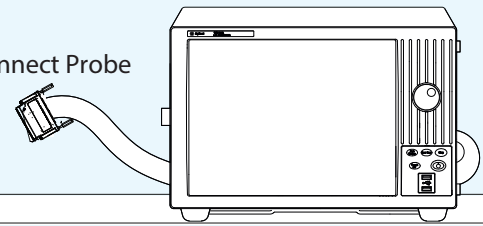


# 160-pin Direct-Connect Probes for 16860-series Logic Analyzers

(U4200A-series probes that connect directly to the 16860-series logic analyzers without any logic analyzer cable)

160-pin Direct Connect Probe

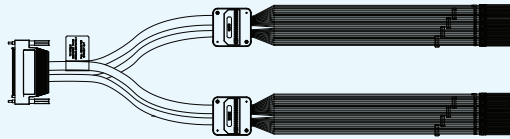


## General Purpose Probe

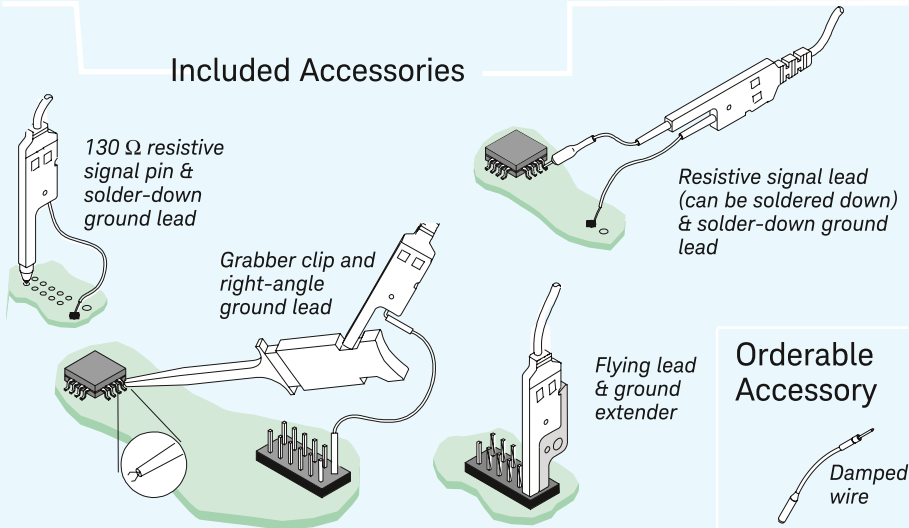
*General-purpose flying lead set with isolation network located at the probe tip. Flexible connection to individual signals. Compatible with a wide assortment of accessories.*

### U4203A single-ended flying lead probe set

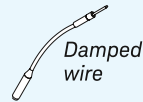
- 34 channels (32 data, 2 clock)
- 1.5 Gb/s data rate
- 250 mV p-p min. signal amplitude
- 1.3 pF equivalent load capacitance



#### Included Accessories



#### Orderable Accessory

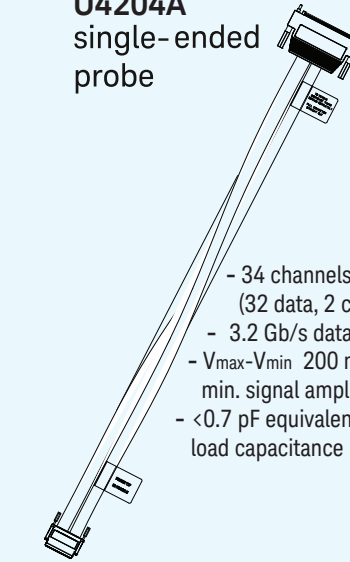


## Soft Touch Connectorless Probes

*High-density probe with isolation network located at the probe tip. Quick connection to many channels in a small footprint without a connector designed into the target. Requires pro series soft touch footprint designed to the target system.*

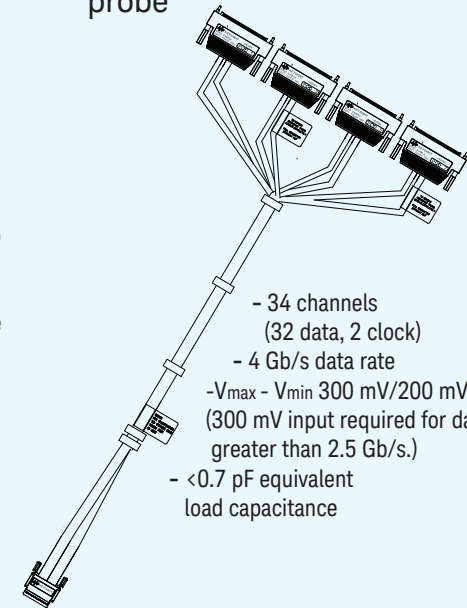
### U4204A single-ended probe

- 34 channels (32 data, 2 clock)
- 3.2 Gb/s data rate
- $V_{max} - V_{min}$  200 mV min. signal amplitude
- $< 0.7$  pF equivalent load capacitance



