TEKTRONIX

# 11801A

The Tektronix 11801A is a high-performance Digital Sampling Oscilloscope designed for high-frequency measurements, high-speed digital communications, and semiconductor testing. Offering a bandwidth of up to 50 GHz and dual-channel modularity supporting up to 8 channels, it achieves exceptional temporal resolution with a minimum main time base of 1 ps/div and rise times down to 8.8 ps depending on the sampling head configuration. The unit features an 8-bit vertical resolution, a color CRT touch-screen display, and multiple control interfaces for automated test environments.

## SPECIFICATIONS

### General

| | |
|---|---|
| Interfaces | GPIB (IEEE-488.1), RS-232-C |
| Display | 9-inch Color CRT with infrared touch screen |

### Physical

| | |
|---|---|
| Power Supply | 90 to 250 VAC, 48 to 440 Hz, 290 W maximum |
| Operating Temperature | 0 to +50 °C °C |
| Dimensions (W×H×D) | 445 mm × 242 mm × 582 mm mm |
| Weight | 22.3 kg kg |

### Vertical System

| | |
|---|---|
| Analog Bandwidth | Up to 50 GHz (sampling head dependent) |
| Number of Channels | Up to 8 channels (via 4 dual-channel front-panel sampling slots) |
| Calculated Rise Time | 8.8 ps (sampling head dependent) |
| Vertical Resolution | 8 bits |
| Input Impedance | 50 Ω (sampling head dependent) |
| Vertical Dynamic Range | 10 divisions |

### Horizontal System

| | |
|---|---|
| Main Time Base - Lowest | 1 ps/div |
| Main Time Base - Highest | 5 ms/div |
| Maximum Record Length | 5120 points |
| Record Length Selection | 512, 1024, 2048, 4096, 5120 points |
| Time Base Resolution | 10 fs (0.01 ps) |

### Trigger System

| | |
|---|---|
| Trigger Sources | External Direct, External Prescaler, Internal Clock |
| External Trigger Input Impedance | 50 Ω |
| Direct Trigger Frequency Range | DC to 3 GHz |
| Prescaler Trigger Frequency Range | 2 GHz to 10 GHz |

### Acquisition System

| | |
|---|---|
| Acquisition Modes | Sample, Average, Envelope |

### Power Specifications

| | |
|---|---|
| Power Consumption | 290 W |
| Line Voltage Range | 90 V to 250 V AC |
| Line Frequency Range | 48 Hz to 440 Hz |

### Environmental Specifications

| | |
|---|---|
| Storage Temperature Range | -40 °C to +75 °C |
| Operating Humidity Range | Up to 95% RH (non-condensing) |
| Operating Altitude | Up to 4,500 m (15,000 ft) |

### Physical Characteristics

| | |
|---|---|
| Height | 242 mm |
| Width | 445 mm |
| Depth | 582 mm |

### Configuration

| | |
|---|---|
| Number of Plug-in Slots | 4 front-panel slots for SD-Series sampling heads |

### Display

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|---|---|
| CRT Display Size | 9-inch diagonal |
| Touchscreen Technology | Infrared touch-sensitive panel |
| Display Technology | Color Liquid Crystal Shutter (LCS) CRT |

### Triggering

| | |
|---|---|
| Direct Trigger Jitter | 1.1 ps RMS + 5 ppm of delay (typical) |
| Direct Trigger Level Range | ±1.0 V |
| Direct Trigger Sensitivity | 40 mV p-p from DC to 3 GHz |
| Direct Trigger Input Connector | BNC |
| Prescaler Trigger Input Connector | SMA |
| Direct Trigger Coupling | DC |

### Auxiliary Ports

| | |
|---|---|
| Internal Calibrator Output Frequency | 100 kHz (nominal) |
| Internal Calibrator Output Amplitude | ±250 mV (nominal) |

### Performance

| | |
|---|---|
| Maximum Sampling Rate | 200 kSa/s |
| Cursor Resolution | 10 fs |

### Connectivity & Expansion

| | |
|---|---|
| Multi-channel Expansion | Supports up to 4 SM-11 Multi-channel Units (up to 136 channels total) |

## TECHNOLOGY

Digital Sampling

## APPLICATIONS

High-speed electrical signal analysis, TDR, semiconductor testing

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