Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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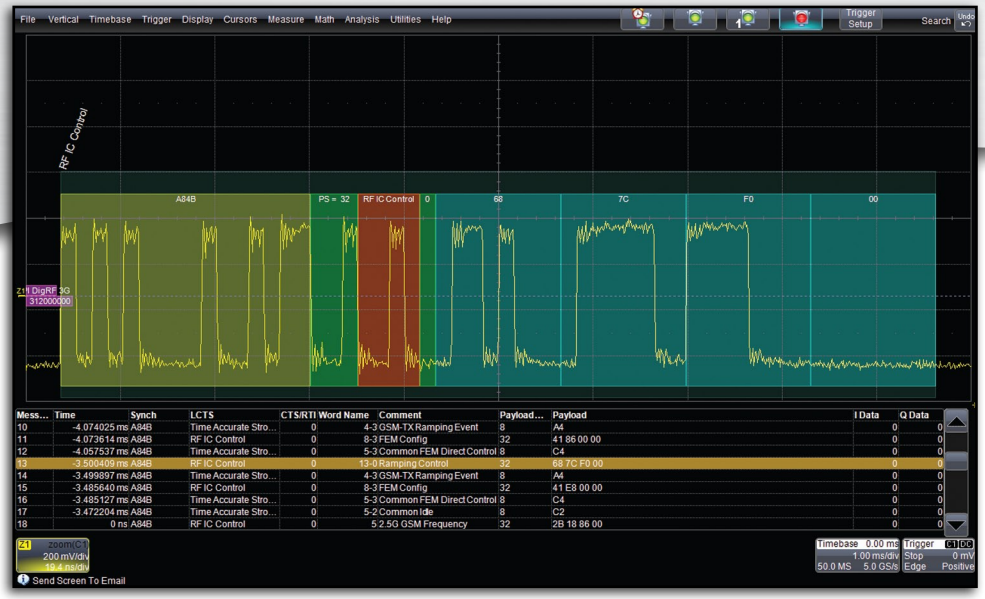
LeCroy

MIPI DigRF 3G and v4 Decode



View an entire DigRF 3G burst using intuitive decoding and table display. Click the table to view a zoom of a particular packet.

Key Features

- **DigRF v4 Decodes**
  - **Low-speed (26 Mb/s)**
  - **Medium-speed (1248 Mb/s)**
  - **High-speed (1456 Mb/s)**
- **DigRF v3 Decodes**
  - **Low-speed (6.5 Mb/s)**
  - **Medium-speed (26 Mb/s)**
  - **High-speed (312 Mb/s)**
- **Convert DigRF 3G and v4 I and Q digital data to corresponding analog waveforms**
- **Correlate analog waveforms with protocol decode on one screen**
- **View decoded data in hexadecimal 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**

The DigRF 3G and v4 decode are the ideal tools for powerful system level protocol debug as well as problem solving for signal quality issues. The DigRF decodes add a unique set of tools to your oscilloscope, simplifying how you design and debug MIPI digital RF systems.

The Most Intuitive Decode

MIPI DigRF decodes use 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.

The Single Tool Enhances Productivity

The MIPI DigRF 3G decode solutions concentrates all your information in one place. Viewing the application layer of DigRF 3G and v4 signals on top of the physical layer provides a unique view that bus analyzers cannot. Measurements such IVRms, QVRms, PIQ, IDC, and QDC can be applied to the DigRF v4 signals for greater understanding.

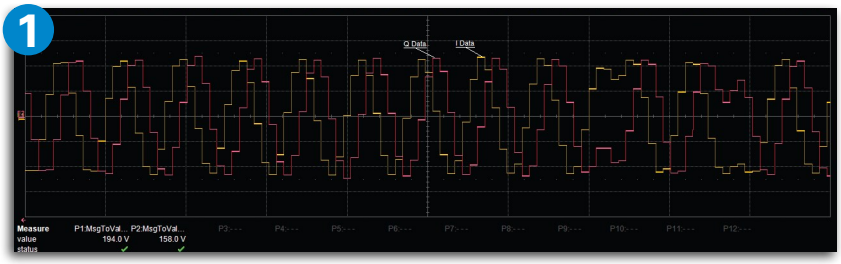
Complete Compliance and Debug

For a complete MIPI toolset, LeCroy offers a D-PHY compliance and decode package. QPHY-MIPI-DPHY provides automated compliance testing to the MIPI Alliance specification for D-PHY version 1.00.00. The D-PHY decode solution provides a simple and powerful debug solution for D-PHY, CSI-2 and DSI signals.

