

Features

- Maximum Sample Rate
 - Max. 32 GHz
 - 2/4/8/16/32 GHz options
- Number of Channels: total 34 CH
- Single-ended channels (31 CH)
 - Per-pin termination level
 - Per-pin threshold level
 - Per-pin timing delay
- Differential channels (3 CH)
 - 1 Differential clock input (CK)
 - 2 Differential strobe input(WCK/RDQS)
- Analysis mode
 - Timing mode
 - Eye mode
- Acquisition Memory
 - Max. 512 GB (standard 128 GB)
 - Full memory depth up to 32 GHz
 - Hardware data compression
- Hysteresis settings for all channels
- Host Interface: PCIe Gen3 x8
- Target application
 - DDR4/5 protocol analysis
 - LPDDR4/5 protocol analysis

JKI JLA420A

DDR5/LPDDR5 Protocol Analyzer



Overview

The JKI JLA420A protocol analyzer system is the industry's highest performance DDR5/LPDDR5 protocol analyzer with deep acquisition memory depth up to 512GB and highest sampling rate up to 32GHz. Our high-speed and powerful memory trace solutions enable you to debug and validate DDR based memory systems up to 6.4 Gb/s

Large Memory for Data Capturing

Large memory depth up to 512GB allows you to debug very complex problems by long capturing time.

Ultra-fast Sampling Speed

Ultra-fast sampling speed up to 32 GHz allows you to capture data rate up to 6.4 Gb/s for all channels without any extra options.

Probe Solution

To minimize signal degradation in the probe system, the analog module is separated from the digital module and placed as close as possible to the device.

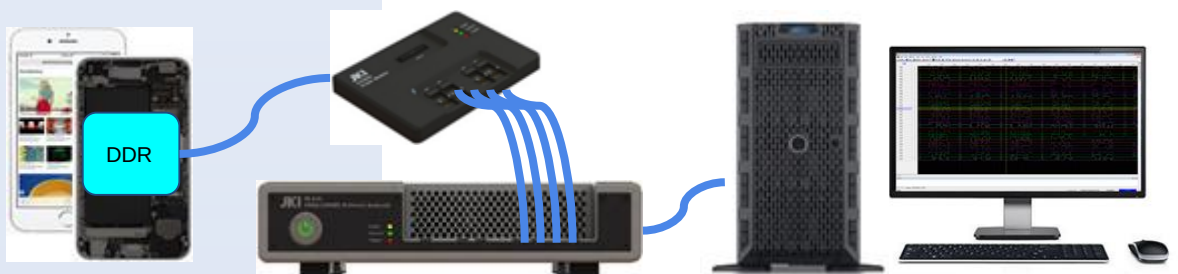
Interposer Solution

We provide variety of interposer and connecting solutions: LPDDR4/5 interposers, DDR4/5 DIMM interposers

