

# ARINC 429 and Symbolic Decode

## Key Features

- Add symbolic labels to ARINC 429 waveforms to customize decode readout
- Correlate analog waveforms with protocol decode on one screen
- View decoded data in binary, hexadecimal, decimal or symbolic format
- Decode information expands as the time base is adjusted or zoomed
- Convenient table display with quick "Zoom to byte" capability
- Quick search capability for specific message packets



View color-coded overlays on top of the analog waveform for quick identification of the ARINC 429 word. Click on the table to zoom the ARINC 429 word to view individual bits.

The ARINC 429 Decode and Symbolic solution is the ideal tool for system level protocol debug as well as problem solving for signal quality issues. The ARINC 429 Decode and Symbolic package adds a unique set of tools to your oscilloscope, simplifying how you design and debug ARINC 429 systems.

## The Most Intuitive Decode

The ARINC 429 Symbolic decode uses color-coded overlays on various sections of the protocol for an easy-to-understand visual display. Depending on the time base or the amount of zoom, the decode information is condensed or expanded to better assist in understanding events during short or long acquisitions.

## Symbolic Decodes Speaks Your Language

ARINC 429 DSymbolic option decodes ARINC 429 serial data into symbolic (Application layer) text directly on the oscilloscope display. The user defined file converts the decoded hex, binary, hexadecimal, or decimal values into a label defined by the ARINC 429 system.

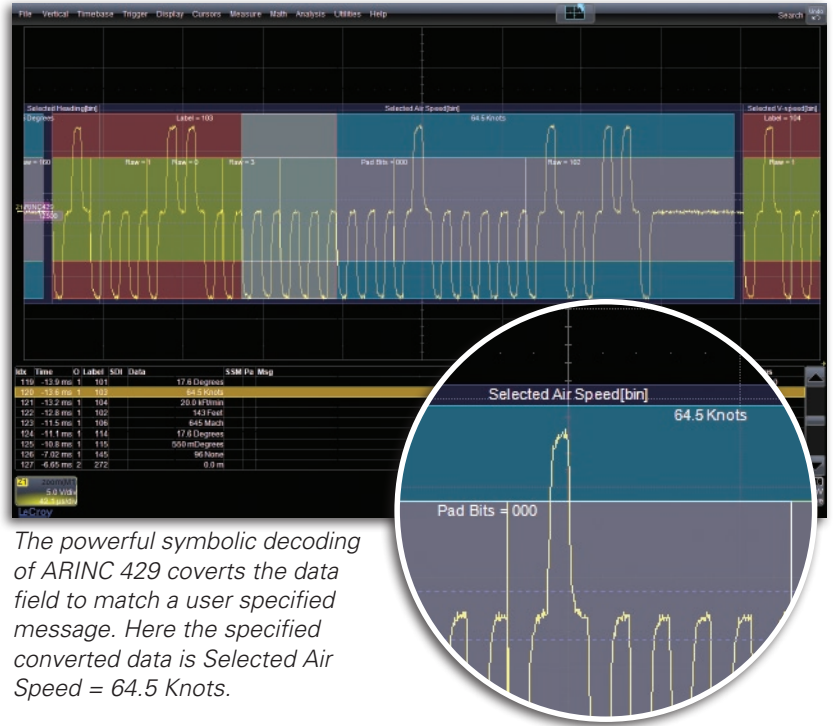
## The Single Tool Enhances Productivity

The ARINC 429 DSymbolic solution concentrates all your information in one place. Viewing the application layer of ARINC 429 signals on top of the physical layer provides a unique view that bus analyzers cannot. Measurements such as amplitude and rise time help to debug physical layer issues that may not be apparent in a protocol view.

# SYMBOLIC DECODING, POWERFUL SEARCH TOOLS

## Symbolic Decoding

ARINC DSymbolic provides a unique and powerful way to view decoded data. Using a user provided file, the label and equipment ID fields can be displayed to match the user provided file, showing an easier to interpret protocol display.



The powerful symbolic decoding of ARINC 429 converts the data field to match a user specified message. Here the specified converted data is Selected Air Speed = 64.5 Knots.

