

# Bus Analysis Guide

Serial bus like I2C, SPI, UART/RS232, USB are widely used in electronic and telecom products as well as other embedded devices. RIGOL mainstream oscilloscope provides common used bus analysis functions. The scope can trigger the at start frame, end frame, specific

address and/or data, as well as error frame. Also, the scope can finish bus decoding functions which can help users to discover errors, debug hardware and accelerate development easily, so as to guarantee quick and high-quality accomplishment of projects.

Series and Options	Decoding Buses	Channel	I2C		SPI		RS232/UART		CAN		LIN		FlexRay	
			Trigger	Decod	Trigger	Decod	Trigger	Decod	Trigger	Decod	Trigger	Decod	Trigger	Decod
DS6000 Series	2	Analog	●		●		●		●				●	
SD-I2C/SPI-DS6000				○		○								
SD-RS232-DS6000							○							
SD-CAN-DS6000								○						
SD-FlexRay-DS6000													○	
MSO/DS4000 Series	2	Analog & Digital	●		●		●		●				●	
SD-I2C/SPI-DS4000				○		○								
SD-RS232-DS4000							○							
SD-AUTO-DS4000									○	○	○			
SD-FlexRay-DS4000													○	
BND-MSO/DS4000				○		○	○		○	○	○		○	○
DS4000E Series	2	Analog	●		●		●		●				●	
SD-I2C/SPI-DS4000				○		○								
SD-RS232-DS4000							○							
SD-AUTO-DS4000									○	○	○			
SD-FlexRay-DS4000													○	
BND-MSO/DS4000				○		○	○		○	○	○		○	○
MSO/DS2000A Series	2	Analog & Digital	●		●		●							
SD-DS2000				○		○		○						
CAN-DS2000A									○	○				
BND-MSO/DS2000A				○		○	○		○	○				
MSO/DS1000Z Series	2	Analog & Digital												
AT-DS1000Z			○		○		○							
SA-DS1000Z			○	○	○	○	○	○						

● Standard ○ Option, could be used

## Power Measurement and Analysis



Power supply is an important component of electronic devices. The quality of power supply will have direct influences on the electronic devices. During the design and manufacture of power supply, performance testing becomes more and more important.

Ultra Power Analyzer is a power measurement and analysis software. The software along with RIGOL DS6000/MSO4000/DS4000/DS4000E/MSO2000A/DS2000A series digital oscilloscope, high voltage differential probe, current probe, probe deskew fixture, and passive probe, form a complete power measurement system for power supply design and testing. It can analyze switching power supply efficiency and reliability.

- Power quality analysis
- Current harmonics analysis
- Inrush current analysis
- Power device analysis
- Safe operating area analysis
- Modulation analysis
- Output analysis

Distribution in the UK & Ireland



www.lambdaphoto.co.uk

### Power quality analysis



### Safe operating area analysis



### Power device switching loss analysis



### Output ripple analysis



## Recommended Configuration

	Description	Order Number
Scope	DS6000, MSO/DS4000, DS4000E, MSO/DS2000A Series	
Probes	High Voltage Differential Probe (depend on bandwidth and voltage range in practical application)	RP1000D Series
	Current probe (depend on bandwidth and current range in practical application)	RP1000C Series
PC Software	Ultra Power Analyzer	UPA-DS
Other Accessories	T2R1000 probe adapter (convert TekProbe to RIGOL standard BNC connector)	T2R1000

## Current & Active Probes

RP1000D High Voltage Differential Probe



RP1003C/04C Current Probe



RP7150/7180 Differential Probe



RP1001C/02C Current Probe



RP1018H High Voltage Probe



RP7150S/7080S Single ended Probe

