M9252A DigRF Host Adapter

January 21, 2013

LTE-A – DigRF Testing needs and Solutions

M9252A DigRF Host Adapter

Host Adapter for a 1.5Gbps link

- 2 x Rx and 1 x Tx lines for sending and receiving digital IQ data. –

Option 1: **HS2x (Gear 2)** Rx and Tx lines to support up to 3.0Gbps.

Option 2: **2nd link** second link with 2 x Rx and 1 x Tx

Option 3: **Lane extension** support for 4 x Rx and 2 x Tx lines

- Fast programming speed:
  - Fast IQ transfer in both direction: receive and transmit.
  - Fast VSA connection.
  - Designed for test automation.
- Seamless integration with Agilent RF validation test tools, like sources, analyzers and signal generation / validation software.

DigRF v4 Host Adapter – M9252A – Features

The Agilent DigRF Host Adapter is a test solution that provides stimulus, response and analysis features required for validating DigRF v4 RF transceivers.

Stimulus features

- Sending DigRF data and/or control frames with automatic generation of CRC, CRI and RTI fields.
- Supports nesting of high priority frames.
- Capabilty to emulate Baseband device.

Response features

- Automatic ARQ support (frame checking, NACK sending, retransmission on received NACK).

Analysis features

- Statistic counters for sent and received DigRF and erroneous frames.
- Capturing of control frames recieved.
- Capturing IQ data out of data frames received in a 256 MB buffer.

Connection to the DUT

The host adapter comes with a 50 pin cable that includes

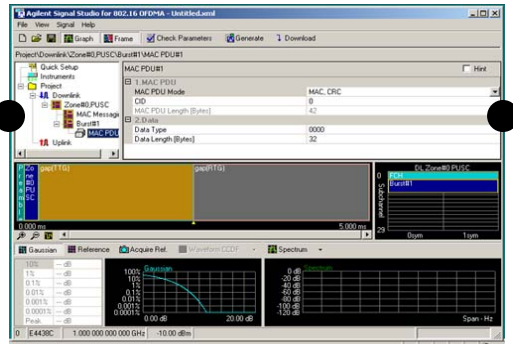
- all high-speed signals
- All DigRF control signals
- 6 GPIO signals

The probing guide includes documentation about the pin-out of the connector to allow customers to lay this on their validation board.

The recommended DUT connector for digRF RF-IC Tester is a 50 position samtec ERF8-025-05.0-L-DV-L-TR

RFIC Transmitter/Receiver Test

Signal Studio



M9381A VSG

Tx

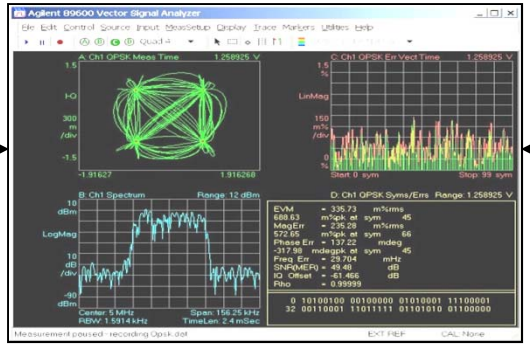
Rx

RF-IC

M9252A DigRF
Host adapter

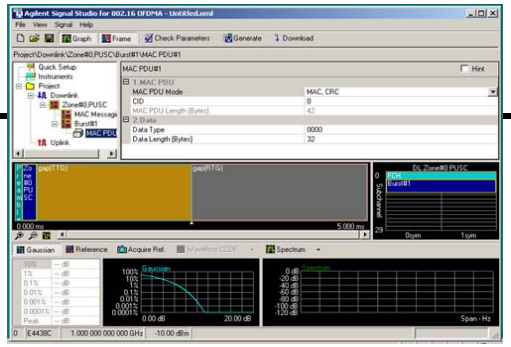
M9392A VSA

Vector Signal Analysis



RFIC Transmitter/Receiver Test

Signal Studio



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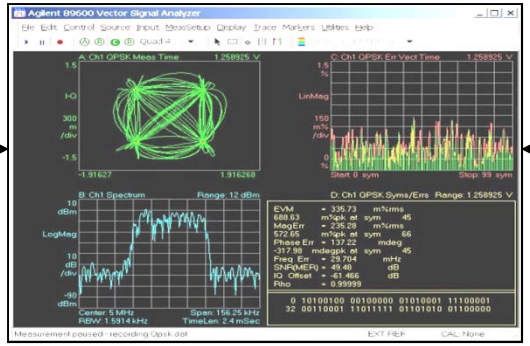


