A3000 Series active probes
with Intelligent Probe Interface

1.3 GHz and 750 MHz probe bandwidths
- Up to 1 GHz system bandwidth
- 0.9 pF input capacitance
- 1 MΩ input resistance
- 10:1 attenuation

Intelligent Probe Interface
- Connects directly to PicoScope 6000E Series oscilloscopes
- Powered by the oscilloscope, eliminating separate power supplies and interface boxes
- Automatic probe detection and unit scaling

Convenient
- Slim, ergonomic design
- Click-to-fit probe accessories
- Super-light flexible cable
- Start and stop capture using a button on the probe
- LED status indicator

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A3000 Series active probes with Intelligent Probe Interface

The Pico A3000 Series are high-impedance active oscilloscope probes. They have been designed to have minimal impact on the signal being probed with maximum signal transfer to the PicoScope 6000E Series through the Intelligent Probe Interface. Their ergonomic design allows for comfortable handheld use with the addition of a pushbutton to start and pause capturing in the PicoScope software.

With an input resistance of 1 MΩ and capacitance of 0.9 pF, these active probes offer high input impedance up to 1 GHz. These characteristics make this probe the most versatile for many of your day-to-day measurements.

The intelligent probe interface powers the probe from the scope and automatically sets the scope's scaling and input impedance to match the probe.

Four intelligent probe interfaces are fitted on the PicoScope 6000E Series oscilloscopes.
Kit contents
A3136 1.3 GHz active probe kit
A3076 750 MHz active probe kit

Each probe is supplied with a comprehensive connection-optimized kit containing the following accessories:

- Rigid probe tip (10)
- Sprung probe tip (10)
- Ground blade (pack of 2 sizes, 2 of each)
- Ground lead (2)
- Solder-in cable pin (10)
- Gold plated copper wire 0.3 mm 30 SWG
- Micro SMD pincer, black
- Micro SMD pincer, red
- Joggle adaptor (2)
- Channel color markers (8 colors, 2 of each)
- Carry case
- Quick start guide

A3000 probe accessory kit

Contents:
- Ground leads (2)
- Solder-in cable pins (pack of 10)
- Gold plated copper wire (0.3 mm 30 SWG)
- Joggle adaptor

Other accessories are available individually. See ordering information on page 6.

Accessory identifier

A  Ground lead
B  Ground blade
C  Wide ground blade (for best high-frequency performance)
D  Joggle adaptor – Makes the probe fit on 2.54 mm (0.1 inch)-pitch headers or can be used with the fixed or sprung probe tips. Without the joggle adaptor, you can connect unequal-length accessories like the ground wire, blades, cable pins or micro pincer SMD clips to the probe.
E  Two rigid or sprung probe tips can be fitted in any combination in the joggle adaptor (D)
F  Sprung probe tip
G  Rigid probe tip
H  Solder-in cable pin and gold-plated 0.3 mm copper wire
I  Micro SMD pincers (black and red)
## A3000 active probe specifications

Specifications are valid after 20-minute warm-up and within the ambient temperature range 15 to 40°C.

<table>
<thead>
<tr>
<th>Probe performance – when used with rigid probe tip and wide ground blade</th>
<th>A3076</th>
<th>A3136</th>
</tr>
</thead>
<tbody>
<tr>
<td>Probe bandwidth (−3 dB)</td>
<td>750 MHz</td>
<td>1.3 GHz</td>
</tr>
<tr>
<td>System bandwidth (−3 dB)</td>
<td>750 MHz nominal with 750 MHz PicoScope 6000E models</td>
<td>1 GHz nominal with 1 GHz PicoScope 6000E models</td>
</tr>
<tr>
<td>Input resistance</td>
<td>1 MΩ +3%, −0%</td>
<td></td>
</tr>
<tr>
<td>Input capacitance</td>
<td>0.9 pF nominal</td>
<td></td>
</tr>
<tr>
<td>Attenuation</td>
<td>10:1</td>
<td></td>
</tr>
<tr>
<td>Oscilloscope input coupling</td>
<td>DC 50 Ω</td>
<td></td>
</tr>
<tr>
<td>Input dynamic range</td>
<td>±5 V (DC + AC peak)</td>
<td></td>
</tr>
<tr>
<td>DC gain accuracy</td>
<td>probe only ±3% of signal</td>
<td>±4% of signal (nominal)</td>
</tr>
<tr>
<td>DC offset accuracy</td>
<td>probe only ±3 mV</td>
<td>±(1% of full scale +4 mV) nominal</td>
</tr>
<tr>
<td>DC offset control range</td>
<td>±10 V</td>
<td></td>
</tr>
<tr>
<td>DC offset control accuracy</td>
<td>±1% of offset setting, additional to DC accuracy above</td>
<td></td>
</tr>
<tr>
<td>Measurable voltage window</td>
<td>±15 V (DC + AC peak)</td>
<td></td>
</tr>
<tr>
<td>Maximum non-destructive input voltage</td>
<td>±30 V (DC + AC peak) derated as shown in A3000 Series Quick Start Guide</td>
<td></td>
</tr>
</tbody>
</table>