System Under Test

Protocol Analyzer

Storage Server



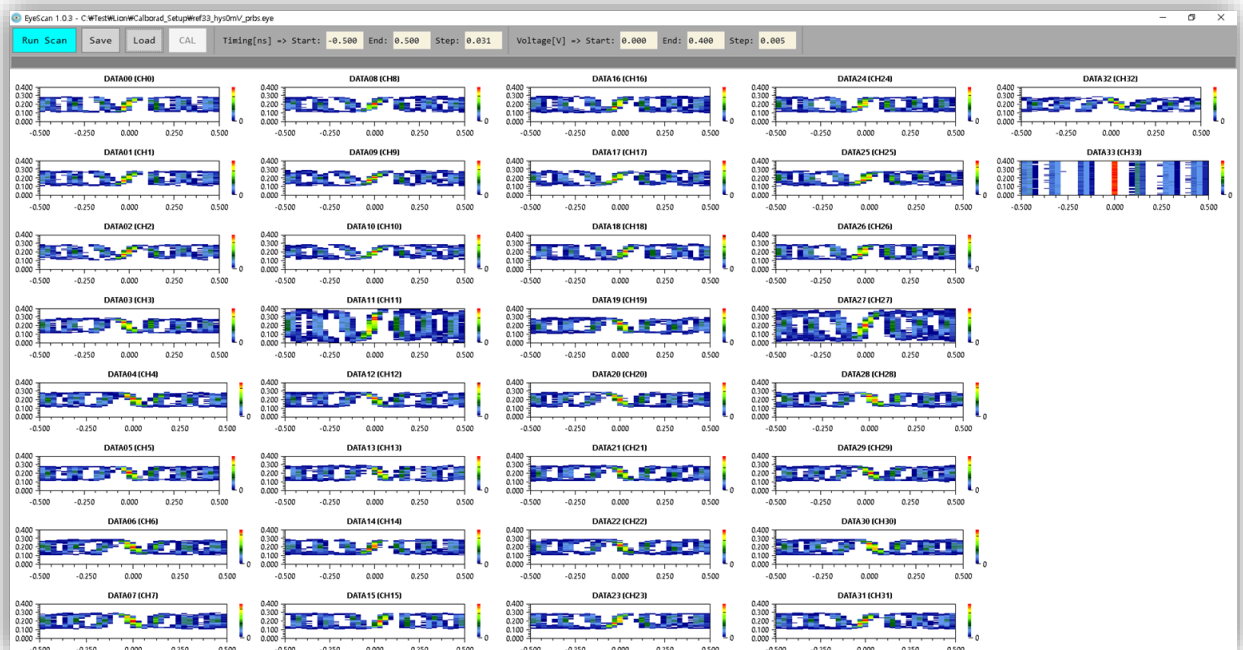
Software Features

- ❖ Capturing, Navigating, and Analyzing DDR memory protocol through fast TeraView 2.0 GUI.
- ❖ Easy setup and configuration window.
- ❖ Software based timing mode eye diagram.
- ❖ Programmable packet decoder and APIs for user post-analysis tool development.

New TeraView 2.0 Wave & List View



Timing Mode Eye Diagram



Channel Specification	
Number of Channels	34 (31 single-ended + 3 differential)
Input Voltage Range	-0.2V to 1.2V (analyzer input)
Minimum Input Voltage Swing	40 mV (analyzer input)
Termination (V _{tt}) Voltage Range	0V to 1.2V (analyzer input)
Termination (V _{tt}) Voltage Resolution	1 mV
Threshold (V _{ref}) Voltage Range	0V to 1.2V (analyzer input)
Threshold (V _{ref}) Voltage Resolution	1 mV
Hysteresis (V _{hys}) Voltage Range	0 ~ 50 mV
Timing Delay Range	-2ns to 2ns
Timing Delay Resolution	31.25 ps @32 GHz
Input Impedance	50 Ohm (analyzer input) 250 Ohm (5:1 probe) 500 Ohm (10:1 probe)

Acquisition Specification	
Sample Rate	2.0 / 4.0 / 8 / 16 / 32 GHz
Analysis Mode	Timing mode, Filter mode, Eye mode
Acquisition Memory	Max. 512 GB (standard 128 GB)
Host Interface	PCIe Gen3 x8
Data Compression	Hardware compression
Data De-compression	Software de-compression

Trigger Specification	
Trigger Pattern	E(Either edge), R(Rising edge), F(Falling edge), H(High), L(Low), X(Don't care) for all channel
Trigger Sequence	2 ~ 4 burst trigger
Trigger Action	Start capture
Trigger Rate	TBD
Pre-trigger Size	TBD

Environmental and physical	
Power Consumption	Max. 150W
Operation Temperature (nom)	0 to +40 dec C
Humidity (nom)	0 to 80% relative humidity
Dimensions (W x H x D)	347 mm x 290 mm x 74 mm
Weight	4.7kg

Recommended System Configuration for DDR5

Model	Qty	Description
JLA420A	1	JLA420A DDR5/LPDDR5 Protocol Analyzer (128GB- standard)
P105Z0	1	DDR5 DIMM interposer
SW-DD5-BD	1	Software – DDR5 bus decoder
PCIe-HIB38	1	PCIe host adapter (Gen3 x8)
PCIe-0802	1	PCIe cable 2m (Gen3 x8)

Recommended System Configuration for LPDDR5

Model	Qty	Description
JLA420A	1	JLA420A DDR5/LPDDR5 Protocol Analyzer (128GB- standard)
P1034B	1	Samtec probe cable
SW-LP5-BD	1	Software – LPDDR5 bus decoder
PCIe-HIB38	1	PCIe host adapter (Gen3 x8)
PCIe-0802	1	PCIe cable 2m (Gen3 x8)

Ordering Information

Model	Description
JLA420A	JLA420A DDR5/LPDDR5 Protocol Analyzer (128GB- standard)
- Option 256G	256 GB memory option
- Option 512G	512 GB memory option
P1034B	Samtec probe cable
P2134A-08S	Connector-less probe cable
P104Z0	DDR4 DIMM interposer
P105Z0	DDR5 DIMM interposer
PCIe-HIB38	PCIe host adapter (Gen3 x8)
PCIe-0802	PCIe cable 2m (Gen3 x8)
SW-LP5-BD	Software – LPDDR5 bus decoder
SW-DD5-BD	Software – DDR5 bus decoder
CAL-1032A	Calibration Kits
W200R-01	1-year technical service program for hardware and software
W200R-03	3-years warranty & calibration service program (return to JKI)