# Hypersignal RIDE Function List

## 1 Channel X Display
Displays input from a single channel

## 1 to 2 Demultiplexer
Demultiplexes one input channel to two channel output based on a select input

## 1 to 4 Demultiplexer
Demultiplexes one channel input to four channel outputs based on two control inputs

## 1/3 Octave Band Analyzer
Performs 1/3 octave band analysis on the input signal

## 1D to Matrix Converter
Converts a 1 dimensional signal to a matrix

## 1st Order Butterworth Filter
Performs 1st order Butterworth filtering on the input data based on some conditions

## 2 Channel X Display
Displays two waveforms on one grid

## 2 to 1 Multiplexer
Multiplexes two channel input to one channel output based on a select input

## 2 to 4 Decoder
Decodes two binary (0,1) inputs to four 1-hot outputs

## 2-Channel Display
Displays input from two channels in several display modes.

## 2-Sided Magnitude
Calculates the double-sided magnitude of the complex input signal

## 2-Sided Phase
Calculates double-sided ArcTangent of both the real and imaginary components of the complex input

## 4 Input AND
Performs logical AND function on four input signals

## 4 Input Max
Finds the maximum value for four inputs and channel number of the maximum value

## 4 Input OR
Performs logical OR function on four input signals

## 4 to 1 Multiplexer
Multiplexes four channel input to one channel output based on two control inputs

## A-87.6 Decode
Performs A law expansion on the input signal

## A-87.6 Encode
Performs A law compression on the input signal

## Absolute Value
Outputs the absolute value of the input signal

## Accumulate
Accumulates data values of all frames

## Add
Adds two input signals

## ADPCM Decoder
Adaptive Differential Pulse Code Modulation Decoder

## ADPCM Encoder
Adaptive Differential Pulse Code Modulation Encoder

## AGC
Automatic Gain Control

## Alarm Clock
Allows the user to set an alarm to go off at a specified time

## Analog Meter
Implements an analog meter control

## Annunciator
Changes appearance based on different threshold values

## Arbitrary Signal Generator
Generates an arbitrary waveform via a mouse

## ArcCosine(x)
Calculates the ArcCosine value of the input signal

## ArcSine(x)
Calculates the ArcSine value of the input signal

## ArcTangent(x)
Calculates the ArcTangent value of the input signal

## Arctangent(y/x)
Quadrant Arctangent (Atan2)

## Autocorrelation
Calculates the autocorrelation function of the input signal

## Averaged Periodogram
Calculates the averaged periodogram of the input signal

## Bartlett Window
Performs Bartlett windowing on the input signal

## BER
Compares the two input channels using the exclusive-or function to count bit errors and calculate bit error rate

## Biquad
Implements a biquad, and applies this to the input signal

## Bit Mask
Masks off user-specified bits in the input signal

## Bit Reverse
Reverses bits in each sample (MSB=>LSB, LSB=>MSB)

## Bitmap Display
Displays a selected bitmap

## Bitmap Read
Reads a Windows bitmap file and outputs the red, green and blue planes

## Blackman Window
Performs Blackman windowing on the input signal

## Boxcar Window
Performs Boxcar (Rectangle) windowing on the input signal

## Buffer
Buffers and outputs a specified number of the input samples

## CD Knob
CD Control Knob

## Center Clip
Clips the input signal by comparing it to two specified threshold levels

## Cepstrum
Calculates the cepstrum of the input signal

## Channel Information
Displays a channels information

## Channel Perturber
Injects bit errors into a digital channel at a specified error rate

## Chirp z-Transform
Calculates the chirp z-transform of the input signal

## Clip
Clips the data elements by comparing with two specified threshold levels

## Color Pattern Generator
Generate a color image (bleeds 5 colors horizontally)

## Command Switch
Switch for controlling (starting/stopping, etc.) worksheets, typically used for power switch

## Complex Cepstrum
Calculates the complex cepstrum of the input signal

## Complex Conjugate
Takes the complex conjugate of the input signal

## Complex Exponential Generator
Generates a complex exponential waveform

## Complex to Real
Converts the complex input values to the corresponding real and imaginary values

