this is 100%, then the ii id="image flip" name="Image Flip" type=int>| <d>Controls the vertical and horizontal flip of the B image. Bit 0 is the horizontal flip. Bit 1 is the v id="zoom user" name="Zoom - User" type=int>| <u>%</u>| <d>User zoom factor, applied on top of the initial zoom value.</d>|
id="zoom offset user" name="Zoom Offset" type="point">| <d>The (X, Y) offset of the user zoom in pixels.</d>| | <w>never</w>| |

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### B-TX

id="b-freq" name="Tx Frequency" type=int>| <ud="MHz">Hz</u>| <d>Transmit frequency for B imaging</d>| <l>| <l>| <t>freeze</t>| </l>| <l>| <l=| b-freq display" name="User Frequency" type=int>| <ud>| <d>Frequency displayed to the user, selected based on transmit frequency and id="tx aperture curve" name="Tx Aperture" type="curve">| <d>| <ud>| <ud

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id="opt b-target hist mean" name="Target Hist Mean (Opt B)" type=int>| <d/>| <d/>| <<l>| <t>freeze</t>| </l>|

id="opt b-target hist diff" name="Target Hist Diff (Opt B)" type=int>| <d/>| <<l>| <t>freeze</t>| </l>|

id="element mask index" name="Element Mask Index" type=int>| <d>Element mask for simulating dead elements. Corresponds to a line within th

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