UTD4000 series oscilloscopes are compact size with more advanced features, including logic analyzer function to measure mixed signals, both analog input and digital input can be displayed simultaneously. The independent built-in DMM and hardware frequency counter provide users more convenience. Also the dual time base and digital filter. With up to 2GS/s real-time sampling rate, 2000wfms/s high waveform update rate and advanced triggering functions, UTD4000 series are ideal for your education, design, manufacturing and service applications.

**Features:**
- 64K full color LCD display, LCD size: 5.7” 320x240 pixels
- Bandwidth: 40MHz/60MHz/80MHz/100MHz/150MHz/200MHz/300MHz
- Max sampling rate: 2GS/s(real-time) / 50GS/s(equivalent)
- Auto measurement of waveform parameters
- Cursor measurement functions
- Logic analyzer function
- Built-in independent digital multimeter
- Built-in independent frequency counter
- Dual time base
- Waveform persistence time adjustable
- Digital filter function
- FFT and 4 math functions
- High waveform capture rate up to 2000wfms/s
- Internal storage/recall of 10 waveforms and 10 settings
- Advanced triggering including edge(rise, fall, rise and fall), pulse width, slope, video, LA
- USB host and USB device, supplied with Windows software
- Pass/Fail test
- On-screen help system
- Waveform recording/playback function, max. 100 frames
- Automatic self-calibration
- Compact size, saving your desk top space

**Specifications (UTD4000 series)**

<table>
<thead>
<tr>
<th></th>
<th>UTD4042C</th>
<th>UTD4062C</th>
<th>UTD4082C</th>
<th>UTD4102C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bandwidth</td>
<td>40MHz</td>
<td>60MHz</td>
<td>80MHz</td>
<td>100MHz</td>
</tr>
<tr>
<td>Rise Time</td>
<td>≤8.7ns</td>
<td>≤5.8ns</td>
<td>≤4.3ns</td>
<td>≤3.5ns</td>
</tr>
<tr>
<td>Sampling Rate</td>
<td>2GS/s (real-time)</td>
<td>2GS/s (real-time)</td>
<td>2GS/s (real-time)</td>
<td>2GS/s (real-time)</td>
</tr>
<tr>
<td>Vertical Sensitivity</td>
<td>5mV~10V/div</td>
<td>1mV~10V/div</td>
<td>1mV~10V/div</td>
<td>1mV~10V/div</td>
</tr>
<tr>
<td>Time Base Range</td>
<td>5ns~50s/div(1-2-5 sequence)</td>
<td>5ns~50s/div(1-2-5 sequence)</td>
<td>5ns~50s/div(1-2-5 sequence)</td>
<td>5ns~50s/div(1-2-5 sequence)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>UTD4152C</th>
<th>UTD4202C</th>
<th>UTD4302C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bandwidth</td>
<td>150MHz</td>
<td>200MHz</td>
<td>300MHz</td>
</tr>
<tr>
<td>Rise Time</td>
<td>≤2.3ns</td>
<td>≤1.3ns</td>
<td>≤1.4ns</td>
</tr>
<tr>
<td>Sampling Rate</td>
<td>2GS/s (real-time)</td>
<td>2GS/s (real-time)</td>
<td>2GS/s (real-time)</td>
</tr>
<tr>
<td>Vertical Sensitivity</td>
<td>2mV~5V/div</td>
<td>2mV~5V/div</td>
<td>2mV~5V/div</td>
</tr>
<tr>
<td>Time Base Range</td>
<td>2ns~50s/div(1-2-5 sequence)</td>
<td>2ns~50s/div(1-2-5 sequence)</td>
<td>1ns~50s/div(1-2-5 sequence)</td>
</tr>
</tbody>
</table>
General Technical Data (UTD4000 series)

**ACQUISITION MODE**
- Normal, peak detect, average (average numbers selectable: 2, 4, 8, 16, 32, 64, 128, 256), envelope

**SAMPLING MODE**
- Real-time equivalent (equivalent mode only for UTD4152C, UTD4202C, UTD4302C)

**INPUT**
- Input Coupling: DC, AC, GND
- Input Impedance: 1 Mohm +/− 1.5 % in parallel with 24 pF +/− 3 pF
- Probe Attenuation: 1x, 10x, 100x, 1k0x
- Max. Input Voltage: 400V (DC: +/− 2 % peak to peak, 1 Mohm input impedance)
- Time delay between channels: 150ps (typical)

