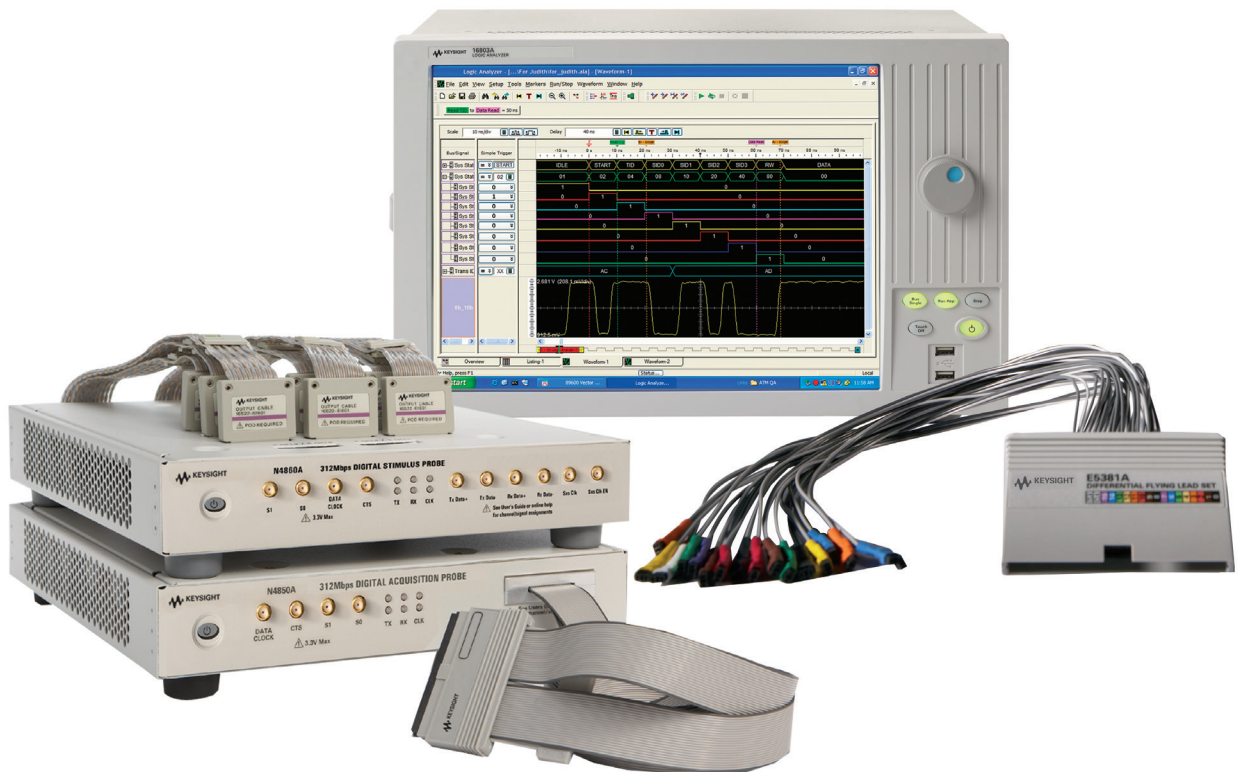


Keysight Technologies

Solutions for the DigRF v3 Digital Serial Interface Used In Mobile Wireless Devices



Rapidly deploy your DigRF v3-based designs using Keysight logic analyzer and RF tools for stimulus and analysis in the digital and RF domains.

The DigRF v3 Measurement Challenge

Technology shifts that enable new capabilities also give rise to a new set of measurement challenges. The DigRF v3 standard, created by a group of mobile wireless component and product suppliers, is a perfect example. The standard was developed to:

- Enable interoperability between baseband and RF ICs from different vendors
- Reduce cost through reduced pin count
- Extend battery life

Achieving these capabilities required changing the traditional analog interface between the BB-IC and RF-IC to a digital serial bus. Measuring and stimulating the BB-IC and RF-IC interface traditionally required you to use a spectrum analyzer and signal generator. However these tools are incapable of making the necessary measurements on the new digital serial bus. Creating a custom test solution requires resources, time and long-term support that you just can't afford.



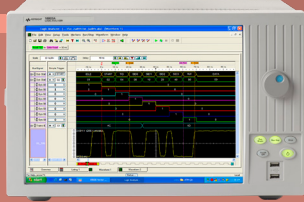
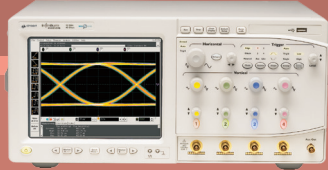



Meeting the DigRF v3 Measurement Challenge



To address this measurement challenge, Keysight Technologies, Inc. developed the N4850A DigRF v3 acquisition probe and N4860A DigRF v3 stimulus probe. The probes operate in conjunction with 16800 and 16900 Series logic analyzers to provide the digital serial acquisition and stimulus capabilities required for DigRF v3-based IC evaluation and integration.

