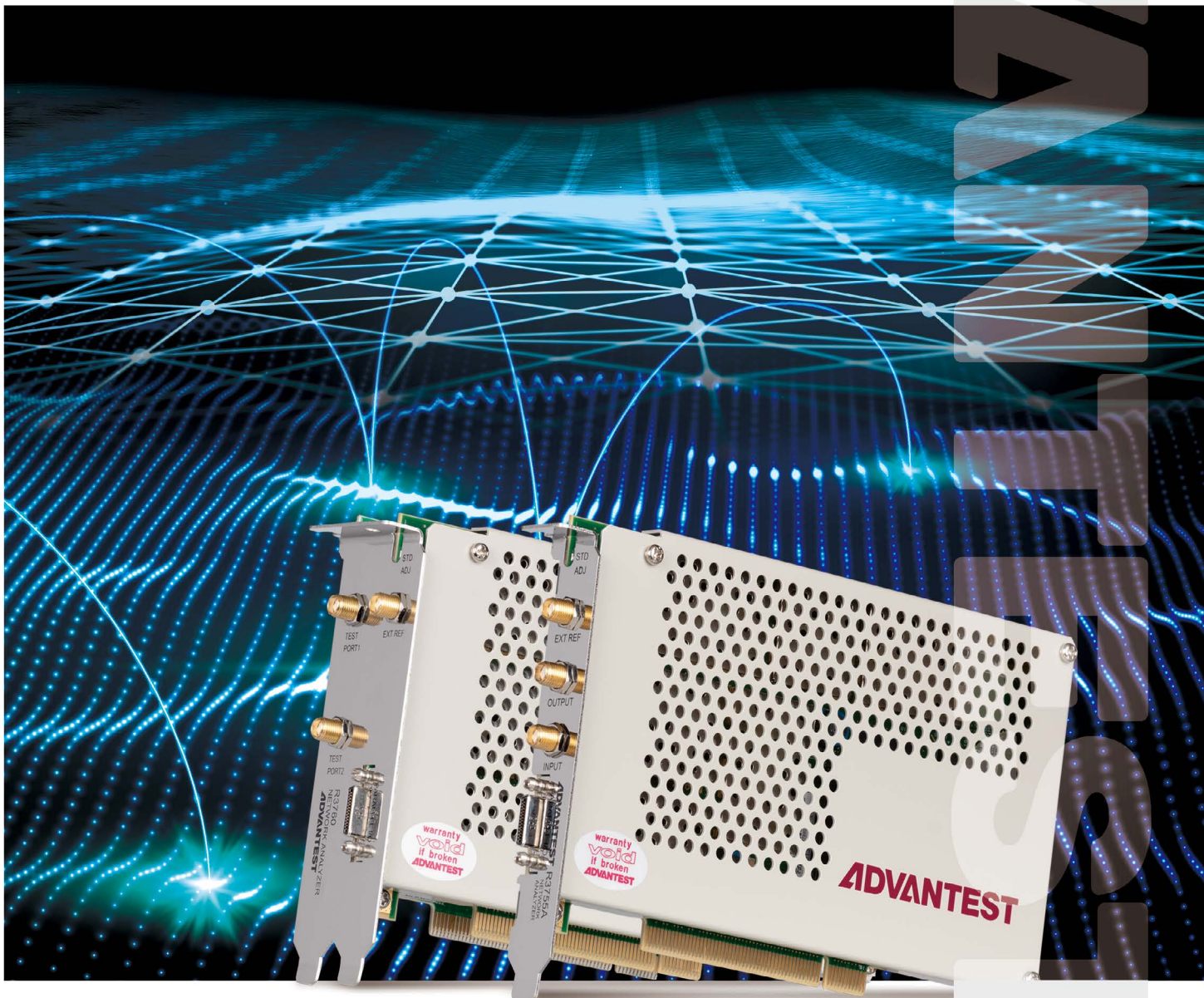


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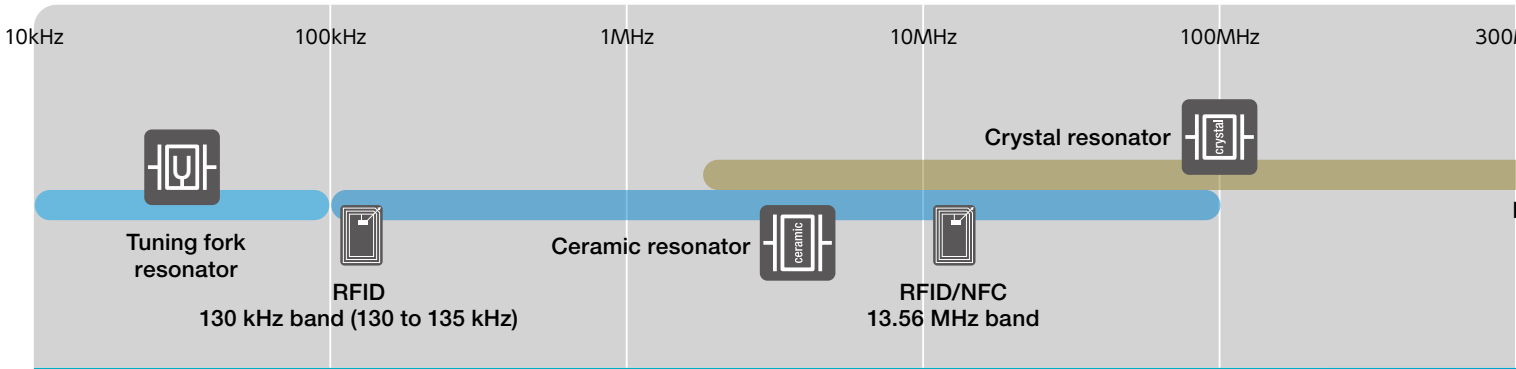
Board Network Analyzers

R3755A/3760

Making a personal computer a vector network analyzer



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300 MHz Board Network Analyzer R3755A

Compact size, light weight, low power consumption of less than 15 W, and with the capacity to drive up to eight units in parallel.

The R3755A network analyzer evaluates the frequency characteristics of electronic components, such as the crystal resonator and ceramic resonator used in a broad range of electronic equipment, as well as antennas for receiving/transmitting wireless signals.

R3755A Key Specifications

Measurement functions

Measurement channels	4
Measurement parameters	A/R (R channel is connected internally)

Signal source characteristics (25°C ± 5°C, calibration cycle one year)

Frequency characteristics	
Range	10kHz to 300MHz
Resolution	1mHz
Accuracy	±20ppm (OPT.20: ±1ppm)