### System dynamic performance (typical) with PicoScope 6000E Oscilloscope

- **Harmonic distortion**: −40 dBc (1%) with 250 MHz 1 V p-p sine
- **Noise**: 2.5 mV RMS nominal referred to probe input
- **Bandwidth flatness**: (+1 dB, −3 dB) from DC to full bandwidth
- **Low-frequency flatness**: < ±6% (or ±0.5 dB) from DC to 1 MHz
- **Propagation delay**: 5.4 ns nominal

### General

- **Probe detection**: Automatic with any oscilloscope with the Pico Intelligent Probe Interface, such as the PicoScope 6000E Series
- **Input connections**: Sockets accepting 0.635 to 0.940 mm (round), 0.64 mm (square). 7.12 mm pitch, 12 mm offset
- **Probe button**: Start or stop capture in PicoScope software
- **Status LED**: Yellow: Plugged into oscilloscope
  * Cyan: Busy/initializing
  * Green: Ready/idle
- **Cable length**: 1.2 m
- **Probe dimensions**: 108 mm (L) × 16 mm (H) × 12 mm (W)
- **Weight**: 75 g
<table>
<thead>
<tr>
<th></th>
<th>A3076</th>
<th>A3136</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Temperature</strong></td>
<td><strong>operating</strong> 0 to 50 °C</td>
<td><strong>operating</strong> 0 to 50 °C</td>
</tr>
<tr>
<td></td>
<td><strong>for quoted accuracy</strong> 15 to 40 °C after 20-minute warm-up.</td>
<td><strong>for quoted accuracy</strong> 15 to 40 °C after 20-minute warm-up.</td>
</tr>
<tr>
<td></td>
<td>System performance specifications assume that both the probe and</td>
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</tr>
<tr>
<td></td>
<td>oscilloscope are within specified operating temperatures.</td>
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</tr>
<tr>
<td></td>
<td><strong>storage</strong> -20 to +60 °C</td>
<td><strong>storage</strong> -20 to +60 °C</td>
</tr>
<tr>
<td><strong>Humidity</strong></td>
<td><strong>operating</strong> 5% to 80% RH non-condensing</td>
<td><strong>operating</strong> 5% to 80% RH non-condensing</td>
</tr>
<tr>
<td></td>
<td><strong>storage</strong> 5% to 95% RH non-condensing</td>
<td><strong>storage</strong> 5% to 95% RH non-condensing</td>
</tr>
<tr>
<td><strong>Altitude</strong></td>
<td>Up to 2000 m</td>
<td>Up to 2000 m</td>
</tr>
<tr>
<td><strong>Pollution degree</strong></td>
<td>EN 61010 pollution degree 2 :</td>
<td>EN 61010 pollution degree 2 :</td>
</tr>
<tr>
<td></td>
<td>&quot;only nonconductive pollution occurs except that occasionally a</td>
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</tr>
<tr>
<td></td>
<td>temporary conductivity caused by condensation is expected&quot;</td>
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</tr>
<tr>
<td><strong>Safety compliance</strong></td>
<td>EN 61010-031:2015</td>
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</tr>
<tr>
<td><strong>EMC compliance</strong></td>
<td>Tested to EN 61326-1:2013 and FCC Part 15 Subpart B</td>
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</tr>
<tr>
<td><strong>Environmental compliance</strong></td>
<td>RoHS, WEEE, REACH</td>
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</tr>
<tr>
<td><strong>Accessories included</strong></td>
<td>See Kit Contents above</td>
<td>See Kit Contents above</td>
</tr>
<tr>
<td><strong>Warranty</strong></td>
<td>2 years</td>
<td>2 years</td>
</tr>
</tbody>
</table>

**Accessories included**

See Kit Contents above

**Warranty**

2 years
A3000 Series Active Probe ordering information

<table>
<thead>
<tr>
<th>Order code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PQ265</td>
<td>A3076 Active Probe 750 MHz</td>
</tr>
<tr>
<td>PQ254</td>
<td>A3136 Active Probe 1.3 GHz</td>
</tr>
</tbody>
</table>

Replacement accessories

<table>
<thead>
<tr>
<th>Order code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PQ275</td>
<td>A3000 Series Active Probe replacement accessories kit (containing: 2 x ground leads, 10 x cable pins, gold-plated copper wire and joggle adaptor)</td>
</tr>
<tr>
<td>TA469</td>
<td>Rigid probe tip (pack of 10)</td>
</tr>
<tr>
<td>TA470</td>
<td>Probe ground blade (pack of 2 sizes, 2 of each)</td>
</tr>
<tr>
<td>TA501</td>
<td>Sprung probe tip (pack of 10)</td>
</tr>
<tr>
<td>TA504/TA505</td>
<td>Micro SMD pincer, black/red</td>
</tr>
<tr>
<td>TA494</td>
<td>Colored cable ties (channels A to D)</td>
</tr>
<tr>
<td>TA495</td>
<td>Colored cable ties (channels E to H)</td>
</tr>
</tbody>
</table>

For use with PicoScope 6000E Series oscilloscopes

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