## Concatenate
Concatenates two input frames into one output frame

## Constant Generator
Generates a constant (DC) waveform

## Convert
Converts input data from integer to floating point, or from floating point to integer

## Convert Character to String
Converts input character arrays to a string

## Convert Number to Character String

Converts input numbers to a character string

## Convolution
Convolves two input signals together

## Correlation
Cross-correlates two input channel signals

## Cosine Generator
Generates a cosine waveform

## Cosine(X)
Calculates the cosine value of each element of an input signal

## Covariance
Calculates the cross-covariance for two different inputs or auto-covariance for two identical inputs

## Create Color
Takes three inputs red, green, and blue and creates a color

## Data Display
Data Display for viewing data in multiple text formats - allows pasting to other windows applications

## Daub4
Calculates the discrete wavelet transform of an input signal with 4 Daubechies coefficients

## Daub6
Calculates the discrete wavelet transform of an input signal with 6 Daubechies coefficients

## dB Amplitude
Performs the function of 20*log10(x)

## dB Power
Performs the function of 10*log10(x)

## DCT
Calculates the discrete cosine transform of an input signal

## De-interleave 2 Channels
Separates one channel input into two channel output

## De-interleave 3 Channels
Separates one channel input into three channel output

## De-interleave 4 Channels
Separates one channel into four channel output

## De-interleave 5 Channels
Separates one channel input into five channel output

## De-Interleave 8 Channels
De-interleaves, or separates, one interleaved channel into eight channels

## Dead Band
Forces a specified range to be 0

## Decimal to Binary
Decimal to Binary conversion block function

## Decimate
Decimates an input signal

## Delay
Delays input by specified number of samples

## DFT
Calculates the discrete Fourier transform of the input signal

## Difference Equation
Difference Equation Function

## Differentiate
Differentiates the input signal

## Digital Display
Displays the input signal using digital numbers

## Divide
Divides one signal by another

## DTMF Keypad
DTMF Keypad

## Dynamic Frame Pad
Pads buffers with previous frame values

## Equal
Checks for Equal condition and controls the block connected to this block

## Event Counter
Calculates the number of times a particular event happens

## Exponential
Calculates the exponential function of the input signal

## Exponential Fit

Performs exponential curve fitting on the input signal

## Extract Sample
Extracts sample from specified index of input data frame

## Fast Hartley Transform
Calculates the Fast Hartley Transform of the input signal

## FFT
Calculates the Fast Fourier Transform of the input signal

## File Read
This block reads an input file.

## File Write
Writes the input signal to a data file

## Find Substring
Find a substring

## FIR Filter
Applies an existing FIR filter to the input signal

## Five Input Add
Adds the corresponding elements of five input signals

## Five Position Toggle Switch
Five Position Vertical Toggle Switch

## Fixed Offset
Adds a specified offset value to each element of the input signal

## Four Freq. Goertzel Algorithm
Performs the Goertzel algorithm at four frequencies

## Four Input Add
Adds the corresponding elements of four input signals

## Frame Count
Counts the number of frames the simulation has run

## Frame Cumulative
Performs the frame cumulative function on input frame

## Frame Deinterleaver
Deinterleaves and outputs two frames from one input frame

## Frame Maximum
Finds the maximum of each frame of the input signal

## Frame Mean
Calculates the mean for each frame of the input signal

## Frame Minimum
Finds the minimum value for each frame of the input signal

## Frame Range
Calculates the range of values of the input frame

## Frame Shift
Shifts frame sample right or left

## Frame Size
Extracts the framesize of the input signal

## Frame Standard Deviation
Calculates the frame standard deviation of the input signal

## Frame Variance
Calculates the frame variance of the input signal

## Framesize Conversion
Converts input framesize from one value to another which can be less than, equal or greater in size