Phoenix Product Structure

M9252A DigRF Host Adapter for a 1.5Gbps link

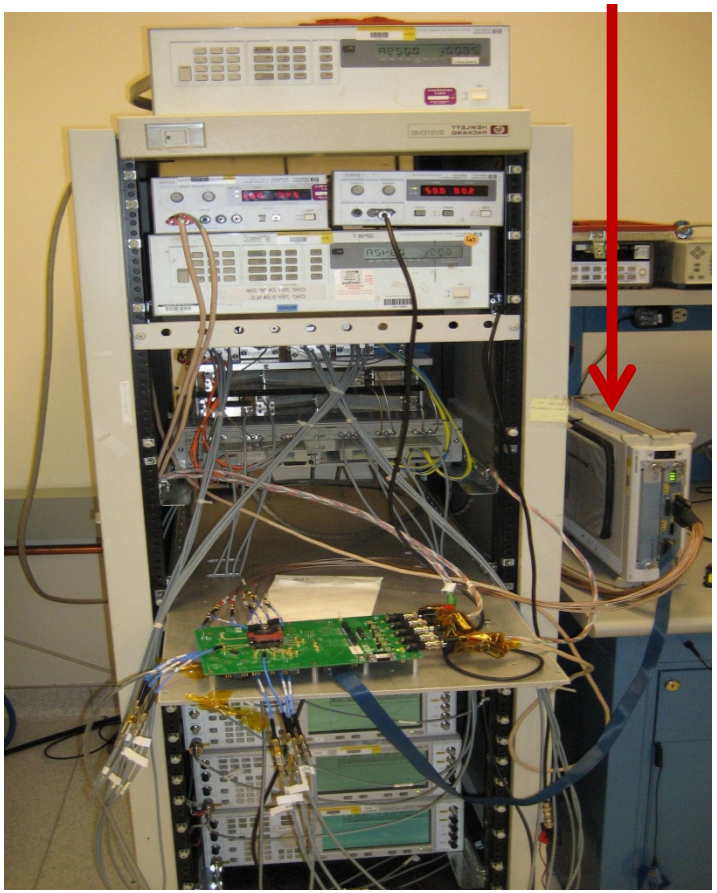
Supporting 2 x Rx and 1 x Tx lines for sending and receiving digital IQ data.

- Option 1: **Gear 2**
  Extends the Rx and Tx lines to support up to 3.0Gbps.
- Option 2: **2nd link (cannot be activated together with option 3)**
  Adds a second link with 2 x Rx and 1 x Tx lines for sending and receiving digital IQ data.
- Option 3: **More lines on link0 (cannot be activated together with option 2)**
  Adds addiditional 2 x Rx and 1 x Tx lines for sending and receiving digital IQ data.
- Option 4: **Software support (1Year (bundled for the 1st year)**

M9255A DigRF DUT cable

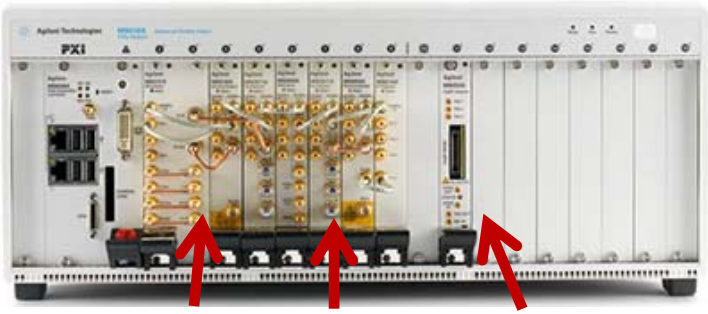
DigRF testing
Agilent Solution comparison

RDX (N5343A)