The integration of DigRF v3 logic analysis tools with the Keysight RF portfolio provides the cross-domain solutions that will help you rapidly deploy your DigRF v3-based designs.

Whether you're designing an individual component or doing system integration of a DigRF v3 design, Keysight has a solution for your specific test and measurement needs.

	DigRF v3 digital serial bus acquisition and stimulus	Signal integrity	RF signal generation and analysis
System integration of the digital and RF domains	16800 or 16900 Series logic analyzers with DigRF v3 N4850A acquisition and N4860A stimulus probes	Infiniium 80000B Series oscilloscopes	N9020A MXA signal analyzer
RF-IC validation independent of the BB-IC			
BB-IC turn on independent of the RF-IC			Vector signal generator 

Available Signal Generation and Analysis Software

Logic analysis with stimulus and acquisition probes

Included:

- DigRF v3 packet decoder and viewer
- B4602A signal extractor

Order separately to:

- Analyze digital IQ: 89601A VSA software
- Create digital IQ data: ADS, Signal Studio, custom programming package, or logic analyzer trace converted to stimulus pattern
- Customize the DigRF v3 packet decoder: B4641A Protocol Development Kit

Oscilloscope

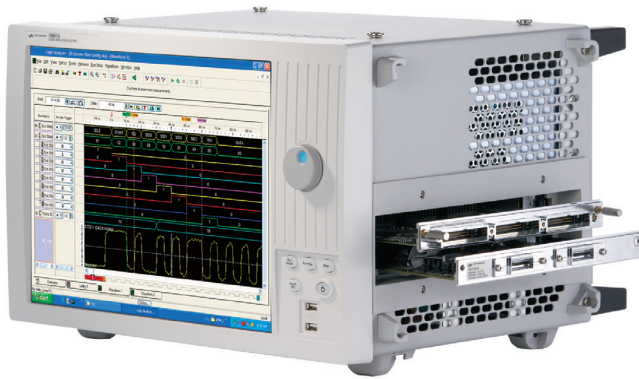
Order separately for serial data analysis and jitter analysis:

- N5400A EZJIT Plus Jitter analysis software
- E2688A Serial Data Analysis
- N5414A InfiniiScan Identification Software

RF signal generation and analysis

Available:

- Advanced Design System (ADS) for BER testing
- 89600 VSA software for RF signal analysis analyzes signals directly from logic analyzers
- Vector signal generators for RF signal generation
- Signal Studio software for format-specific signal creation



Keysight 16800 and 16900 Series logic analyzers

Keysight logic analyzers offer the performance, application support, and usability your digital development team needs to quickly debug, validate, and optimize your DigRF v3 digital design. The 16800 Series portable logic analyzers and 16900 Series modular systems, used in conjunction with the Keysight DigRF v3 probes, provide the real-time acquisition and digital-pattern generation capability you need.

www.keysight.com/find/logic



N4850A DigRF v3 acquisition probe

The N4850A acquisition probe enables you to:

- Validate and troubleshoot devices incorporating DigRF v3 across a wide variety of 2.5G and 3GPP over-air standards
- Acquire data no matter which DigRF v3 voltage level (1.8V LVDS, 1.2V LVDS, SLVDS) or SysClk speed (19.2 MHz, 26.0 MHz, 38.4 MHz) you're using
- Track and verify speed-mode change algorithms real time in a single acquisition