## Framesize Expander or Compressor
Converts (by expanding/compressing) data with an input framesize to a given output framesize

## Frequency Zoom
Calculates the magnitude (frequency) of the input signal at any frequency range with any frequency step

## Function Generator
Function Generator Control Front Panel

## Gain
Multiplies each element of the input signal by a constant

## Gaussian Generator
Generates a Gaussian waveform

## Gaussian Window
Performs Gaussian windowing on the input signal

## General Gaussian Generator
Generates a gaussian waveform with a specified mean and variance

## General Knob
General knob used for offsets, etc.

## Generate Character String
Sends a character string out its output channel

## Global Cumulative
Performs the global cumulative function

## Global Frame Mean
Performs the mean calculation on a sample by sample basis for all frames

## Global Maximum
Finds the maximum value of all data passed through this block

## Global Mean
Calculates the mean of all data passed through this block

## Global Minimum
Finds the minimum value of all data passed through this block

## Global Range
Calculates the range of values of the all input frames

## Global Standard Deviation
Calculates the standard deviation of all data passed through this block

## Global Variable
Global Variable to allow dynamic assignment, or placeholder, function

## Global Variance
Calculates the variance of all data passed through this block

## Goertzel Algorithm
Calculates the frequency domain magnitude at the specified frequency

## Greater Than
Checks for Greater Than condition to control the block connected to this block

## Greater Than / Equal
Checks for Greater Than/Equal condition to control the block connected to this block

## Hamming Window
Performs Hamming windowing on the input signal

## Hanning Window
Performs Hanning windowing on the input signal

## Hilbert Transform
Calculates the Hilbert transform of the input signal

## Histogram
Calculates the histogram of the input signal

## Horizontal Bar Chart
Horizontal bar chart

## Horizontal Bar Graph
Graph data horizontally

## Horizontal Slider
Horizontal slider control

## Hyperbolic Cos(x)
Calculates the Hyperbolic Cosine value of each element of the input signal

## Hyperbolic Sin(x)
Calculates the Hyperbolic Sine of the input signal

## Hyperbolic Tan(x)
Calculates the Hyperbolic Tangent value of the input signal

## IF-ELSE/COUNTER
Checks for IF-ELSE (with counter) condition to control the block connected to this block

## IIR Filter
Applies an existing IIR filter to the input signal

## Impulse Generator
Generates a unit impulse with the specified delay sample

## Impulsive Noise Generator
Generates an impulse noise waveform

## In Range
Checks to see if a value is between a range

## Integrate
Integrates the input signal

## Integrate and Dump
Performs integrate and dump

## Interleave 2 Channels
Interleaves two channel inputs to one channel output

## Interleave 3 Channels

Interleaves three channel inputs to one channel output

## Interleave 4 Channels
Interleaves four channel inputs to one channel output

## Interleave 5 Channels
Interleaves five channel inputs to one channel output

## Interleave 8 channels
Interleaves, or combines, eight channels into one

## Internet Receiver
Receive data through the internet

## Internet Transceiver
Transmit and receive data from the internet

## Internet Transmitter
Transmit data through the internet

## Interpolate
Interpolates the input signal

## Inverse DCT
Calculates the inverse discrete cosine transform of the input signal

## Inverse DFT
Calculates the inverse Discrete Fourier Transform of the input signal

## Inverse Fast Hartley Transform
Calculates the inverse Fast Hartley Transform of the input signal

## Inverse FFT
Calculates the inverse Fast Fourier Transform of the input signal

## Inverse Hilbert Transform
Calculates the inverse Hilbert transform of the input signal

## IP DAC
6ch DAC

## Kaiser Window
Performs Kaiser windowing on the input signal

## Keyboard Receiver
Receive keyboard input and output it

## Keypad
Implements a keypad control

## Knob
Implements a knob control

## Leaky LMS Adaptive Filter
Performs a leaky least mean square adaptive filter on the input signal

## LED
Simple two bitmap LED control

## LED
User control LED which gets set when a threshold is reached

## LED Button
Simple LED Button

## LED Meter
LED Meter indicator

## LED Meter
Implements a light emitting diode meter control

