

## KEYSIGHT TECHNOLOGIES (AGILENT HP)

# 16911A

The Keysight 16911A is a 68-channel logic analyzer module designed for the 16900 Series logic analysis systems. It offers high-performance digital measurement capabilities, including a 4 GHz (250 ps) timing zoom with a dedicated 64K memory depth, alongside deep-memory conventional and transitional timing analysis. Configurable with various memory depth options and state speed upgrades, it provides flexible state and timing analysis for debugging high-speed digital systems.

## SPECIFICATIONS

### General

|            |                       |
|------------|-----------------------|
| Interfaces | 2 x 90-pin connectors |
|------------|-----------------------|

### Physical

|                       |                                 |
|-----------------------|---------------------------------|
| Power Supply          | Supplied by mainframe backplane |
| Operating Temperature | 0 °C to 50 °C °C                |
| Dimensions (W×H×D)    | 28 mm × 290 mm × 384 mm mm      |
| Weight                | 1.4 kg kg                       |

### Channel and Acquisition Configuration

|                                                        |                                                                                         |
|--------------------------------------------------------|-----------------------------------------------------------------------------------------|
| Total Number of Channels                               | 68 channels                                                                             |
| Maximum State Clock Speed                              | 250 MHz (Option 250) / 450 MHz (Option 500)                                             |
| Maximum State Data Rate                                | 250 Mb/s (Option 250) / 500 Mb/s (Option 500)                                           |
| Maximum Conventional Timing Sample Rate (Half Channel) | 1 GHz                                                                                   |
| Maximum Conventional Timing Sample Rate (Full Channel) | 500 MHz                                                                                 |
| Maximum Transitional Timing Sample Rate                | 250 MHz                                                                                 |
| Timing Zoom Resolution                                 | 250 ps (4 GHz)                                                                          |
| Timing Zoom Memory Depth                               | 64K                                                                                     |
| Acquisition Memory Depth (Base Configuration)          | 256K (Option 256)                                                                       |
| Acquisition Memory Depth Options (Upgradable)          | 1M (Option 001), 4M (Option 004), 16M (Option 016), 32M (Option 032)                    |
| Threshold Voltage Range                                | -3.0 V to +5.0 V (single-ended)                                                         |
| Threshold Setting Resolution                           | 10 mV                                                                                   |
| Automatic Calibration Support                          | Eyefinder automatically adjusts setup and hold for accurate high-speed bus measurements |

Timing Analysis (Asynchronous Sampling)

|                                |                  |
|--------------------------------|------------------|
| Full-Channel Timing Resolution | 2.0 ns (500 MHz) |
| Half-Channel Timing Resolution | 1.0 ns (1 GHz)   |
| Transitional Timing Resolution | 4.0 ns (250 MHz) |

Mainframe Compatibility and Software

|                       |                                                                             |
|-----------------------|-----------------------------------------------------------------------------|
| Compatible Mainframes | Keysight 16900 Series (including 16900A, 16901A, 16902A, 16902B, 16903A)    |
| Required Slot Width   | 1 slot                                                                      |
| Multi-Module Support  | Supports multi-module configurations inside a single 16900 Series mainframe |

Input and Probing Characteristics

|                |                              |
|----------------|------------------------------|
| Number of Pods | 4 pods (17 channels per pod) |
|----------------|------------------------------|

Performance

|                                |                                             |
|--------------------------------|---------------------------------------------|
| State Speed Options            | 250 MHz (Option 250) / 450 MHz (Option 500) |
| Setup/Hold Window              | 1.5 ns (minimum eye width)                  |
| Sample Period Range            | 1 ns to 10 s                                |
| Minimum Voltage Swing          | 300 mV p-p                                  |
| Maximum Combined Channels      | 340 (5 modules merged)                      |
| Maximum Trigger Sequencer Rate | 450 MHz                                     |

Triggering

|                       |                              |
|-----------------------|------------------------------|
| Trigger Levels        | 16                           |
| Pattern Detectors     | 16                           |
| Range Detectors       | 4                            |
| Edge/Glitch Detectors | 8                            |
| Timers                | 2 (32-bit, 10 ns resolution) |
| Counters              | 2 (16-bit)                   |

Power Requirements

|                           |      |
|---------------------------|------|
| Maximum Power Dissipation | 80 W |
|---------------------------|------|

Inputs & Outputs

|                      |                             |
|----------------------|-----------------------------|
| Input Connector Type | Two 90-pin cable connectors |
|----------------------|-----------------------------|

Software & Connectivity

|                        |                                              |
|------------------------|----------------------------------------------|
| Software Compatibility | Keysight Logic Analyzer Application Software |
|------------------------|----------------------------------------------|

TECHNOLOGY

Logic Analyzer Module

## APPLICATIONS

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### State and timing analysis for debugging high-speed digital systems

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Generated by SpecAtlasHub (specatlashub.com). Specifications are compiled from available sources and are subject to change — verify critical values against the manufacturer before purchase.