

RIGOL

用户手册

User's Guide



T2R1000 有源探头适配器

T2R1000 Active Probe Adaptor

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Product Overview

T2R1000 active probe adaptor can be used to connect the TekProbe-BNC level II probe with **RIGOL** DS6000 series or MSO4000/DS4000 series digital oscilloscope.

T2R1000 converts the TekProbe-BNC interface to RIGOL-Probe interface and supplies power, calibration and DC offset adjustment function for probe.



To TekProbe-BNC Interface



To RIGOL-Probe Interface

Connection Method

Firstly, connect the probe with TekProbe-BNC interface to T2R1000. Then, connect the other terminal of T2R1000 to the analog input terminal of the oscilloscope with RIGOL-Probe, as shown in the right figure.

By operating the oscilloscope menu, you can select the corresponding probe model, the probe ratio and the type of the probe front end. In addition, the calibration function and the bias voltage adjustment function are provided for some probes.




Menu Operation

In this section, CH1 of MSO4000 is taken as an example to illustrate the menu operation. After connecting T2R1000 and Tektronix probe to the input terminal of the oscilloscope, press **CH1** → **Probe** to open the menu as shown in the figure on the right side. At this point, **Probe Type** shows "Tek Probe". You can set the probe model, the probe ratio and the type of the probe front end by pressing the corresponding menu. For P6241, P6245, P6246, P6247, P6248, P6249, P6250 and P6251, **Probe-Cal** and **Bias Voltage** are also provided.

1. For a probe with fixed probe ratio or with a single type of probe front end, the oscilloscope identifies the probe ratio or the type of the probe front end automatically. You cannot set the probe ratio or the



type of the probe front end.

2. Probe-Cal: connect T2R1000 and Tektronix probe to the input terminal of the oscilloscope and select the corresponding probe model. Then, press **Probe-Cal**. At this point, "Please connect the probe to the GND" is displayed. Ground the input terminal of the probe according to the prompt message and press **OK**; the oscilloscope executes the probe calibration program to perform self-calibration on the probe offset.
3. Bias Voltage: this function is used to adjust the signal under test that exceeds the input dynamic range of the probe amplifier to a proper range to ensure the integrity of the signal under test. Press **Bias Voltage** and rotate  to adjust the bias voltage. The range available is determined by the DC offset voltage of the probe.

Tektronix Active Probes Supported by T2R1000

Single Ended Active Voltage Probes

| Model | Bandwidth | Attenuation | Support DC offset adjustment? |
|-------|-----------|-------------|-------------------------------|
| P6205 | 750MHz | 10:1 | No |
| P6243 | 1GHz | 10:1 | No |
| P6245 | 1.5GHz | 10:1 | Yes |
| P6241 | 4GHz | 10:1 | Yes |
| P6249 | 4GHz | 5:1 | Yes |

Differential Active Voltage Probes

| Model | Bandwidth | Attenuation | Support DC offset adjustment? |
|-------|-----------|-----------------------|-------------------------------|
| P5205 | 100MHz | 50:1/500:1 optional | No |
| P5210 | 50MHz | 100:1/1000:1 optional | No |
| P6246 | 400MHz | 10:1/1:1 optional | Yes |
| P6247 | 1GHz | 10:1/1:1 optional | Yes |
| P6248 | 1.5GHz | 10:1/1:1 optional | Yes |
| P6250 | 500MHz | 50:1/5:1 optional | Yes |
| P6251 | 1GHz | 50:1/5:1 optional | Yes |

Current Probes

| Model | Bandwidth | Attenuation | Description |
|--------|-----------|-------------|---------------------|
| TCP202 | 50MHz | 10A/V | AC/DC current probe |

Optical Probes

| Model | Bandwidth | Attenuation |
|--------|-----------|-------------|
| P6701B | 1GHz | 0.001W/V |
| P6703B | 1.2GHz | 0.001W/V |
| P6711 | 250MHz | 0.0002W/V |
| P6713 | 300MHz | 0.0002W/V |

RIGOL Oscilloscope Supported by T2R1000

If you have purchased DS6000 or MSO4000/DS4000 series digital oscilloscope, before using T2R1000, you need to update your software to or above the version listed in the table below.

| Series | Model | Software Version |
|---------------|-------------------------------------------------------------------------|-------------------------|
| DS6000 | DS6062/DS6064/DS6102/DS6104 | 00.01.05.00.00 or above |
| DS4000 | DS4014/DS4024/DS4034/DS4054/ DS4012/DS4022/DS4032/DS4052 | 00.02.01.00.04 or above |
| MSO4000 | MSO4014/MSO4024/MSO4034/ MSO4054/MSO4012/MSO4022/ MSO4032/MSO4052 | |

Specifications

| | |
|--------------------|---------------------------------------------------------------|
| Bandwidth | >4GHz (T2R1000 only) |
| Power Supplies | $\pm 5V$, $\pm 15V$ |
| Max Output Current | 150mA |
| DC Offset Range | $< \pm 1V$ (from the output terminal of T2R1000) |
| Max Input Voltage | 42Vpk, 30Vrms |
| Temperature | Operation: 0°C-50°C; Non-operation: -40°C-70°C |
| Humidity | 95%RH at 50°C |
| Altitude | 4000m |
| Size | 60mm (length) \times 33.7mm (width) \times 29.5mm (depth) |
| Weight | 132g (with package); 41g (without package) |

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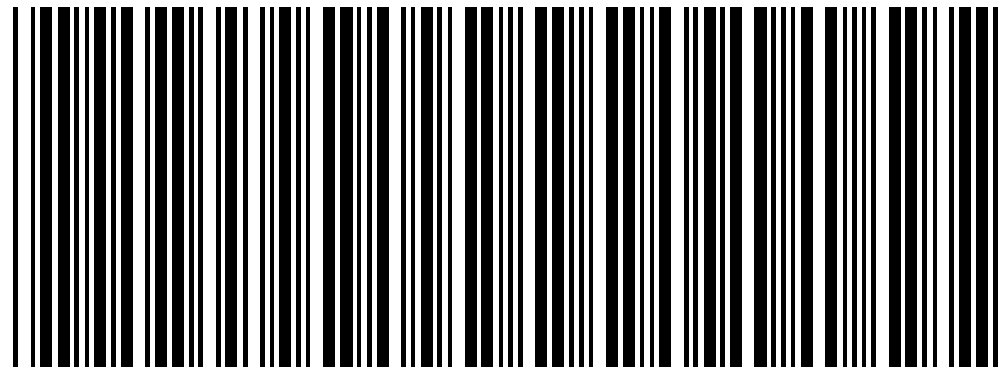
If you have any problem or requirement when using our products or this manual, please contact RIGOL Technologies, Inc.

E-mail: service@rigol.com

Website: www.rigol.com

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