## Less Than
Checks for Less Than condition to control the block connected to this block

## Less Than / Equal
Checks for Less Than/Equal condition to control the block connected to this block

## Linear Fit
Performs a Linear curve fit to the input signal

## Linear Predictive Coding
Calculates the LPC coefficients based on the autocorrelation of the input signal

## LMS Adaptive Filter
Performs a Least Mean Square adaptive filter on the input signal

## Log
Calculates the natural logarithm (base e) value of each element of the input signal

## Log10
Calculates the common logarithm (base 10) value of each element of the input signal

## Logical AND

Performs logical AND function on two input signals

## Logical NAND

Performs logical NAND function on two input signals

## Logical NOR

Performs logical NOR function on two input signals

## Logical NOT

Performs the logical NOT function on the input signal

## Logical OR

Performs logical OR function on two input signals

## Logical XOR

Performs logical XOR (Exclusive-OR) function on two input signals

## Logx(y)

Calculates the logarithm (base x) value of each element of the input signal

## Loop Counter

Performs the Loop Counter operation to control the block connected to this block

## Loop Filter

Performs first order loop filtering on the input data

## Magnitude

Calculates the magnitude of the complex input signal

## Matrix Addition

Adds two matrices

## Matrix Generator by manual entry

Generates a  manually entered matrix

## Matrix Invert

Matrix Invert

## Matrix Multiply

Multiplies two matrices

## Matrix Order

Outputs the row and column values of a matrix

## Matrix Scale

Multiply a matrix by a scalar value

## Matrix Subtraction

Subtracts two matrices

## Matrix to 1D Converter

Converts matrix data into 1 dimensional data

## Median Filter

Performs the median filter on the input signal

## Modulus

Divides the input frame of data with the Modulus value

## Momentary Button

Output different values when the button is in the pressed or non-pressed state

## Multiply

Multiplies the corresponding elements of two input signals

## NCO

Numerically Controlled Oscillator - generates sinusoidal signals with frequencies governed by the amplitude of the input signal

## Noise Generator

Generates a noise waveform with normal distribution

## Not

Creates the logical opposite of the input signal.

## Not Equal

Checks for Not Equal condition to control the block connected to this block

## Notch Filter

Performs the notch filter

## Numeric Indicator

Numeric display to display a single value

## Octave Band Analyzer

Performs an octave band analysis on the input signal

## Offset

Adds the element of channel 1 to each element of channel 0

## Ones Complement

Performs ones complement bit conversion on each element of the input signal

## Pad

Pads the output frame with the specified pad value

## Peak Extractor

Finds peaks within a frame of data, either by position or magnitude

## Peak Hold

Holds the peak value for each frame sample globally or for a number of frames

## Periodogram

Calculates the periodogram of the input signal

## Phase

Calculates the ArcTangent of both the real and imaginary component of the complex input

## Phase Decoder

Decodes the phase angle into data bits

## Phase Locked Loop

Used to effectively discriminate between a feedback frequency and the input signal

## Polar to Rectangular

Converts polar to rectangular

## Polynomial Fit

Performs a polynomial curve fit to the input data

## Pow

Calculates the user specified exponent (power) value of the input signal

## Power Spectrum

Performs an average in time across frames

## PRN Generator

Generates a pseudo random noise waveform

## Product

Outputs the product of all input frame samples

## Pulse Train Generator

Generates a pulse train

## Quantizer

Limits (quantizes) the number of bits of precision in the input signal

## Ramp Generator

Generates a ramp waveform

## Read Com Port

Reads the input data from the specified com port

## Real to Complex

Converts real and imaginary values into the corresponding complex values

## Reciprocal

Calculates the 1/x value for a data sample x

## Rectangular to Polar

Converts rectangular to polar

## Rectify

Performs either half or full wave rectification on the input signal

## Replace Sample

Replaces sample with input value at specified index

## Replace Subset

Replaces a subset of data at a specified location within a frame

## Reverse

The Reverse block outputs the input data in reverse order.