## Convenient Table Display Summarizes Results

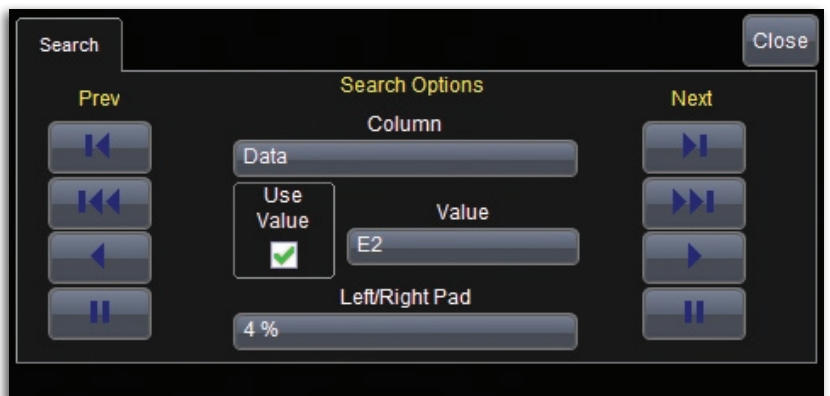
Turn your oscilloscope into a protocol analyzer with the table display of protocol information. Custom configure the table to display the information you want, and export table data into an Excel file. Touch the message in the table and automatically zoom for detail. In all cases, the table never obscures your waveform.

Idx	Time	O Label	SDI	Data	SSM Pa Msg	Symbols	Bits/Resol...	Pad	Status
79	-191 ms	1	106	645 Mach		Selected Mach(bin)	12 / 1.000000	0	
80	-191 ms	1	114	17.6 Degrees		Desired Track(bin)	12 / 0.050000	13	Pad != 0
81	-191 ms	1	115	550 m Degrees		VS/FPA Val(bin)	12 / 0.050000	6	Pad != 0
82	-187 ms	1	145	96 None		TACAN Control(bin)	12 / 1.000000	0	
83	-187 ms	2	272	0.0 m		Metric Altitude(bin)	4 / 0.250000	0	
84	-186 ms	2	273	30.0 kg/m2		Appr Loc(bin)	4 / 0.250000	0	
85	-186 ms	2	274	5.0 kg/m2		DD5(bin)	4 / 0.250000	0	
86	-180 ms	0	50	1.01e+3		Spare(bin)	10 / 1.000000	464	Pad != 0
87	-180 ms	0	51	63		Spare(bin)	10 / 1.000000	507	Pad != 0

Quickly view valuable information for each ARINC 429 word, such as Label, SDI, Data, SSM, Parity, and symbolic message.

## Search and Zoom

Search through a long record of decoded data by entering any of the 14 available search criteria by entering a value or simply finding the next occurrence.



Search can locate up to 14 selectable criteria, or narrow down the search by entering a value.

# SPECIFICATIONS

<b>ARINC 429 DSymbolic</b>	
<b>Definition</b>	
Protocol Setup	Select Data source
<b>Decode Capability</b>	
Format	Hexadecimal, Binary, Decimal
Decode Setup	Threshold definition required. Default is to Percent amplitude Choose bitrate Select viewing control to determine payload format
Decode Input	Any analog Channel, Memory or Math trace
# of Decode Waveforms	<b>Up to 4 buses may be decoded at one time.</b> In addition, zooms can be displayed (with decoded information)
Location	Overlaid over DATA waveform, on Grid. (Note: Use multi-grid if there is more than one decoder ON)
Visual Aid	Color Coding for Frame, Break, Synch, ID, ID Parity, Data, CRC. Decode information is intelligently annotated based on time base setting
<b>Search Capability</b>	
Pattern Search	Search by: Search by IDX, Time, OctalDigits, Label, SDI, Data, SSM, Parity, Msg, Symbols, Bits/resolution, Pad, Status, Attributes
<b>Other</b>	
Compatible With...	Symbolic option fully compatible with WaveMaster® 8 Zi, WaveMaster® 8000, WavePro® 7 Zi, WavePro® 7000, WaveRunner® 6000, WaveRunner® Xi/Xi-A, WaveSurfer® Xs/Xs-A

# ORDERING INFORMATION

## Product Description

## Product Code

### ARINC 429 Symbolic Decode Options

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ARINC 429 Symbolic Decode Option for WaveSurfer Xs/Xs-A	WSXs-ARINC429bus DSymbolic
ARINC 429 Symbolic Decode Option for WaveRunner Xi/Xi-A	WRXi-ARINC429bus DSymbolic
ARINC 429 Symbolic Decode Option for WavePro 7 Zi	WPZi-ARINC429bus DSymbolic
ARINC 429 Symbolic Decode Option for WaveMaster 8 Zi-A	WM8Zi-ARINC429bus DSymbolic

### Customer Service

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LeCroy oscilloscopes and probes are designed, built, and tested to ensure high reliability. In the unlikely event you experience difficulties, our digital oscilloscopes are fully warranted for three years and our probes are warranted for one year.

This warranty includes:

- No charge for return shipping
- Long-term 7-year support
- Upgrade to latest software at no charge



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