### U4206A single-ended quad X 160-pin probe

- 34 channels (32 data, 2 clock)
- 4 Gb/s data rate
- $V_{max} - V_{min}$  300 mV/200 mV (300 mV input required for data rates greater than 2.5 Gb/s.)
- $< 0.7$  pF equivalent load capacitance



Top-side attach retention module

Pro series soft touch footprint

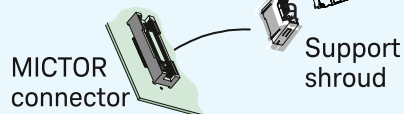
The U4206A probe is compatible for use only with the 16862A and 16864A models in the 16860-series.

## MICTOR Probe

*High-density probe for 38-pin MICTOR connector with isolation network located at the probe tip. Quick connection to many channels in a small footprint. Requires 38-pin Mictor connector designed into the target system*

### U4205A single-ended probe

- 34 channels (32 data, 2 clock)
- 600 Mb/s data rate
- 300 mV p-p minimum signal amplitude
- 3.0 pF equivalent load capacitance

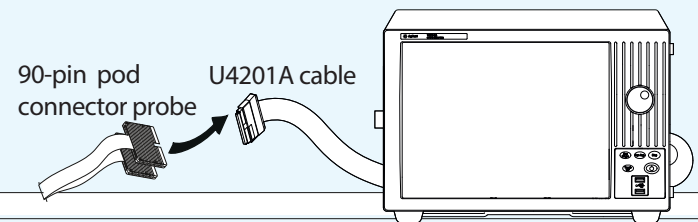


For the latest information on probe compatibility with a given logic analyzer, see *Probing Solutions for Logic Analysis Systems* (publication 5968-4632E) available at [www.keysight.com/find/logic\\_analyzer\\_probes](http://www.keysight.com/find/logic_analyzer_probes).

For detailed information on a U4200A-series direct connect probe, refer to the *U4200A-series Probes and Cables User Guide* (publication U4200-97000) available on [www.keysight.com](http://www.keysight.com).

# 90-pin Pod Connector Probes for 16860-series Logic Analyzers

(Probes that require the U4201A cable to connect to the 16860-series logic analyzer)



## MICTOR Probe

High-density probe for 38-pin MICTOR connector with isolation network located at the probe tip. Quick connection to many channels in a small footprint. Requires 38-pin Mictor connector designed into the target system

### E5380B single-ended probe

- 34 channels (32 data, 2 clock)
- 600 Mb/s data rate
- 300 mV p-p minimum signal amplitude
- 3.0 pF equivalent load capacitance

Support shroud

MICTOR connector

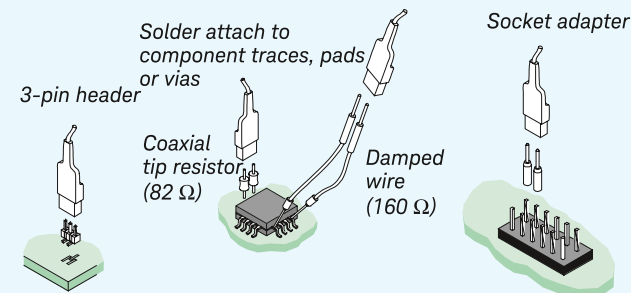
## General Purpose Probes and Accessories

General-purpose flying lead set with isolation network located at the probe tip. Flexible connection to individual signals. Compatible with a wide assortment of accessories.

### E5381B differential flying lead probe set

- 17 channels (16 data, 1 clock)
- 1.5 Gb/s data rate
- $V_{max} - V_{min}$  200 mV min. signal amplitude
- 0.9 pF equivalent load capacitance

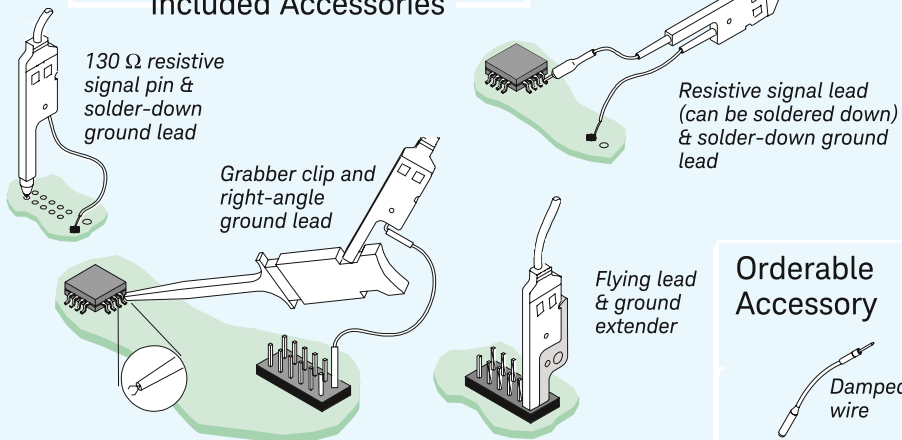
#### Included Accessories



### E5382B single-ended flying lead probe set

- 17 channels (16 data, 1 clock)
- 1.5 Gb/s data rate
- 250 mV p-p min. signal amplitude
- 1.3 pF equivalent load capacitance