## RGB Display

Displays an image in RGB format

## Root Mean Square

Calculates the frame root mean square of the input signal

## Rotate

Rotates input frame data by specified number

## RT 1 to 2 Demultiplexer

Demultiplexes one channel input to two channel inputs based on bottom control input

## RT 1 to 4 Demultiplexer

Demultiplexes one channel input to four channel output based on two bottom control inputs

## RT 2 to 1 Multiplexer

Multiplexes two channel inputs to one channel output based on the bottom control input

### RT 4 Input AND
Performs logical AND on the 4 input signals

### RT 4 Input OR
Performs the logical OR on 4 input signals

### RT 4 to 1 Multiplexer
Multiplexes four channel inputs to one channel output based on two bottom control input

### RT A-87.6 Decode
Performs A-law expansion on the input signal

### RT A-87.6 Encode
Performs A-law compression on the input signal

### RT Absolute Value
Takes the absolute value of the input signal

### RT Accumulate
Accumulates the input signal

### RT Add
Adds two input signals

### RT ADPCM Decoder
Adaptive Differential Pulse Code Modulation Decoder

### RT ADPCM Encoder
Adaptive Differential Pulse Code Modulation Encoder

### RT AGC
Performs the automatic gain control on the input signal

### RT ArcCos(x)
Calculates the ArcCosine value of the input signal

### RT ArcSin(x)
Calculates the arcsin value of the input signal

### RT ArcTan(x)
Calculates the ArcTan value of the input signal

### RT Arctanq(x)
Calculates the Arctanq value of the input signal

### RT Autocorrelation
Performs the autocorrelation on the input signal

### RT Bartlett Window
Performs the Bartlett window

### RT Biquad
Performs the biquad or filter on the input signal

### RT Blackman Window
Performs the Blackman window

### RT Buffer
Stores data temporarily

### RT Center Clip
Center clip the input signal based on the specified parameters

### RT Clip
Clips the input signal based on the specified parameters

### RT Complex to Real
Separates the complex number to real and image parts

### RT Concatenate
Concatenates two input data frames into one output data frame

### RT Constant Generator
Generates a constant (DC) waveform

### RT Correlation
Performs the correlation on the two input signals

### RT Cos(x)
Calculates the cosine value of the input signal

### RT Cosh(x)
Calculates the cosh value of the input signal

### RT Cosine Generator
Generates a cosine waveform

### RT Cot(x)
Calculates the cot value of the input signal

### RT Covariance
Calculates the covariance of the two input signals

### RT Daub4
Calculates the discrete wavelet transform of an input signal with 4 Daubechies coefficients

### RT Daub6
Calculates the discrete wavelet transform of an input signal with 6 Daubechies coefficients

## RT dB Amplitude
Calculates the dB amplitude of the input signal

## RT dB Power
Calculates the dB power of the input signal

## RT Decimal to Binary
Performs the decimal to binary conversion

## RT Decimate
Decimates the input signal

## RT Delay
Delays the specified samples

## RT Delay (w/Initial Value)
Delays input by specified number of samples

## RT DFT
Calculates the DFT of the input signal

## RT Differentiate
Differentiates the input signal

## RT Divide
Performs two input division

## RT Double-Sided Magnitude
Performs the double-sided magnitude on the input signal

## RT Double-Sided Phase
Calculates the double-sided phase of the input signal

## RT DSP to PC Upload
Performs the data transfer from DSP board to PC

## RT Dynamic Frame Pad
Pads buffers with previous frame values

## RT Equal
Checks the equal condition and controls the block connected to this block

## RT Event Counter
Calculates the number of signal transitions relative to a specified threshold value

## RT Exponential
Calculates the exponential of the input signal

## RT Extract Sample
Extracts sample from specified index of input data frame

## RT FFT
Takes the Fast Fourier Transform of the input signal

## RT FFT Optimized for C3x
Real-Time Fast Fourier Transform

## RT FIR Filter
Performs the FIR filter on the input signal

## RT Five Input Add
Adds the five input signals

## RT Fixed HPF
Performs fixed high pass filter operation

## RT Fixed LPF
Performs the fixed low pass filter operation

## RT Fixed Offset
Adds the fixed value to the input signal

## RT Four Freq. Goertzel
Calculates the four specified frequency values

## RT Four Input Add
Adds the four input signals

## RT Frame Count
Counts the number of frames

## RT Frame Delay
Delays input by specified number of samples

## RT Frame Maximum
Calculates the maximum value of each frame

## RT Frame Minimum
Calculates the minimum value of each frame

## RT Frame Standard Deviation
Calculates the frame standard deviation of the input signal

## RT Frame Threshold Counter

## RT Frame Variance
Calculates the variance of each frame

## RT Frame Zero Crossings
Performs the frame zero crossings

### RT Frequency Zoom
Calculates the frequency magnitude in the specified range

### RT Gain
Multiply a gain value to the input signal

### RT Gate Inverter
Performs the gate inverter on the input signal

### RT Gauss Window
Performs the Gauss window

### RT Gaussian Noise Generator
Generates a Gaussian noise waveform

### RT Gen. Gauss. Noise Generator
Generates a Gaussian noise waveform with the specified mean and variance

### RT Global Maximum
Calculates the global maximum value of input frames

### RT Global Mean
Calculates the global mean of the input frames

### RT Global Minimum
Calculates the global minimum value of the input frames

### RT Global Threshold Counter
Examines the input data and outputs a zero if the data is not greater than the specified threshold