**HORIZONTAL SYSTEM**
- Waveform Interpolation: Sinc(x)/x
- Memory Depth: 102k
- Time Base Accuracy: +/- 50ppm

**VERTICAL SYSTEM**
- Vertical Resolution: 8 bit, two channels sampled simultaneously
- Vertical Sensitivity: 1 mV/div = 10 V/div at input BNC
- Position Range: +/- 10 div
- Bandwidth limit filter: 20 MHz
- Low Frequency Response: <= 50 Hz at BNC [AC coupling, -3dB]
- DC Gain Accuracy: 1 mV/div: +/-0.5% (normal or average acquisition mode); 2 mV/div: +/-1.0% (normal or average acquisition mode)
- DC Gain Accuracy (average acquisition mode): 5 mV/div: +/-10.0% (normal or average acquisition mode)

**MEASUREMENT SYSTEM**
- Measurement Accuracy: Under identical setup and environmental conditions, the voltage difference (ΔV) between two points of the waveform after averaging number ≥ 16 waveforms are acquired: +/-3% (x reading + 0.05 div)
- Measurement Accuracy (average acquisition mode): +/-3% (x reading + 0.05 div)

**TRIGGER SYSTEM**
- Trigger Mode: Auto, normal, single, edge, pulse width, slope, video, LA
- Trigger Sensitivity: +/- 1 div
- Trigger Level Range: Internal: +/-8 div from the center of the screen
  - EXT: +/-3 V
  - EXT/5: +/-15 V
- Trigger Level Accuracy (typical):
  - Applied on signals of ± 20ns rise or fall time: +/-1% (6% default value = 400 mV)
  - EXT: +/-1.0% (6% default value = 200 mV)
- Trigger Capability:
  - Normal mode/scanning mode, pre-trigger/delayed trigger, pre-trigger depth adjustable
- Hold off: 1 ns = 1.5 s
- Set level to 50% (typical): Input signal frequency ≤ 50 Hz
- Edge trigger:
  - Edge type: Rise, Fall, Rise and Fall
  - Hold off: 20 ns (typical)
- Pulse Width Trigger:
  - Trigger sensitivity (typical):
    - Internal: 20 div peak to peak
    - EXT: 1000 mV
    - EXT/5: 2 V
    - Signal format and line/field frequency: supports standard NTSC and PAL. Line range: 1-525 (NTSC) and 1-625 (PAL)
  - Alternate Trigger:
    - CH1 trigger: edge, pulse, slope, video, LA
    - CH2 trigger: edge, pulse, slope, video, LA

**FREQUENCY COUNTER**
- 6 digit

**DMM**
- DC Voltage: 400V
- AC Voltage: 400V
- DC Current: 4 mA/40 mA/400 mA/4 A
- Resistance: 40 MOhm
- Diode and Continuity Check: Yes (buzzer)

**LOGIC ANALYZER**
- Input: 16 data channels, divided in two groups: D1-D8, D9-D16
- Max. Sampling Rate: 250 M Sam/s
- Memory Depth: 512k
- Max. Input Voltage: +/-40 Vpp
- Max. Voltage Swing: 1.2 Vpp
- Trigger Type: Edge, pattern, duration
- Threshold: TTL, CMOS, ECL, or user definable
- Display:
  - Type: 64k full color 5.7" LCD
  - Resolution: 320 x 240 pixels
  - Waveform Intensity: Adjustable (+/- 12 dB)
  - Display Language: Simplified Chinese, Traditional Chinese, English

**INTERFACE**
- Standard USB device, USB host
- Pass/Fail module, DMM module, logic analyzer module
- Optional LAN, GPIB

**POWER SOURCE**
- Mains Voltage: 100~240 Vac, 45~65 Hz
- Power Consumption: < 50 W

**MECHANICAL SPEC**
- Dimension: 336 x 177 x 174 mm; Weight: approx. 3.8 Kgs

**STANDARDACCESSORIES**
- Logic analyzer probes and leads x 1 set, USB cable x 1, power cord x 1, Windows software, operation manual