#### Included Accessories



#### Orderable Accessory

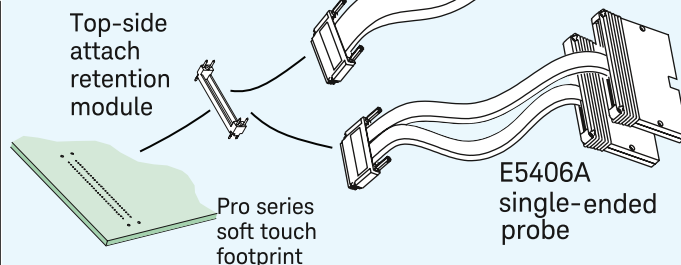
## Soft Touch Connectorless Probe

High-density probe with isolation network located at the probe tip. Quick connection to many channels in a small footprint without a connector designed into the target. Requires appropriate Pro series soft touch or original soft touch footprint designed into the target system. The Pro series footprint is 30% smaller than the original soft touch footprint and top-side mounting eliminates the need to access the back of the board.

For the latest information on probe compatibility with a given logic analyzer, see *Probing Solutions for Logic Analysis Systems* (publication 5968-4632E) available at [www.keysight.com/find/logic\\_analyzer\\_probes](http://www.keysight.com/find/logic_analyzer_probes).

### E5405B differential probe

- 17 channels (16 data, 1 clock)
- >2.5 Gb/s data rate
- $V_{max} - V_{min}$  200 mV min. signal amplitude
- <0.7 pF equivalent load capacitance



- 34 channels (32 data, 2 clock)
- >2.5 Gb/s data rate
- $V_{max} - V_{min}$  200 mV min. signal amplitude
- <0.7 pF equivalent load capacitance

## Samtec Probes

High-density probe for 100-pin Samtec connector with isolation network located at the probe tip. Quick connection to many channels in a small footprint. Requires 100-pin Samtec connector designed into target system.

### E5379A differential probe

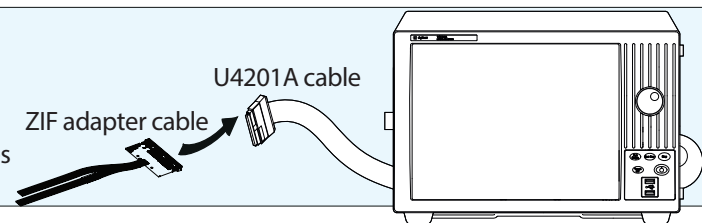
- 17 channels (16 data, 1 clock)
- 1.5 Gb/s data rate
- $V_{max} - V_{min}$  200 mV min. signal amplitude
- 1.5 pF equivalent load capacitance

Samtec connector

Support shroud

# DDR3 Probes and Cables for 16860-series Logic Analyzers

(Probes that require ZIF adapter cables and U4201A cables to connect to the 16860-series logic analyzer)



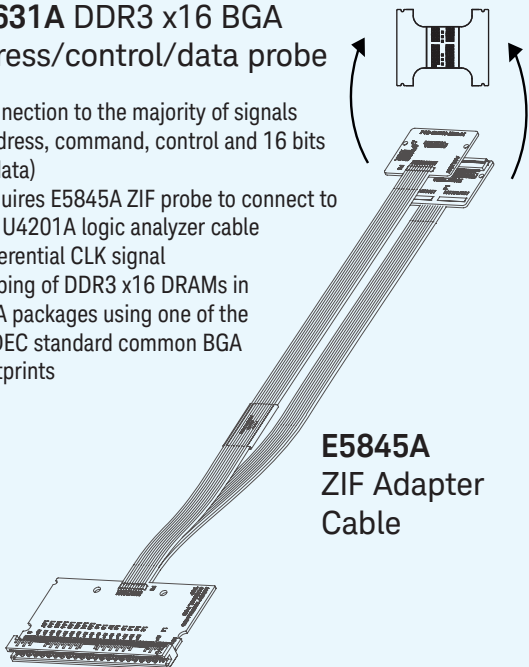
## W3630-series DDR3 DRAM BGA Probes

*This series enables probing of embedded memory DIMMs directly at the ball grid array. This eliminates board space and trace routing required for connector probing methods. Provides complete signal access to the DDR3 signals. Supports probing of DDR3 x4, x8, and x16 DRAMs in BGA packages using one of the JEDEC standard common BGA footprints.*

