



Agilent M9252A DigRF Host Adapter

Protocol test for MIPI Alliance Gear1 and Gear2 DigRf v4 RFICs

Data Sheet

Industries and Applications

DigRF is used in mobile terminals for Long Term Evolution (LTE) and WiMax communications, including:

- RFIC development test
- RFIC validation
- RFIC device integration

Product Description

Validation of RFIC operation starts before the handset integration phase. Engineering teams need DigRF digital serial stimulus and analysis tools that operate in concert with the traditional RF tools.

The M9252A DigRF Host Adapter module belongs to the Agilent Technologies RDX family. The module provides the serial stimulus capabilities required for the MIPI™ Alliance DigRF v4-based RFIC evaluation and characterization. A single module combines stimulus and Rx side capture capabilities to generate configurable control and data traffic and observe the response from the Device Under Test (DUT). It allows engineers to work in the domain (digital or RF) of their choice to quickly characterize the DUT's digital and wireless behavior.

Features and Benefits

For RFIC test, simulates a BB-IC	Control and configure the RFIC to match the test setup
Gear 2 (HS2x) support	Test high throughput to the latest MIPI specifications
Multi-link	Support for 1Rx/1Tx at low power or 4Rx/2Tx at Gear 2 high speed
Automation API	Complete programmatic control for complete production testing requirements
Seamless integration with Agilent 89600 VSA software	Immediate access to the industry's broadest, most advanced standards-based demodulation and signal analysis



Conquer protocol testing challenges with integrated DigRF and RF analysis solutions from Agilent Technologies

Specifications and Characteristics

Hardware	
Size	1 slot 3U
DigRF v4	Version 1.0 and 1.1
DUT connection	Samtec 50-pin ERF8-025-05.0-L-DV
GPIO bus	A 6-pin-width GPIO bus can stimulate and sense proprietary interfaces
Trigger Input/Output	MMCX connections for external device synchronization
Link support	1 link 2 links (Option 002)
Link speeds	Low power (LP) High speed (HS1x) Gear 1 High speed (HS2x) Gear 2 (Option 001)
Lane configurations	Primary and secondary lanes 1Tx/1Rx 1Tx/2Rx 2Tx/4Rx (Option 003)



Software

The Agilent M9252A supports configurable traffic generation with customizable headers, payloads, and frame-sequence control. The host adapter allows the user to characterize and analyze RFIC performance with LTE-Advanced transmit and receive waveforms.

- Automatic support of ARQ in hardware
- Precise control of timing for each DigRF frame sent
- Ability to inject a group of DigRF frames under software (API) control while transmission is active
- Capability to control 'clustering' of multiple DLCs
- Capability to create valid GSM symbols over the TX sublink
- Supports multiple (2) independent DLC channels
- Ability to understand and convert IQ data to DigRF from a variety of input formats such as ASCII files, signal studio, SystemVue and ADS. Internal 128 MB data memory is used as transmit source
- Automatically extract the IQ data from the DigRF data stream in hardware. The data is written into the internal 256-MB DDR memory. The data can be evaluated using the 89600 VSA software
- Programmable IQ resolution per DLC (number of bits per sample)
- Selectable sample rate per DLC on TX and RX sublink
- IQ samples and resolution automatic selection based on Air-standard
- Programmable number of IQ samples in a DigRF frame per



M9252A DigRF host adapter module and M9255A DUT cable

Complete RF Testing

The M9252A works with Agilent vector signal generation and analysis software to perform cutting edge LTE-A carrier aggregation and RF quality analysis. The M9252A module can be combined with an RF signal generator and analyzer for RF interface stimulus and analysis. The same signal generation and analysis software can be used to build stimulus and analyze data on both the DigRF and antenna sides of the RFIC.

Ordering Information

Model	Description
M9252A	PXIe DigRF host adapter
M9252A-001	Enable secondary link
M9252A-002	Enable Gear 2 (HS2x)
M9252A-003	Link extension (2Tx/4Rx lanes) (cannot be used with Option 002)
Interface cable	
M9255A	DUT connection cable Samtec 50pin ERF8-025-05.0-L-DV

Software

Supported operating systems	Microsoft Windows® XP (32-bit) Microsoft Windows® 7 (32/64-bit)
Standard compliant drivers	IVI-COM, IVI-C, LabVIEW

Warranty

Cables

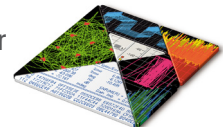
R-51B-001-3C	1 year return-to-Agilent warranty extended to 3 years
R-51B-001-5C	1 year return-to-Agilent warranty extended to 3 years

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