Automated test bench
for 2G, 3G and 4G

PXI with embedded controller



Advantages

Test execution time reduced (estimate)
> 50%

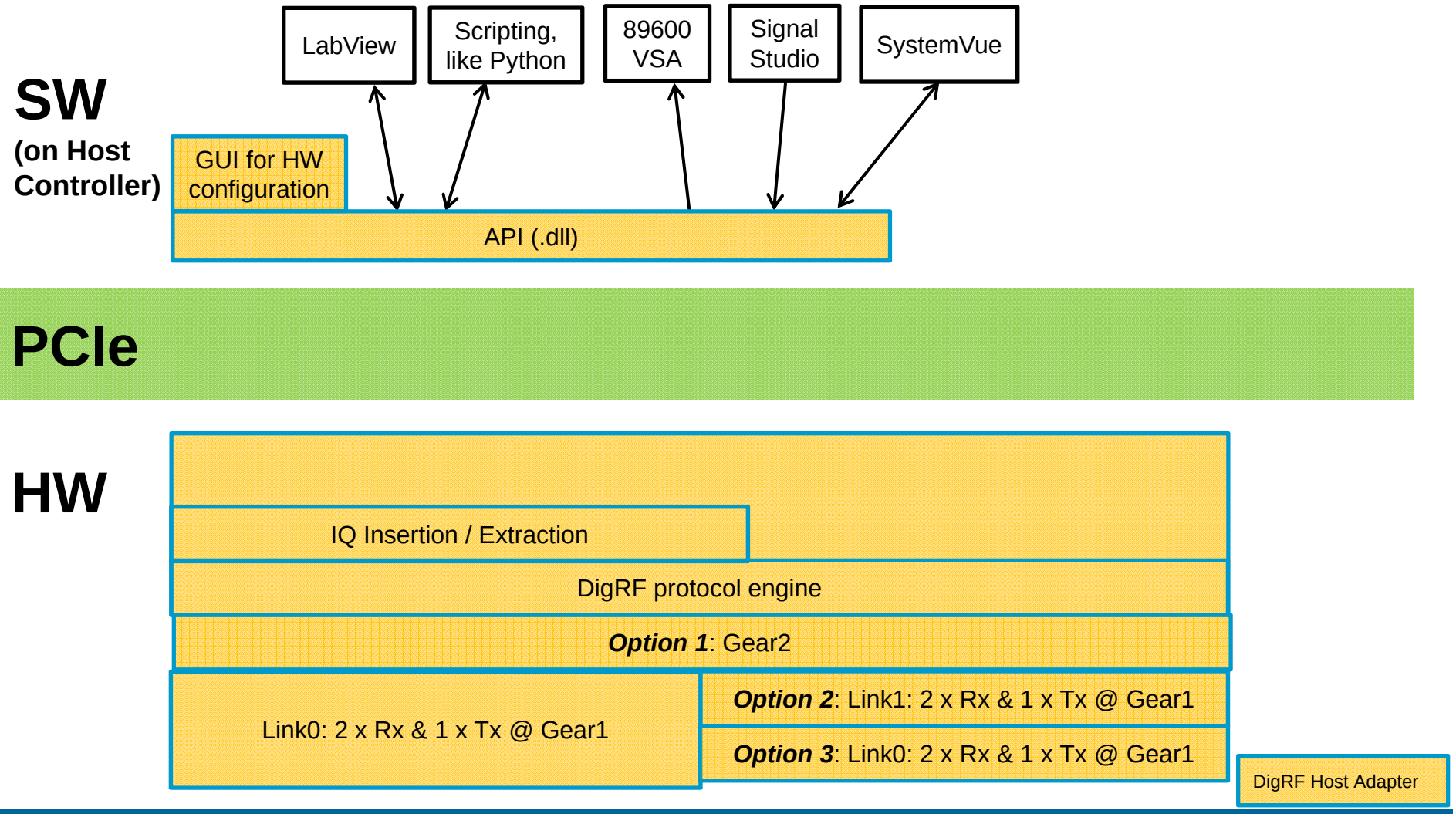
- Cost reduced
  > 25%
- DigRF v4 Host Adapter:
  Supports Gear2, 2 links, Lane extension

Roadmap:

- RFIC/BBIC Exerciser
- DigRF analyzer

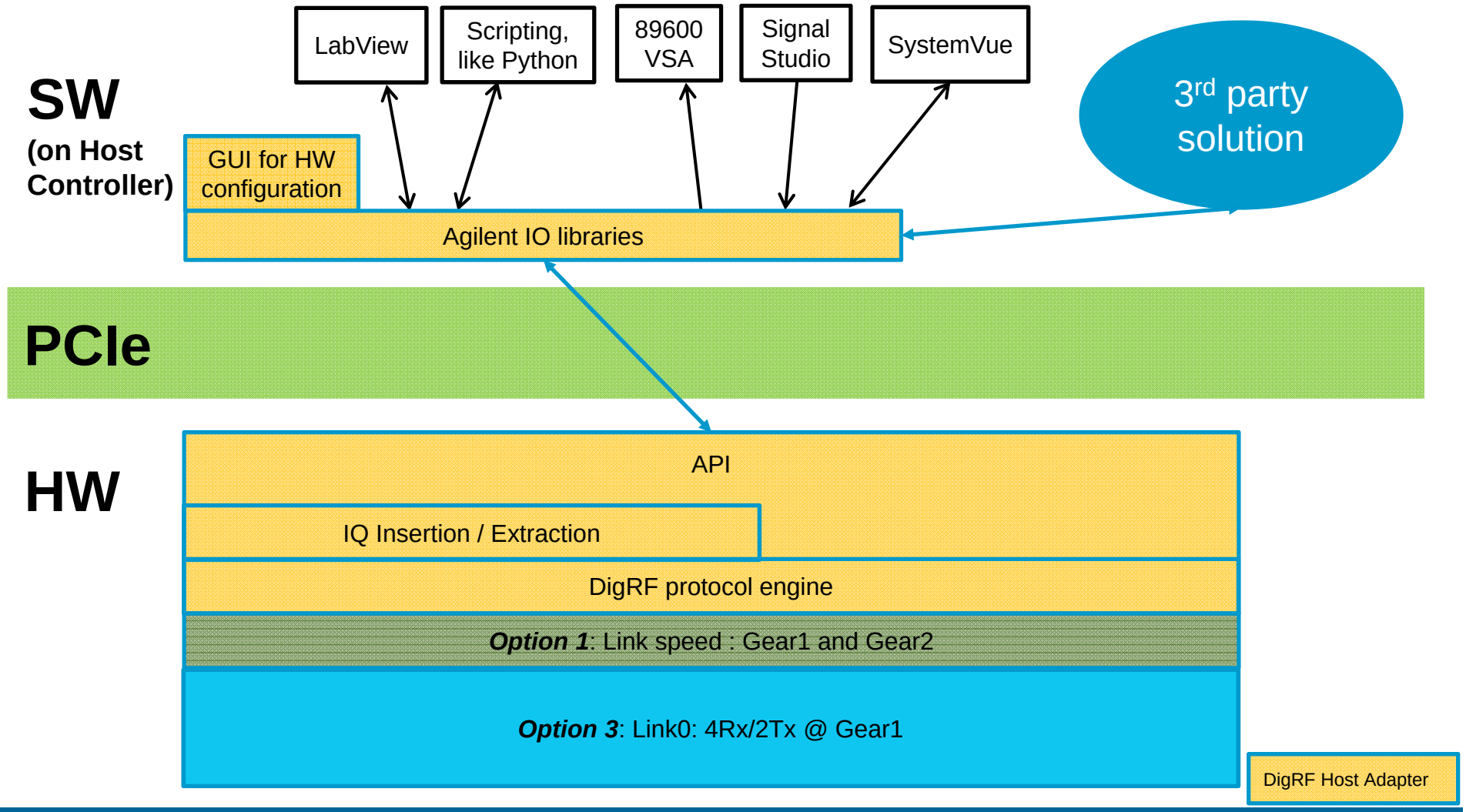
Phoenix: PXIe DigRF host adapter

Extendable product offering, starting with the DigRF Host Adapter



Phoenix: PXIe DigRF host adapter

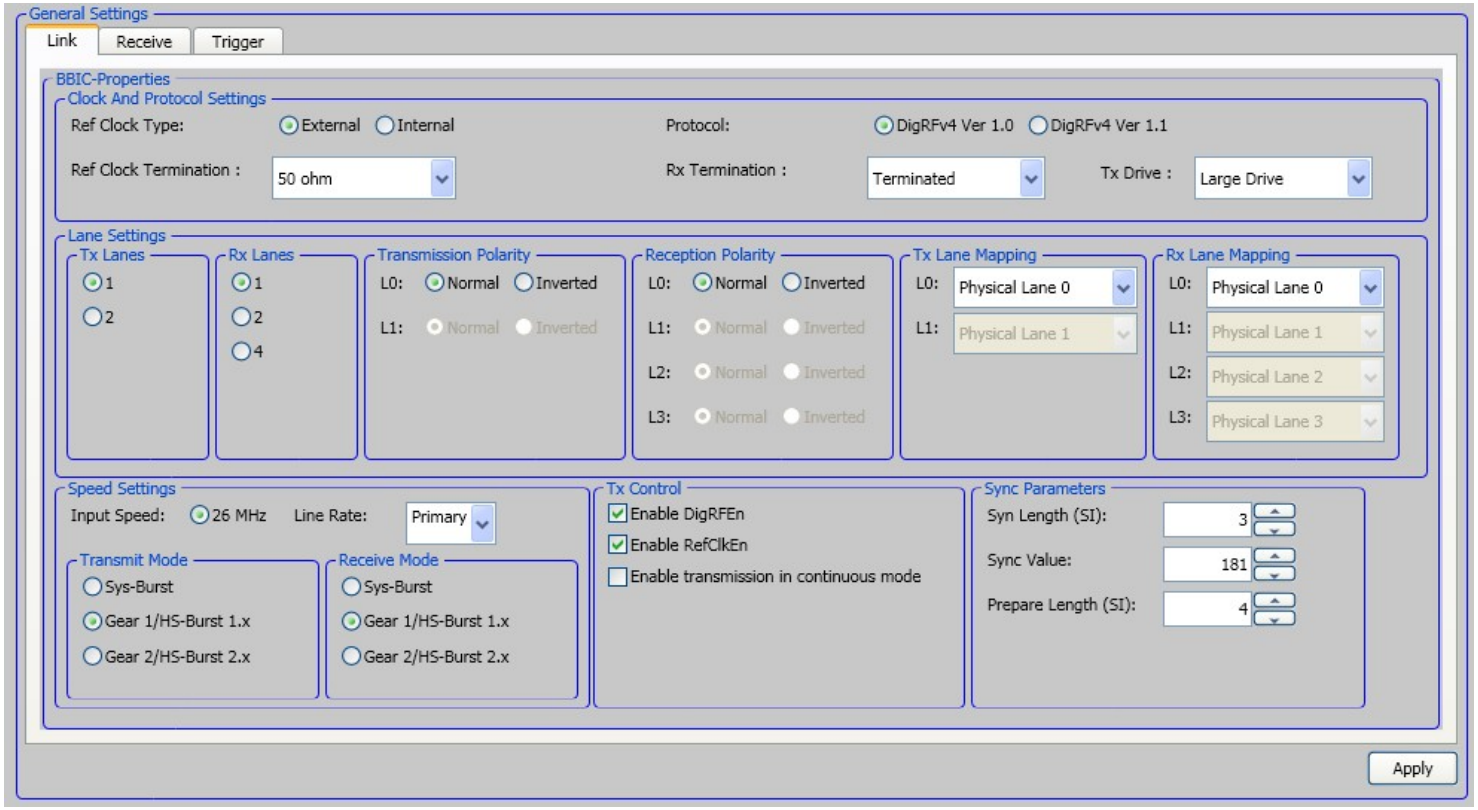
Extendable product offering, starting with the DigRF Host Adapter



Programming the Host Adapter

The main controlling interface for the Host Adapter is the GUI.

It can also be controlled via DCOM or TCL.



Pricing

USD List	Item	Description
$ 20,540.00	M9252A	DigRF host adapter for 1.5 Gbps link - includes 12 month SUS
$ 5,000.00	-001	G2 speed enhancement license
$ 5,000.00	-002	Upgrade to 2 links (2Rx/1Tx each)
$ 5,000.00	-003	Link upgrade to 4Rx/2Tx license
$ 1,000.00		Twelve month M9252A core software update subscription renewal
$ 1,500.00		Twenty-four month core software update subscription service renewal
$ 1,027.00	M9255A	DigRF device cable

Note:
- Option 001 can be combined with either 002 or 003.
- Option 002 and 003 can be activated only at one at a time.