### W3631A DDR3 x16 BGA address/control/data probe

- Connection to the majority of signals (address, command, control and 16 bits of data)
- Requires E5845A ZIF probe to connect to the U4201A logic analyzer cable
- Differential CLK signal
- Probing of DDR3 x16 DRAMs in BGA packages using one of the JEDEC standard common BGA footprints

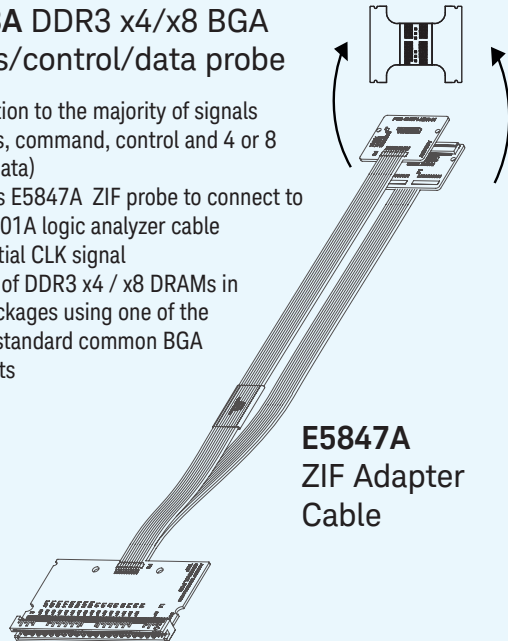
**E5845A**  
ZIF Adapter Cable



### W3633A DDR3 x4/x8 BGA address/control/data probe

- Connection to the majority of signals (address, command, control and 4 or 8 bits of data)
- Requires E5847A ZIF probe to connect to the U4201A logic analyzer cable
- Differential CLK signal
- Probing of DDR3 x4 / x8 DRAMs in BGA packages using one of the JEDEC standard common BGA footprints

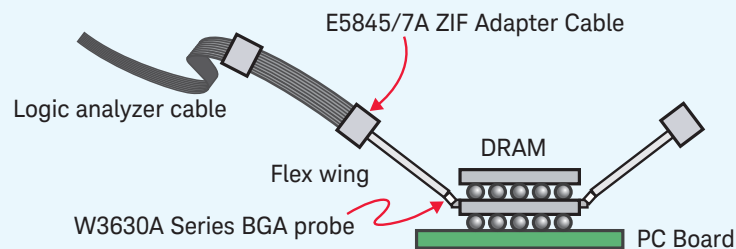
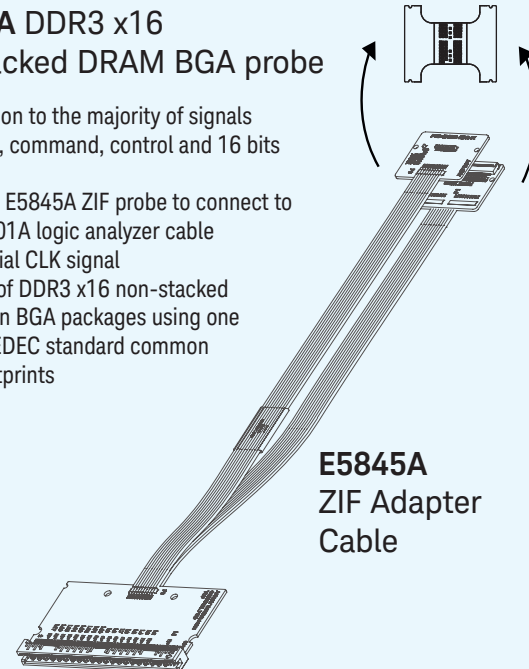
**E5847A**  
ZIF Adapter Cable



### W3636A DDR3 x16 non-stacked DRAM BGA probe

- Connection to the majority of signals (address, command, control and 16 bits of data)
- Requires E5845A ZIF probe to connect to the U4201A logic analyzer cable
- Differential CLK signal
- Probing of DDR3 x16 non-stacked DRAMs in BGA packages using one of the JEDEC standard common BGA footprints

**E5845A**  
ZIF Adapter Cable



For detailed information on a W3630-series probe, refer to the following publications on [www.keysight.com](http://www.keysight.com):

- W3630-Series DDR3 BGA Probes for Logic Analyzers and Oscilloscopes Data Sheet (publication 5990-3179EN)
- W3630-Series DDR3 DRAM BGA Probes Installation Guide (publication W3631-97005)

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Part Number 16860-97002



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