MULTI-DOMAIN ANALYSIS, POWERFUL SEARCH TOOLS

1. Convert Digital RF Signal to RF View

With the addition of the PROTOBus MAG Serial Debug Tookit, DigRF 3G and v4 I and Q digital data payload fields may be quickly converted into a corresponding I and Q analog waveform representation for easy analysis and debug. View the I, Q or both waveforms in the time domain, and perform time / delay measurements on I and Q signals.



Convert the digital I and Q DigRF 3G signals into corresponding analog waveforms for easy analysis.

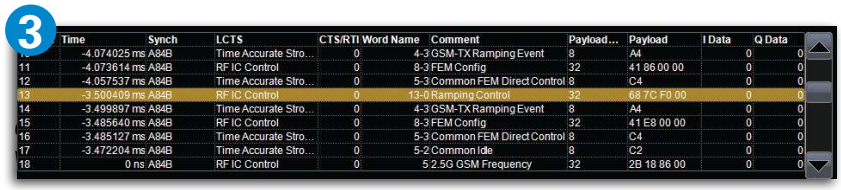
2. Constellation Diagram

View the constellation diagram of the DigRF v4 signal for a visual representation o finterference or distortion in the acquired signal.

DigRF v4 Constellation diagram shows information such as gaussian noise, Phase noise, and attenuation.

3. 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.



Display your values in an easy to understand table. Touch a row to zoom or export to Excel with one button push.

4. Search and Zoom

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

DigRF 3G	
Search on:	
Message	Comment
Time	Payload
Sync	Payload Size
LCTS	IData
CTS/RTI	Q Data
TxRx	Frame
Word Name	Attributes

DigRF v4	
Search on:	
Time	Payload
Sync	IData
SoF	Q Data
LCTS	Frame
CRI	Attributes
TxRx	Header Type
Word Name	RTI
Comment	CRC
Size	EoF

Search can locate up to 14 selectable criteria for DigRF 3G and 18 criteria for DigRF v4, or narrow down the search by entering a value.

SPECIFICATIONS

	DigRF 3G Decode	DigRF v4 Decode
	Definition	
Protocol Setup	Select Data source	Select Data source
	Decode Capability	
Format	Hexadecimal	Hexadecimal
Decode Setup	Threshold definition required. Default is to Percent amplitude Choose Speed-mode: Low (6.5 Mb/s), Medium (26 Mb/s) or High (312 Mb/s) Probing setup: Differential or Single-ended	Probing and threshold definition required. Probing setup: One diferential or two single ended. Voltage Level: 0V default Hysteresis: 53mV default Select Speed-mode: Low (26 Mb/s), Medium (1248 Mb/s), High(1456 Mb/s) Select IQ Period: 2G (541.66 KHz), 3G (7.68 MHz), LTE (1.4 MHz), LTE (3 MHz), LTE (5 MHz), LTE (10 MHz), LTE (15 MHz), LTE (20 MHz) Select IQ format: Standard or Custom Select RF Path: Main or Diversity
Decode Input	Any analog Channel, Memory or Math trace Select Start Pattern	Any analog Channel, Memory or Math trace.
# of Decode Waveforms	**Up to 4 buses may be decoded at one time.** In addition, zooms can be displayed (with decoded information)	**Up to 4 buses may be decoded at one time.** In addition, zooms can be displayed (with decoded information)
Location	Overlayed over DATA waveform, on Grid. (Note: Use multi-grid if there is more than one decoder ON)	Overlayed 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	Color coding for start of frame (Sof), cyclic running index (CRI), DCL, Tx Interface control logic (TICLC), Data, CRC, End of frame (EoF). Decode information is intelligently annotated based on timebase setting
	Search Capability	
Pattern Search	Message, Time, Sync, LCTS, CTS/RTI, TxRx, Word Name, Comment, Payload Size, Payload, I Data, Q Data, Frame, Attributes	MIPI DigRF v4, Time, Syncg, Sof, LCTS, CRI, TxRx, Word Name, Comment, Size, Payload, I Data, Q Data, Frame, Attributes, Header Type, RTI CRC, EoF
	Other	
Compatible With…	Compatible with WaveMaster® 8 Zi/Zi-A, WavePro® 7 Zi/Zi-A, WaveRunner® 6 Zi , WaveRunner® Xi/Xi-A, WaveSurfer® Xs/Xs-A oscilloscopes and analyzers based on these platforms. Bandwidth recommended to be equal to or greater than the DigRF 3G Mb/s data rate, with a minimum oscilloscope sample rate requirement of 4x the data rate	Compatible with WaveMaster® 8 Zi/Zi-A, WavePro® 7 Zi/Zi-A, WaveRunner® 6 Zi , WaveRunner® Xi/Xi-A, WaveSurfer® Xs/Xs-A oscilloscopes and analyzers based on these platforms. Bandwidth recommended to be equal to or greater than the v4 Mb/s data rate, with a minimum oscilloscope sample rate requirement of 4x the data rate