Output characteristics

Range	
10kHz to 1MHz:	0dBm to -30dBm
1MHz to 300MHz:	+18dBm to -43dBm 0.1dB resolution
Range set-up	Start/Stop, or Center/Span
Sweep type	
Arbitrary sweep of specified segment (Frequency, Output level, RBW, Point, Settling time)	
Sweep speed	Maximum 50 µsec/point (RBW 15 kHz)
Measurement point	Maximum 1601 points (segment)
Output port	SMA (female) 50Ω connector

Receiving section characteristics (25°C ± 5°C, calibration cycle one year)

Input characteristics	
Input	SMA (female) 50Ω connector
Frequency range	Same as the signal source characteristics
Average noise level	-70dBm (RBW:1kHz)
Resolution bandwidth	10Hz to 15kHz (1, 1.5, 2, 3, 4, 5, or 7 steps)
Error correction functions	Normalize, Trans Full Cal, 1-Port Full Cal

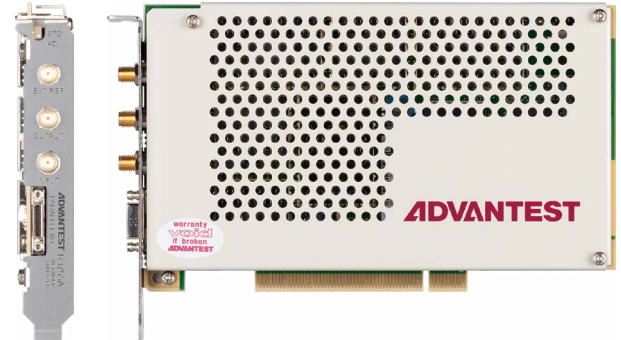
Connections to external devices

Parallel I/O	8-bit output (C-MOS), 4-bit input (C-MOS)
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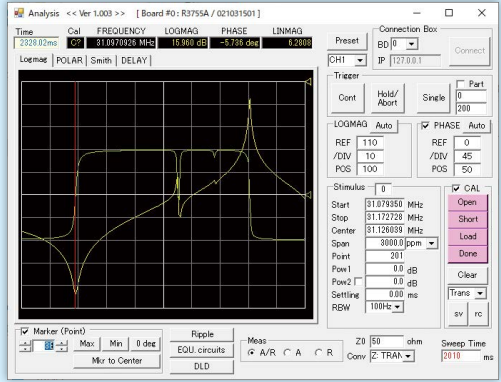
General specifications