### RT Global Variance
Calculates the global variance of the input frames

### RT Global Zero Crossings
Performs the global zero crossings

### RT Goertzel Algorithm
Calculates the specified frequency value

### RT Greater or Equal
Checks the greater or equal condition and controls the block connected to this block

### RT Greater Than
Checks the greater condition and controls the block connected to this block

### RT Hamming Window
Performs the Hamming windowing on the input signal

### RT IFFT Optimized for C3x
Calculates the inverse FFT of the input signal

### RT IIR Filter
Performs real-time IIR filter

### RT Impulse Noise Generator
Generate an impulse noise waveform

### RT In Range
Controls the output values based on the specified parameters

### RT Integrate
Integrates the input signal

### RT Interleave 2 Channels
Interleaves two channel inputs to one channel input

### RT Interleave 3 Channels
Interleaves three channel inputs to one channel output

### RT Interleave 4 Channels
Interleaves four channel inputs to one channel output

### RT Interleave 5 Channels
Interleaves five channel inputs to one channel output

### RT Interpolate
Interpolates the input signal

### RT Inverse FFT
Calculates the inverse FFT of the input signal

### RT Invert
Invert the input signal

### RT Kaiser Window
Performs the Kaiser window

### RT Less Or Equal
Checks the less or equal condition and controls the block connected to this block

### RT Less Than
Checks the less than condition and controls the block connected to this block

### RT Linear Predictive Coding
Performs the linear predictive coding

### RT Log
Calculates the nature log of the input signal

### RT Log 10
Calculates the log10 of the input signal

### RT Logical  AND
Performs the logical AND on the two input signals

### RT Logical NAND
Performs the logical NAND on two input signals

### RT Logical NOR
Performs the logical NOR on two input signals

### RT Logical NOT
Performs the logical NOT on the input signal

### RT Logical OR
Performs the logical OR on two input signals

### RT Logical XOR
Performs the logical XOR on two input signals

### RT Loop Filter
Real-Time Loop Filter

### RT Magnitude
Calculates the magnitude of the complex input signal

### RT Magnitude Optimized for C3x
Real-Time Magnitude

### RT Mean
Calculates the mean of the input signal

### RT Memory Dump
Dumps DSP Memory to PC.

### RT Modulus
Calculates the modulus of the input signal

### RT Multiply
Multiplies the corresponding elements of the two input signals

### RT NCO
Performs the real-time numerically controlled oscillator

### RT Noise Generator
Generates a noise waveform with normal distribution

### RT Not Equal
Checks the not equal condition and controls the block connected to this block

### RT Notch Filter
Performs the real-time notch filter

### RT Out Range
Controls the output value based on the specified parameters

### RT Pad
Pads the input signal

### RT PC to DSP Download
Downloads code from PC side to DSP board