ORDERING INFORMATION

Product Description	Product Code
DigRF3G Decode Options	
DigRF 3G Decode Option for WaveSurfer Xs/Xs-A	WSXs-DigRF3Gbus D
DigRF 3G Decode Option for WaveRunner Xi/Xi-A	WRXi-DigRF3Gbus D
DigRF 3G Decode Option for WaveRunner 6 Zi	WR6Zi-DigRF3Gbus D
DigRF 3G Decode Option for WavePro 7 Zi/Zi-A	WPZi-DigRF3Gbus D
DigRF 3G Decode Option for WaveMaster 8 Zi/Zi-A	WM8Zi-DigRF3Gbus D
DigRF v4 Decode Options	
DigRF v4 Decode Option for WaveSurfer Xs/Xs-A	WSXs-DigRFv4bus D
DigRF v4 Decode Option for WaveRunner Xi/Xi-A	WRXi-DigRFv4bus D
DigRF v4 Decode Option for WaveRunner 6 Zi	WR6Zi-DigRFv4bus D
DigRF v4 Decode Option for WavePro 7 Zi-A	WPZi-DigRFv4bus D
DigRF v4 Decode Option for WaveMaster 8 Zi-A	WM8Zi-DigRFv4bus D
Additional Products	
QPHY Enabled MIPI D-PHY Software Option	QPHY-MIPI-DPHY
D-PHY Decode Option for WaveSurfer Xs/Xs-A	WSXs-DPHYbus D
D-PHY Decode Option for WaveRunner Xi/Xi-A	WRXi-DPHYbus D
D-PHY Decode Option for WaveRunner 6 Zi	WR6Zi-DPHYbus D
D-PHY Decode Option for WavePro 7 Zi/Zi-A	WPZi-DPHYbus D
D-PHY Decode Option for WaveMaster 8 Zi/Zi-A	WM8Zi-DPHYbus D
PROTObus MAG Serial Debug Toolkit for WaveRunner Xi/Xi-A	WRXi-PROTObus MAG
PROTObus MAG Serial Debug Toolkit for WaveRunner 6 Zi	WR6Zi-PROTObus MAG
PROTObus MAG Serial Debug Toolkit for WavePro 7 Zi/Zi--A	WPZi-PROTObus MAG
PROTObus MAG Serial Debug Toolkit for WaveMaster 8 Zi/Zi-A	WM8Zi-PROTObus MAG

Product Description	Product Code
Recommended Accessories	
Two x 2.5 GHz, 0.7 pF Active Probe (÷10), Small Form Factor	HFP2500
WaveLink ProLink Platform/Cable Assembly (4 – 6 GHz) (WavePro (4 GHz bandwidth or greater) or WaveMaster only)	WL-PLink
WaveLink ProBus Platform/Cable Assembly (4 GHz)	WL-PBus
WaveLink 4 GHz 2.5 Vp-p Differential Amplifier Small Tip Module	D410*
WaveLink 4 GHz 5 Vp-p Differential Amplifier Small Tip Module	D420*
WaveLink 6 GHz 2.5 Vp-p Differential Amplifier Small Tip Module	D610*
WaveLink 6 GHz, 5 Vp-p Differential Amplifier Small Tip Module	D620*

*For a complete probe, order a WL-PLink or WL-PBus Platform/Cable Assembly with the Probe Tip Module.

Customer Service

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

LeCroy
1-800-5-LeCroy
www.lecroy.com

Local sales offices are located throughout the world.
Visit our website to find the most convenient location.

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DigRF-3G-DigRFv4-22Feb11
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