Loadable PC ¹⁾	
Expansion-slot ²⁾	PC which carries 1 PCI slot (32 Bit, 5 V, half-size)
OS	Microsoft Windows 10 Pro (64bit)
Development of application	
Environment	Microsoft Visual Studio
Power supply	+5 VDC (5W), +3.3 VDC (5W), +12 VDC (1W), -12 VDC (1W)
Power consumption	15 W or less
Dimensions, Mass	Approx. 190 (W) x 126 (H) x 20 (D) mm, 1 kg or less

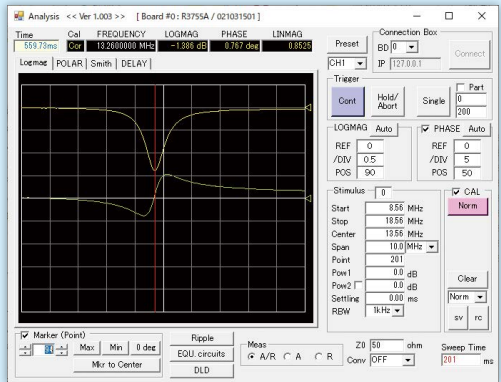
1) Depending on the specifications of the PC to be used, it may not operate.
 2) Please keep the ambient air temperature (temperature in the PC) of this device equipped to the PC expansion slot from exceeding +55 degree C.



Measurement example with R3755A sample software

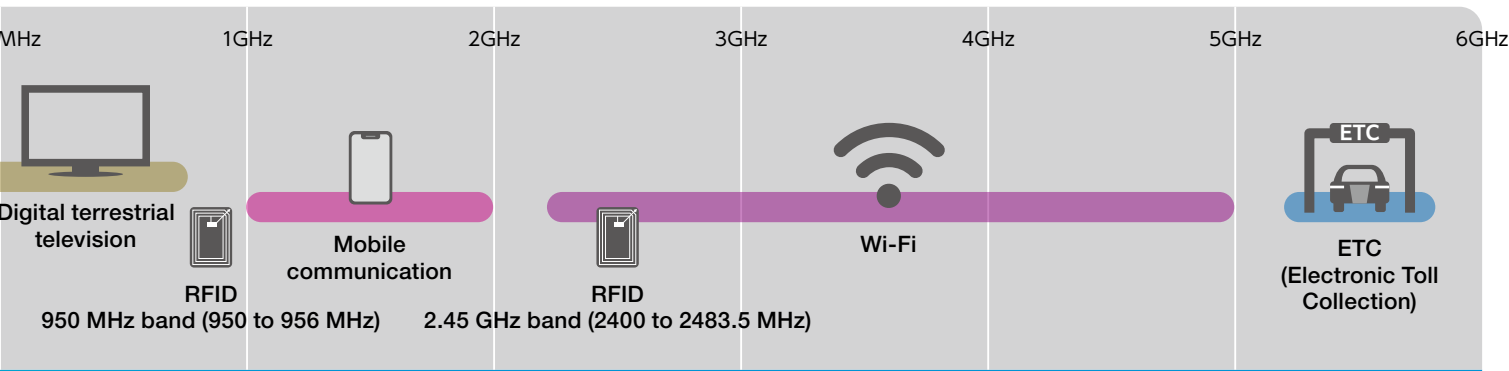


Example of oscillation characteristics measurement for crystal resonator



Example of oscillation frequency measurement for RFID

*Microsoft, Windows and Visual Studio are registered trademarks of Microsoft Corporation in the United States and other countries.



6 GHz Board Network Analyzer R3760



Compact size, light weight, low power consumption of less than 20 W, and with the capacity to drive up to eight units in parallel.

The R3760 network analyzer, low in cost and with a space-saving design, measures and evaluates the frequency characteristics of receiving/transmitting antennas and filters, which are used for wireless communications.