### RT Peak Extractor
Finds localized peak within input data, either by position or magnitude

### RT Peak Hold
Performs the peak hold during the specified frames

### RT Phase
Calculates the phase of the input complex values

### RT Power Spectrum
Calculates the power spectrum of the input signal

### RT Pulse Train Generator
Generates a pulse train waveform

### RT Quadrature Oscillator
Generates an in-phase and  90 degree shifted signals

### RT Raise to Power
Calculates the user specified exponent (power) value of the input signal

### RT Ramp Generator
Generates a ramp waveform

### RT Reciprocal
Performs the reciprocal of the input signal

### RT Rectify
Rectifies the input signal

### RT Replace Sample
Replaces sample with input value at specified index

## RT Reverse

Reverses the order of the samples in a frame

## RT Root Mean Square

Calculates the root mean square of the input signal

## RT Rotate

Rotates the input frame elements by a specified number

## RT Scale

Scales the input signal

## RT Search

Searches an input data frame for a specified data value (real or complex)

## RT Separate 2 Channels

Separates one channel input to two channel inputs

## RT Separate 3 Channels

Separates one channel input to three channel output

## RT Separate 4 Channels

Separates one channel input to four channel output

## RT Separate 5 Channels

Separates one channel input to five channel outputs

## RT Shift

Applies a user-specified shift to each data value of the input frame

## RT Sin(x)

Calculates the sine value of the input signal

## RT Sinc(x)

Calculates the sinc (sin(x)/x) value of the input signal

## RT Sine Generator

Generates a sine waveform

## RT Sinh(x)

Calculates the sinh value of the input signal

## RT Six Input Add

Adds the six input signals

## RT Sort

Sorts the input signal

## RT Spectral Inversion

Performs the input spectral inversion

## RT Split

Splits the input data frame into two output data frames

## RT Spool

Spools data out from an input buffer

## RT Square

Calculates the square of the input signal

## RT Square Root

Calculates the square root of the input signal

## RT Square Wave Generator

Generates a square wave

## RT Stop on Frame Count

Real-time frame counter with stop capability.

## RT Strobe

Finds the amplitude of the signal at the given position (zero-based) within a frame

## RT Subset

Outputs a subset of the input data for subsequent processing

## RT Subtract

Performs two input subtraction

## RT Sum

Calculates the sum of the input signal

## RT Sweep Generator

Generates a sweep (chirp) waveform.

## RT Tan(x)

Calculates the tan value of the input value

## RT Tanh(x)

Calculates the tanh value of the input signal

## RT Three Input Add

Adds the three input signals

## RT Threshold

Examines the input data and outputs zero if the specified threshold condition is not satisfied

## RT Triangle Generator

Generates a triangle waveform

## RT Triggered Buffer

Triggers on an external signal, and buffers up a specified amount of data.