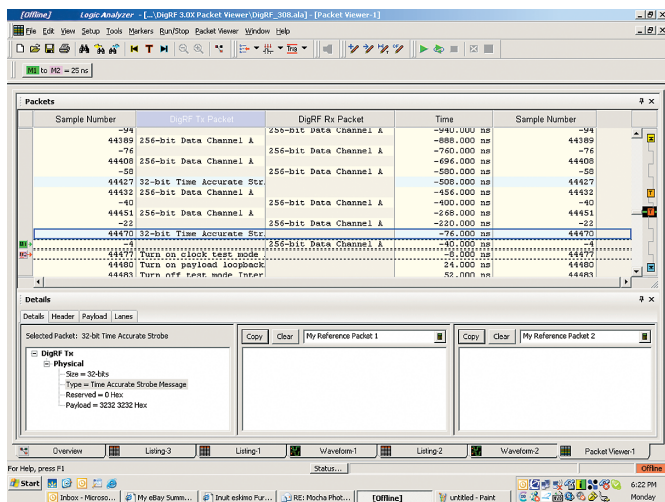
www.keysight.com/find/DigRF

N4860A DigRF v3 stimulus probe

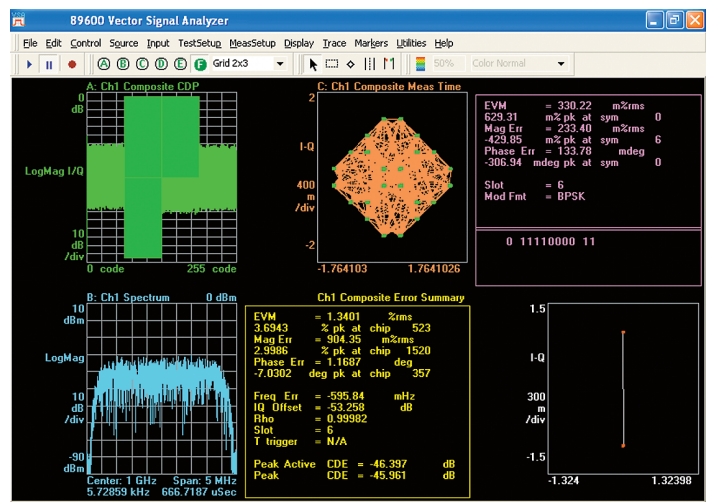
The N4860A stimulus probe provides the ability to:

- Convert raw IQ ASCII data and user-defined control information to DigRF v3 compliant data and control packets
- Loop the stimulus data for continuous operation
- Modify critical control settings while looping (e.g. adjust RF-IC amplifier gain) to see how the system responds
- Respond to "Clear to send" per the DigRF v3 specifications

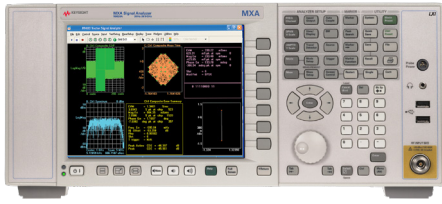
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The N4850A probe lets you quickly analyze and debug DigRF v3 control and raw IQ data at the packet level.



The N4850A probe lets you rapidly work through scenarios. Use the B9600 VSA software running directly on the logic analyzer to quickly identify RF signal problems and fine tune your DSP algorithm.

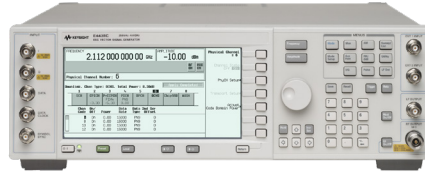


Keysight N9020A MXA signal analyzer

Ensure your mobile communication designs comply with the DigRF v3 standard. The MXA provides the highest performance and accuracy in a midrange signal or spectrum analyzer to help you solve design challenges faster with fewer iterations and increased confidence.

- 25 MHz analysis bandwidth
- +15 dBm TOI, -154 dBm/Hz DANL
- 0.3 dB absolute amplitude accuracy
- Spectrum analysis, WiMAX, W-CDMA, HSDPA/HSUPA and phase noise applications

www.keysight.com/find/sa



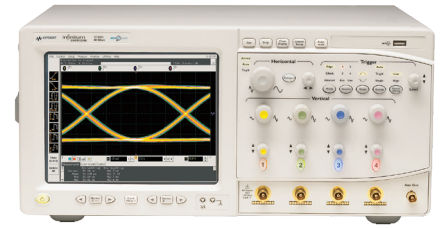
Keysight E4438C ESG vector signal generator and Signal Studio software

Simplify the signal generation process with an E4438C ESG vector signal generator that delivers an assortment of standards-based receiver and component test signals for 3G and emerging communications formats.

- 6 GHz frequency range
- 160 MHz RF modulation bandwidth
- 64 MSa baseband memory
- 6 Gbyte non-volatile waveform storage

www.keysight.com/find/E4438C

www.keysight.com/find/signalstudio



Keysight Infiniium 80000B Series oscilloscope and InfiniiMax II probing system

Improve system performance by identifying signal integrity problems early with Keysight Infiniium 80000B Series oscilloscope and InfiniiMax II probing system.

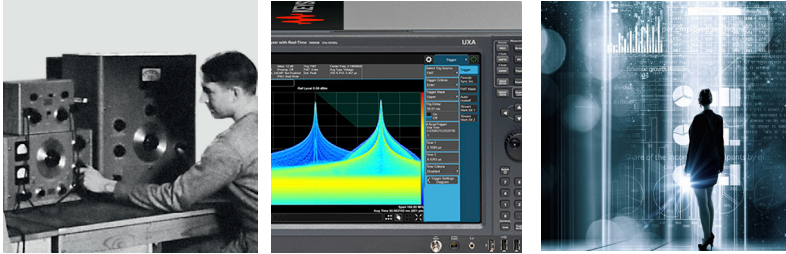
- 2 GHz to 13 GHz bandwidth with up to 40 GSa/s sample rate
- Industry's lowest noise floor for both oscilloscopes and probes
- Industry's lowest jitter measurement floor
- Industry's flattest frequency response

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