

## TEKTRONIX

# TLA704/711

The Tektronix TLA704 and TLA711 are logic analyzer mainframes from the TLA700 Series. The TLA704 is a portable mainframe with 4 module slots and a built-in color display, while the TLA711 is a benchtop mainframe with 13 module slots. Both systems accept fully interchangeable logic analyzer and digital storage oscilloscope (DSO) modules, and utilize MagniVu acquisition technology for high-speed analysis.

## SPECIFICATIONS

### General

|            |                                                                                    |
|------------|------------------------------------------------------------------------------------|
| Interfaces | LAN (10Base-T), RS-232-C, Centronics Parallel, PS/2 Keyboard, PS/2 Mouse, SVGA out |
| Display    | Color portable display (TLA704) / External monitor required (TLA711)               |

### Physical

|                            |                                                           |
|----------------------------|-----------------------------------------------------------|
| Power Supply               | 90 to 250 VAC, 45 to 66 Hz                                |
| Operating Temperature      | 5 to 50 °C                                                |
| Dimensions (W×H×D)         | TLA704: 422 x 343 x 381 mm; TLA711: 425 x 324 x 574 mm mm |
| Cooling Clearance (TLA704) | 2 in (51 mm) on sides and rear                            |
| Cooling Clearance (TLA711) | 3 in (76 mm) on rear, 2 in (51 mm) on sides               |

### Chassis Capacity & Modular Expansion

|                                 |                                                                                                           |
|---------------------------------|-----------------------------------------------------------------------------------------------------------|
| Mainframe Form Factor (TLA704)  | Portable                                                                                                  |
| Mainframe Form Factor (TLA711)  | Benchtop                                                                                                  |
| Number of Module Slots (TLA704) | 4                                                                                                         |
| Number of Module Slots (TLA711) | 13                                                                                                        |
| Module Compatibility            | Fully interchangeable TLA700 Series logic analyzer modules and digital storage oscilloscope (DSO) modules |

### System Architecture & Processing

|                           |                                                              |
|---------------------------|--------------------------------------------------------------|
| MagniVu Timing Resolution | 500 ps on all channels simultaneously through a single probe |
| State Analysis Speed      | 200 MHz on all channels simultaneously                       |

## Triggering & Clocking

|                                                |                                                                |
|------------------------------------------------|----------------------------------------------------------------|
| CLK10 Clock Frequency                          | 10 MHz $\pm$ 100 PPM                                           |
| System Trigger Input VIH                       | $\geq$ 2.0 V (TTL compatible)                                  |
| System Trigger Input VIL                       | $\leq$ 0.8 V (TTL compatible)                                  |
| System Trigger Input Mode                      | Falling edge sensitive, latched (active low)                   |
| System Trigger Input Minimum Pulse Width       | 12 ns                                                          |
| System Trigger Input Maximum Voltage           | 0 to +5 V <sub>peak</sub>                                      |
| External Signal Input VIH                      | $\geq$ 2.0 V (TTL compatible)                                  |
| External Signal Input VIL                      | $\leq$ 0.8 V (TTL compatible)                                  |
| External Signal Input Mode                     | Active (true) low, level sensitive                             |
| External Signal Input Bandwidth (Signal 1, 2)  | 50 MHz square wave minimum                                     |
| External Signal Input Bandwidth (Signal 3, 4)  | 10 MHz square wave minimum                                     |
| External Signal Input Maximum Voltage          | 0 to +5 V <sub>peak</sub>                                      |
| System Trigger Output VOH                      | $\geq$ 4 V into open circuit; $\geq$ 2 V into 50 Ohm to ground |
| System Trigger Output VOL                      | $\leq$ 0.7 V sinking 10 mA                                     |
| System Trigger Output Source Mode              | Active (true) low, falling edge latched                        |
| System Trigger Output Protection               | Short circuit protected to ground                              |
| External Signal Output VOH                     | $\geq$ 4 V into open circuit; $\geq$ 2 V into 50 Ohm to ground |
| External Signal Output VOL                     | $\leq$ 0.7 V sinking 10 mA                                     |
| External Signal Output Bandwidth (Signal 1, 2) | 50 MHz square wave minimum                                     |
| External Signal Output Bandwidth (Signal 3, 4) | 10 MHz square wave minimum                                     |
| External Signal Output Protection              | Short circuit protected to ground                              |

## Software & Measurement Capabilities

|                                         |                                                                                        |
|-----------------------------------------|----------------------------------------------------------------------------------------|
| Analysis and Protocol Software Features | High-level language (HLL) source-code support and performance analysis (V2.0 software) |
|-----------------------------------------|----------------------------------------------------------------------------------------|

## Physical Specifications

|               |                           |
|---------------|---------------------------|
| TLA704 Weight | 17.7 kg (without modules) |
| TLA711 Weight | 21.8 kg (without modules) |

## Power Specifications

|                                  |        |
|----------------------------------|--------|
| TLA704 Maximum Power Consumption | 400 W  |
| TLA711 Maximum Power Consumption | 1000 W |

## Environmental Specifications

|                    |                               |
|--------------------|-------------------------------|
| Operating Altitude | Up to 3000 m                  |
| Operating Humidity | 20% to 80% RH (noncondensing) |

## Controller & Storage

|                          |                                                            |
|--------------------------|------------------------------------------------------------|
| Controller Processor     | Intel Pentium (133 MHz or 200 MHz configuration dependent) |
| Operating System         | Windows 95 / Windows NT 4.0                                |
| Floppy Disk Drive        | 3.5 in, 1.44 MB                                            |
| CD-ROM Drive             | Internal CD-ROM (TLA711 only)                              |
| PC Card (PCMCIA) Slots   | Two Type II or one Type III (TLA704 only)                  |
| Internal Expansion Slots | 3 PCI, 1 ISA (TLA711 only)                                 |

## Environmental

|                         |                                                |
|-------------------------|------------------------------------------------|
| Operating Vibration     | 0.27 Grms, 5 Hz to 500 Hz                      |
| Non-operating Vibration | 2.28 Grms, 5 Hz to 500 Hz                      |
| Operating Shock         | 30 G (TLA704) / 10 G (TLA711), 11 ms half-sine |
| Acoustic Noise          | 51 dBA (TLA704) / 53 dBA (TLA711) typical      |

## Compliance & Safety

|                                     |                                                               |
|-------------------------------------|---------------------------------------------------------------|
| Safety Certifications               | UL3111-1, CSA C22.2 No. 1010.1, EN61010-1                     |
| Electromagnetic Compatibility (EMC) | EN 55011 Class A, FCC Part 15 Subpart B Class A, VCCI Class A |

## TECHNOLOGY

MagniVu acquisition technology

## APPLICATIONS

Embedded hardware development, hardware/software integration, and software performance analysis

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