Solution Components

Chassis		
M9018A 18 slot PXIe Chassis	or equivalent PXIe chassis with support for PCIe x4, Gen1	
DigRF host adapter		
M9252A Phoenix Card:	DigRF Host Adapter	
M9255A to DUT connection Cable	50 position Samtec ERF8 connectors, 1,0m	
Embedded PC		
M9036A PXIe embedded controller		Embedded controller
Or PC connection		
M9021A PCIe Cable Interface	PCIe x8, Gen2	
M9048A PCIe Desktop Adapter	PCIe x8, Gen2	Desktop Connection
Connecting Cable:	Y1202A PCIe Cable: X8, 2,0m	
M9045B PCIe ExpressCard Adapter	PCIe x1, Gen1	Laptop Connection
Connecting Cable:	Y1200B PCIe Cable: X1, 2,0m	

M9252A Chassis configurations

M9252A w/ embedded PC

Item	Price
M9252A	$ 20,540
M9018A (PXIe Chassis)	$ 8,568
M9036A (embedded cpu)	$ 7,000
typ config	$ 36,108

Display and keyboard required

M9252A w/ PCIe connect

Item	Price
M9252A	$ 20,540
M9018A (PXIe Chassis)	$ 8,568
M9021A (PCIe interface)	$ 671
typ config	$ 29,779

PC with PCIe connection required

MIPI = Mobile Industry Processor Interface