

## TEKTRONIX

# TLA611

The Tektronix TLA611 is a high-performance 34-channel portable logic analyzer from the TLA600 Series. Designed for debugging complex synchronous and asynchronous digital systems, it features Tektronix's proprietary MagniVu™ technology to provide up to 2 GHz (500 ps) high-resolution timing measurements simultaneously with up to 100 MHz state acquisition (upgradable to 200 MHz). Built on a Windows platform, the unit includes an integrated 10.4-inch SVGA color display and a rich selection of connectivity and legacy peripheral interfaces.

## SPECIFICATIONS

### General

|            |                                                                                                                                                |
|------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| Interfaces | 10/100 Base-T LAN (RJ-45), GPIB (IEEE-488.2), RS-232 (DB9), Centronics Parallel (DB25), PS/2 Keyboard, PS/2 Mouse, VGA External Display Output |
| Display    | 10.4-inch active-matrix color TFT LCD, 800 x 600 resolution                                                                                    |

### Physical

|                       |                                            |
|-----------------------|--------------------------------------------|
| Power Supply          | 90 to 250 V AC, 45 to 66 Hz, 300 W maximum |
| Operating Temperature | 5 °C to 50 °C °C                           |
| Dimensions (W×H×D)    | 404 mm x 222 mm x 513 mm mm                |
| Weight                | 12 kg kg                                   |

### State Acquisition

|                                  |                                  |
|----------------------------------|----------------------------------|
| Number of Channels               | 34 (32 data, 2 clock/qualifier)  |
| Standard State Clock Speed       | 100 MHz                          |
| Optional State Clock Speed       | 200 MHz (with Option 1S)         |
| State Memory Depth               | 1 Mb per channel                 |
| Minimum State Clock Pulse Width  | 2 ns                             |
| Setup and Hold Window Range      | 15 ns                            |
| Setup and Hold Window Resolution | 100 ps                           |
| Demux Channel Count              | 17 channels (demultiplexed mode) |

## Timing Acquisition

|                                         |                                                                   |
|-----------------------------------------|-------------------------------------------------------------------|
| MagniVu Timing Resolution               | 500 ps (2 GHz) on all channels                                    |
| MagniVu Memory Depth                    | 2 Kb per channel                                                  |
| Deep Timing Rate (Full Channel)         | 250 MHz (4 ns)                                                    |
| Deep Timing Rate (Half Channel)         | 500 MHz (2 ns)                                                    |
| Deep Timing Memory Depth (Full Channel) | 1 Mb per channel                                                  |
| Deep Timing Memory Depth (Half Channel) | 2 Mb per channel                                                  |
| Minimum Glitch Pulse Width              | 2 ns                                                              |
| Transition Storage Mode                 | Supported (extends capture time by storing only data transitions) |

## Trigger System

|                                     |            |
|-------------------------------------|------------|
| Trigger States                      | 16         |
| Word Recognizers                    | 16         |
| Range Recognizers                   | 4          |
| Edge/Transition Recognizers         | 4          |
| Counter/Timers                      | 2 (32-bit) |
| Glitch Triggering                   | Supported  |
| Setup and Hold Violation Triggering | Supported  |

## Processor and OS

|                              |                                                         |
|------------------------------|---------------------------------------------------------|
| Internal Operating System    | Windows 98 Second Edition / Windows 2000                |
| Internal Hard Drive Capacity | >= 6.4 GB                                               |
| System Memory (RAM)          | 128 MB (expandable)                                     |
| Removable Media Drives       | Internal CD-ROM drive and 3.5-inch 1.44 MB floppy drive |

## Inputs and Outputs

|                         |                                                                   |
|-------------------------|-------------------------------------------------------------------|
| External Trigger Input  | BNC                                                               |
| External Trigger Output | BNC                                                               |
| System Trigger Output   | BNC                                                               |
| iView Interface         | For cross-domain analysis with Tektronix TDS Series Oscilloscopes |

## Environmental

|                              |                                                       |
|------------------------------|-------------------------------------------------------|
| Storage Temperature Range    | -20 °C to 60 °C                                       |
| Operating Altitude Limit     | 3,000 m (10,000 ft)                                   |
| Non-Operating Altitude Limit | 12,190 m (40,000 ft)                                  |
| Operating Humidity Range     | 80% relative humidity at up to 30 °C (non-condensing) |
| Operating Shock              | 15 g (11 ms, half-sine)                               |
| Non-Operating Shock          | 50 g (11 ms, half-sine)                               |

**Input Characteristics**

|                                            |                                                                     |
|--------------------------------------------|---------------------------------------------------------------------|
| Input Threshold Range                      | -2.0 V to +4.5 V                                                    |
| Input Threshold Resolution                 | 10 mV                                                               |
| Input Threshold Accuracy                   | ±(100 mV + 3% of threshold setting)                                 |
| Maximum Probe Input Voltage (Non-Destruct) | ±15 V                                                               |
| Minimum Input Voltage Swing                | 300 mV (single-ended)                                               |
| Input Impedance                            | 20 kΩ in parallel with 1.4 pF (P6417 probe) or 2.0 pF (P6418 probe) |

**Probes & Connectivity**

|                   |                     |
|-------------------|---------------------|
| Compatible Probes | P6417, P6418, P6434 |
|-------------------|---------------------|

**Environmental & Reliability**

|                         |                             |
|-------------------------|-----------------------------|
| Operating Vibration     | 0.31 g RMS (5 Hz to 500 Hz) |
| Non-Operating Vibration | 2.46 g RMS (5 Hz to 500 Hz) |

**Compliance**

|                  |                                               |
|------------------|-----------------------------------------------|
| Safety Standards | UL3111-1, CAN/CSA C22.2 No. 1010.1, EN61010-1 |
|------------------|-----------------------------------------------|

**Display**

|                    |                             |
|--------------------|-----------------------------|
| Display Size       | 10.4 in. (264 mm)           |
| Display Resolution | 800 x 600 pixels (SVGA)     |
| Display Type       | Active-matrix color TFT LCD |

**Performance**

|                        |                |
|------------------------|----------------|
| Timebase Accuracy      | ±100 ppm       |
| Trigger Sequencer Rate | 250 MHz (4 ns) |

**Power**

|                      |               |
|----------------------|---------------|
| Power Consumption    | 300 W maximum |
| Line Voltage Range   | 90 to 250 VAC |
| Line Frequency Range | 45 to 66 Hz   |

**Storage**

|              |                 |
|--------------|-----------------|
| Floppy Drive | 3.5 in. 1.44 MB |
|--------------|-----------------|

**TECHNOLOGY**

Logic Analyzer

**APPLICATIONS**

Digital Hardware Debugging & Analysis

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