XDS2102A High Resolution Digital Oscilloscope

your powerful on-site measurement station)

12 bits high resolution ADC

Super Performance
+ 12-bit high resolution ADC, restoring the waveform detail fully
+ 20M record length, and 55,000 wfms/s waveform refresh rate
+ low background noise, vertical sensitivity in 1 mV/div - 10 V/div
+ multi- trigger, and bus decoding function
+ SCPI, and LabVIEW supported
+ ultra-thin body-design, less space accommodation
+ multi-interface integration - USB host, USB device, USB port for PictBridge, LAN, AUX, and more
+ VGA port - better solution for video expansion, and teaching demonstration
+ 8 inch 800 x 600 high resolution LCD

+ Performance Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>XDS2102A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bandwidth</td>
<td>100MHz</td>
</tr>
<tr>
<td>Sample Rate</td>
<td>1GS/s (8 bits)</td>
</tr>
<tr>
<td></td>
<td>500MS/s (12 bits)</td>
</tr>
<tr>
<td>Vertical Resolution (A/D)</td>
<td>12 bits</td>
</tr>
<tr>
<td>Record length</td>
<td>20M</td>
</tr>
<tr>
<td>Waveform Refresh Rate</td>
<td>55,000 wfms/s</td>
</tr>
<tr>
<td>Horizontal Scale (s/div)</td>
<td>2ns/div - 1000s/div, step by 1<del>2</del>5</td>
</tr>
<tr>
<td>Rise Time (at input, typical)</td>
<td>≤3.5ns</td>
</tr>
<tr>
<td>Channel</td>
<td>2 + 1 (external)</td>
</tr>
<tr>
<td>Display</td>
<td>8” color LCD, 800 x 600 pixels</td>
</tr>
<tr>
<td>Input Impedance</td>
<td>1MΩ ± 2%, in parallel with 15pF ± 5pF</td>
</tr>
<tr>
<td>Channel Isolation</td>
<td>50Hz : 100 : 1, 10MHz : 40 : 1</td>
</tr>
<tr>
<td>Max Input Voltage</td>
<td>1MΩ ≤ 300Vrms</td>
</tr>
<tr>
<td>DC Accuracy</td>
<td>average≥16 : ±(3% reading + 0.05 div) for ΔV</td>
</tr>
<tr>
<td>Probe Attenuation Factor</td>
<td>0.001X - 1000X, step by 1 - 2 - 5</td>
</tr>
<tr>
<td>LF Respond (AC, -3dB)</td>
<td>≥10Hz (at input, AC coupling, -3dB)</td>
</tr>
</tbody>
</table>
### Sample Rate / Relay Time Accuracy

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accuracy</td>
<td>±1 ppm ( TYP, Ta=+25°C )</td>
</tr>
</tbody>
</table>

### Interpolation

<table>
<thead>
<tr>
<th>Method</th>
<th>Formula</th>
</tr>
</thead>
<tbody>
<tr>
<td>sin(x) / x</td>
<td></td>
</tr>
</tbody>
</table>

### Interval (ΔT) Accuracy (full bandwidth)

<table>
<thead>
<tr>
<th>Mode</th>
<th>Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single</td>
<td>±(1 interval time + 1ppm x reading + 0.6ns)</td>
</tr>
<tr>
<td>Average</td>
<td>±(1 interval time + 1ppm x reading + 0.4ns)</td>
</tr>
</tbody>
</table>

### Input Coupling

- DC, AC, and GND

### Vertical Sensitivity

- 1mV/div - 10V/div (at input)

### Trigger Type


### Bus Decoding

- I2C, SPI, RS232, and CAN

### Trigger Mode

- Auto, Normal, and Single

### Vertical Range

- ±2V ( 1mv/div - 50mv/div), ±20V ( 100mv/div - 1V/div), ±200V (2V/div - 10V/div)

### Line / Field Frequency (video)

<table>
<thead>
<tr>
<th>Mode</th>
<th>Format</th>
</tr>
</thead>
<tbody>
<tr>
<td>NTSC, PAL and SECAM standard</td>
<td></td>
</tr>
</tbody>
</table>

### Cursor Measurement

- Vpp, Vavg, Vrms, Freq, Period, Week RMS, Cursor RMS, Vmax, Vmin, Vtop, Vbase, Vamp, Overshoot, Phase, Preshoot, Rise Time, Fall Time, +Width, -Width, +Duty, -Duty, Duty Cycle, Delay A→B ↑, Delay A→B ↓, +Pulse Count, -Pulse Count, Rise Edge Count, Fall Edge Count

### Automatic Measurement

- +, -, x, ÷, FFT, FFTrms, Intg, Diff, Sqrt, User Defined Function, digital filter (low pass, high pass, band pass, band reject)

### Waveform Math

- +, -, x, ÷, FFT, FFT rms, Intg, Diff, Sqrt, User Defined Function, digital filter (low pass, high pass, band pass, band reject)

### Waveform Storage

- 50 waveforms

### Lissajou’s Figure

- Bandwidth: full bandwidth
- Phase Difference: ±3 degrees

### Communication Interface

- USB host, USB device, USB port for PictBridge, Trig Out (P/F), LAN, and VGA (optional)

### Frequency Counter

- available

### Power Supply

- 100V - 240V AC, 50/60Hz, CAT II

### Power Consumption

- < 15W

### Fuse

- 2A, T class, 250V

### Dimension (W x H x D)

- 340 x 177 x 90 mm

### Weight

- 2.40 kg

Specifications subject to change without prior notice.

**Application**

- electronic circuit debugging
- circuit testing
- design and manufacture
- education and training
- automobile maintenance and testing

**Accessories**

The accessories subject to final delivery.

- Power Cord
- CD Rom
- Quick Guide
- USB
- Probe
- Probe Adjust
- Soft Bag

---

Fujiian Lilliput Optoelectronics Technology Co., Ltd

E-mail: [info@owon.com.cn](mailto:info@owon.com.cn)  
Facebook: [fb.me/owontech](http://fb.me/owontech)