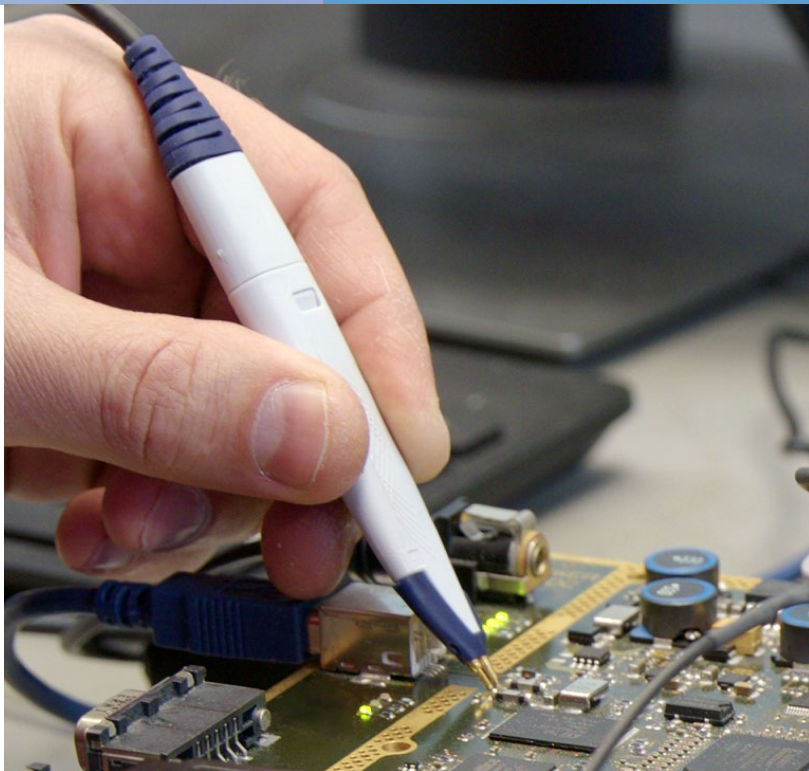


# A3000 Series active probes

with Intelligent Probe Interface



#### **1.3 GHz and 750 MHz probe bandwidths**

Up to 1 GHz system bandwidth

0.9 pF input capacitance

1 M $\Omega$  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

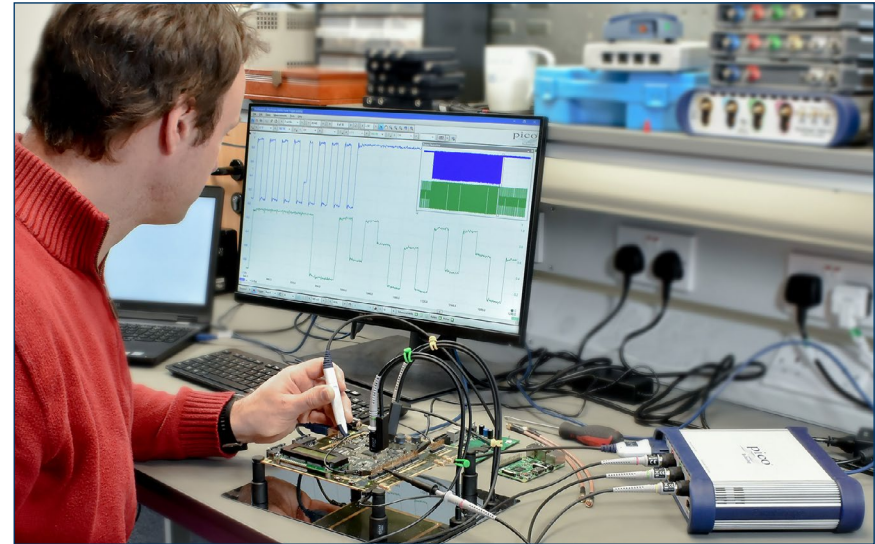