## RT u-255 Decode

Performs the u-255 decode function

## RT u-255 Encode

Performs the u-255 encode function

## RT Unit Impulse Generator

Generates an unit impulse waveform

## RT Variable Delay

Delays a signal by a variable amount

## RT Variable Notch Filter

Real-Time Variable Notch Filter

## RT Variable Sine Generator

Generates a sine wave with variable amplitude and frequency inputs

## RT Welch Window

Performs the Welch window

## Sample Rate

This block obtains the sample rate information from the input channel

## Sample-and-Hold

Performs sample-and-hold based on the input sampling clock

## Saramaki Window

Performs Saramaki windowing on the input signal

## Sawtooth Generator

Generates a sawtooth signal

## Scale

Multiplies or scales each element of channel 0 by the first value of channel 1

## Schmidt Trigger

Schmidt Trigger

## Scrolling Buffer

Buffers and scrolls input data

## Search

Searches input data frame for specified value

## Serial Command Receiver

Receives commands from serial port

## Shift Left

Applies a user-specified left shift to each data value of the input frame

## Shift Right

Applies a user-specified right shift to each data value of the input frame

## Sign

Provides the arithmetic sign of the data, either +1, or -1.

## Sinc(x)

Calculates the Sinc (sinx/x) value of the input signal

## Sine Generator

Generates a sine waveform

## Sine(x)

Calculates the sine value of the input signal

## Single Channel Display

Displays input from a single channel in several different display modes

## Sort

Sorts the input data of each frame

## Sound Card A/D

Sound card A/D

## Sound Card D/A

Sound Card D/A

## Spectral Inversion

Performs a spectral inversion (flipping spectrum) in the time domain

## Spectrogram

Displays input from a single channel using color denoting amplitude

## Split

Splits input frame into two output frames

## Square

Calculates the square of the input signal

## Square Root
Calculates the square root of the input signal

## Square Wave Generator
Generates a square wave

## Static Array (buffer)
Array used for holding results and feeding other blocks (ignores Data Ready condition)

## Strobe
Finds the amplitude of the signal at the given index (zero-based) within the frame

## Subset
The Subset block outputs a subset of the input data.

## Subtract
Subtracts the corresponding elements of channel 1 input from channel 0 input

## Sum
Outputs the sum of the input data frame values

## Sweep (Chirp) Generator
Generates a sweep (Chirp) waveform

## Table Lookup
Performs a table lookup function

## Tangent(x)
Calculates the tangent value of the input signal

## Tap Weight Buffer
Filter Tap Weight Buffer for Adaptive Filtering

## Terminate Block Diagram
Stops simulation at this block

## Text Display
Text display block

## Three Input Add
Adds the corresponding elements of three input signals

## Three Position Toggle Switch
Three position vertical toggle switch

## Threshold

Examines the input data and outputs zero if the data is not greater than the specified threshold

## Time Sweep Control Knob
Time Sweep Control Knob

## Timer
Generates a pulse or level change at a specified time interval

## Toggle Button
User control button used to create an alternating 0/1 output value

## Transfer Function
Performs the division of two frequency domain signals

## Triangle Wave Generator
Generates a triangle waveform

## Triggered Buffer
Buffers input data when the selected trigger criteria is met

## Two Position Toggle Switch
Two position vertical toggle switch

## u-255 Decode
Performs the u-255 decode function on the input signal

## u-255 Encode
Performs the u-255 encode function

## Variable Bandpass Filter
Performs the variable bandpass filter on the input signal

## Variable Notch Filter
Variable Notch Filter

## Variable Signal Generator
Generates a signal based on the given equation

## Vertical Bar Chart
Vertical bar chart

## Vertical Bar Graph
Graph data vertically

## Vertical Scaling Knob
General knob used for vertical trace control, etc.

## Vertical Slider

Vertical slider control

## Virtual Delay
Initializes a recursive loop

## Waveform Editor
Dynamically edit an incoming waveform

## Welch Window
Performs Welch windowing on the input signal

## Write Com Port
Sends the input data out of the specified port

## XY Display
Displays two channel signals using two orthogonal axes

## XY Display with Intensity
XY Display with an intensity value

## Zero Crossing
Calculates the number of zero crossings in an input signal