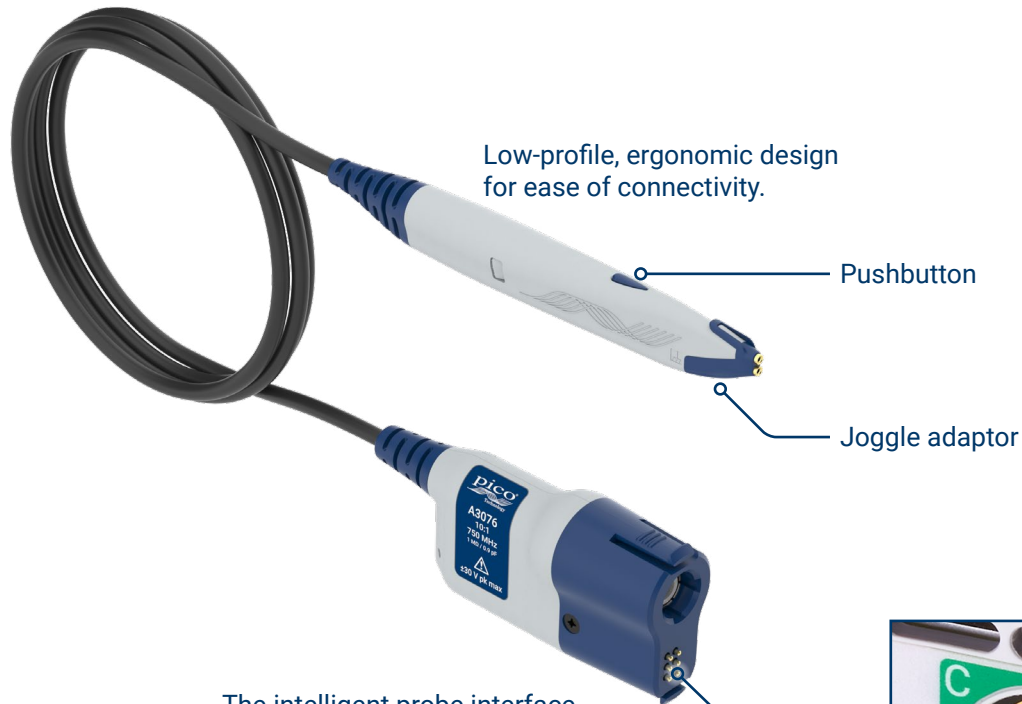
Start and stop capture using a button on the probe

LED status indicator

## 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 M $\Omega$  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

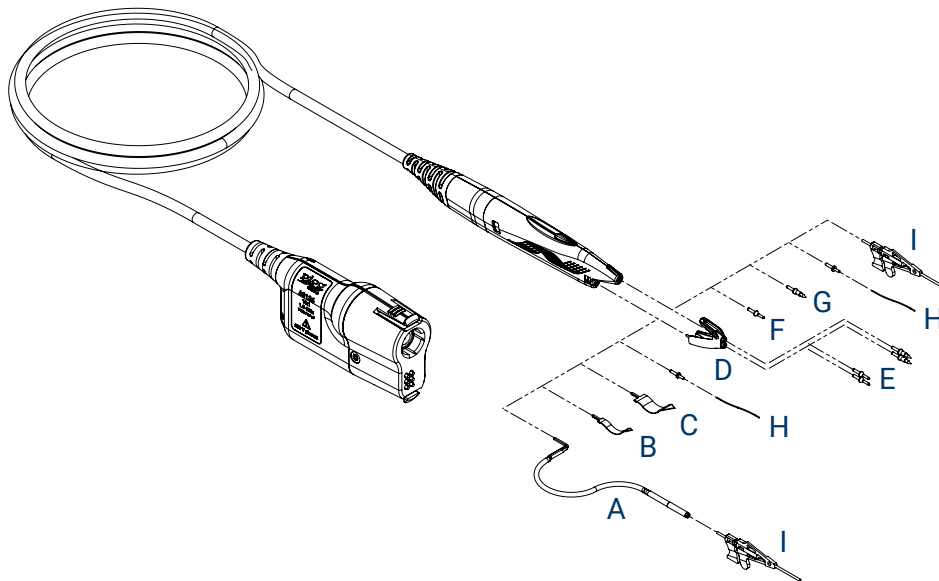
Contents:

- 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



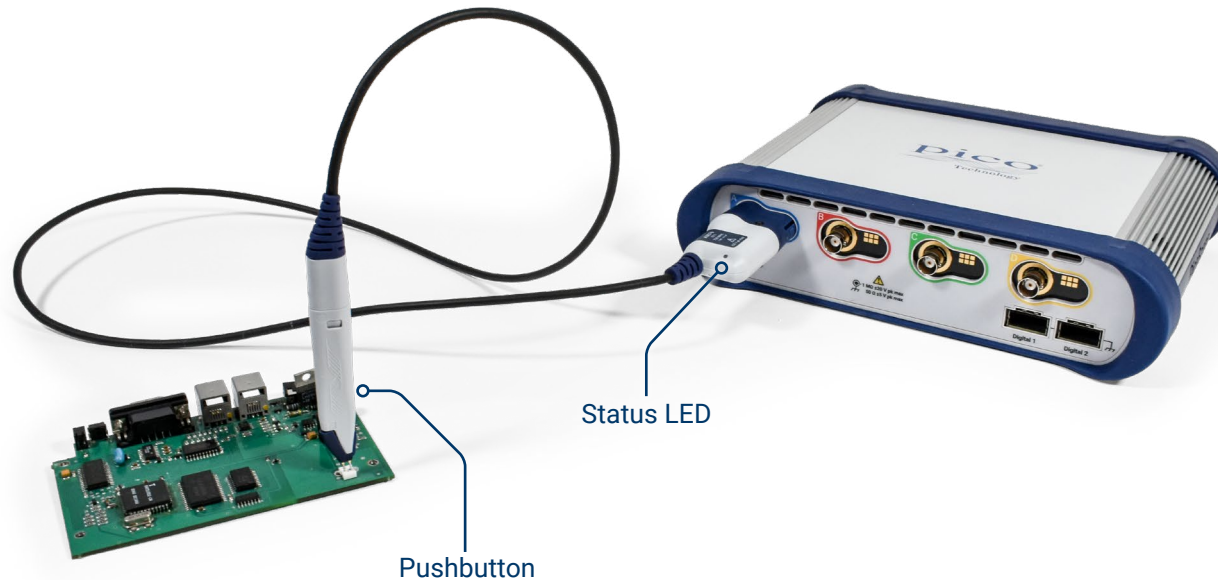
- A Ground lead
- B Ground blade
- C Wide ground blade (for best high-frequency performance)
- D Joggle adaptor – Makes the probe fit on 2.54 mm (0.1 inch)-pitch headers or can be used with the fixed or sprung probe tips. Without the joggle adaptor, you can connect unequal-length accessories like the 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.

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

		A3076	A3136
Temperature	operating	0 to 50 °C	
	for quoted accuracy	15 to 40 °C after 20-minute warm-up. System performance specifications assume that both the probe and oscilloscope are within specified operating temperatures.	
	storage	-20 to +60 °C	
Humidity	operating	5% to 80% RH non-condensing	
	storage	5% to 95% RH non-condensing	
Altitude		Up to 2000 m	
Pollution degree		EN 61010 pollution degree 2 : "only nonconductive pollution occurs except that occasionally a temporary conductivity caused by condensation is expected"	
Safety compliance		EN 61010-031:2015	
EMC compliance		Tested to EN 61326-1:2013 and FCC Part 15 Subpart B	
Environmental compliance		RoHS, WEEE, REACH	
Accessories included		See <b>Kit Contents</b> above	
Warranty		2 years	



## A3000 Series Active Probe ordering information

Order code	Description
PQ265	A3076 Active Probe 750 MHz
PQ254	A3136 Active Probe 1.3 GHz

## Replacement accessories

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

For use with PicoScope 6000E Series oscilloscopes



### United Kingdom global headquarters

Pico Technology  
James House  
Colmworth Business Park  
St. Neots  
Cambridgeshire  
PE19 8YP  
United Kingdom

[www.picotech.com](http://www.picotech.com)

+44 (0) 1480 396 395

[sales@picotech.com](mailto:sales@picotech.com)

### North America regional office

Pico Technology  
320 N Glenwood Blvd  
Tyler  
TX 75702  
United States

[www.picotech.com](http://www.picotech.com)

+1 800 591 2796

[sales@picotech.com](mailto:sales@picotech.com)

### Asia-Pacific regional office

Pico Technology  
Room 2252, 22/F, Centro  
568 Hengfeng Road  
Zhabei District  
Shanghai 200070  
PR China

[www.picotech.com](http://www.picotech.com)

+86 21 2226-5152

[pico.asia-pacific@picotech.com](mailto:pico.asia-pacific@picotech.com)

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