R3760 Key Specifications

Measurement functions

Measurement channels	4
Measurement parameters	Reflection (S11), Transmission (S21)

Signal source characteristics (25°C ± 5°C, calibration cycle one year)

Frequency characteristics

Range	S11/S21: 300 MHz to 6 GHz
Resolution	10 kHz
Accuracy	±50 ppm (OPT.20: ±1 ppm stability)

Output characteristics

Range	≤3 GHz: 0 to -10 dBm >3 GHz: -5 to -10 dBm 0.1 dB resolution
Range set-up	Start/Stop, or Center/Span
Sweep type	Arbitrary sweep of specified segment (Frequency, Output level, RBW, Point, Settling time)
Sweep speed	Maximum 300 µsec/point
Measurement point	Maximum 1601 points (segment)
Output port	SMA (female) 50Ω connector

Receiving section characteristics (25°C ± 5°C, calibration cycle one year)

Input characteristics

Input	SMA (female) 50Ω connector
Frequency range	Same as the signal source characteristics
Average noise level	-70dBm (RBW:1kHz)
Resolution bandwidth	10Hz to 15kHz (1, 1.5, 2, 3, 4, 5, or 7 steps)
Error correction functions	Normalize, Trans Full Cal, 1-Port Full Cal

Connections to external devices

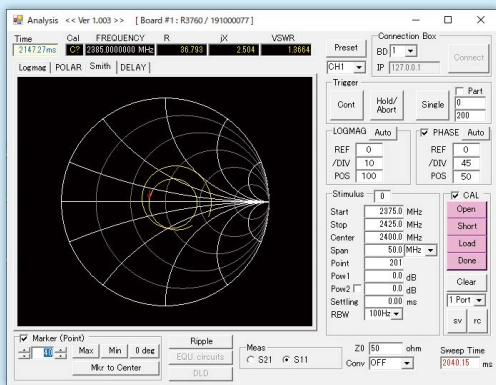
Parallel I/O	8-bit output (C-MOS), 4-bit input (C-MOS)
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General specifications

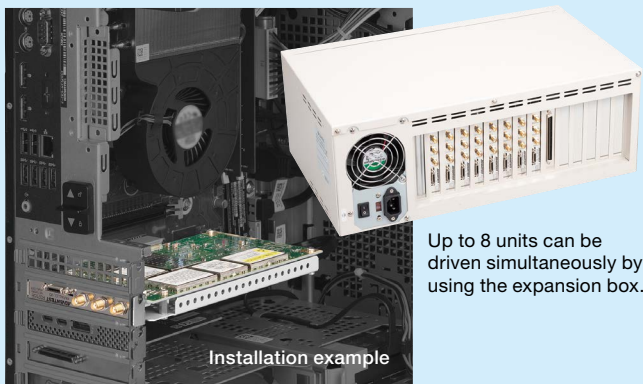
Loadable PC ¹⁾	
Expansion-slot ²⁾	PC which carries 2 PCI slot (32 Bit, 5 V, half-size)
OS	Microsoft Windows 10 Pro (64bit)
Development of application	
Environment	Microsoft Visual Studio
Power supply	+5 VDC (5W), +3.3 VDC (5W), +12 VDC (1W), -12 VDC (1W)
Power consumption	20 W or less
Dimensions, Mass	Approx. 190 (W) x 126 (H) x 42 (D) mm, 1 kg or less

1) Depending on the specifications of the PC to be used, it may not operate.
2) Please keep the ambient air temperature (temperature in the PC) of this device equipped to the PC expansion slot from exceeding +55 degree C.

Measurement example with R3760 sample software



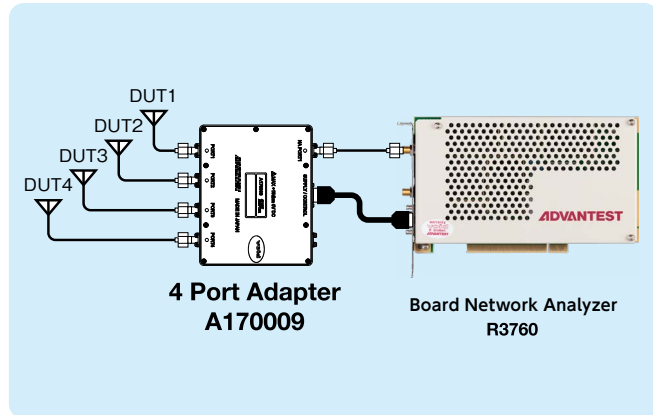
Example of impedance measurement for antenna



For more information on the calibration kit required for impedance measurement, please contact our office.

Optional Accessories for Expanding Applications of Board Network Analyzer

● 4-Port Adapter A170009



A170009 Key Specifications

Input/Output port

Port numbers	5
Switchable path	On State1: Path between NA PORT1 - PORT1 is On
	On State2: Path between NA PORT1 - PORT2 is On
	On State3: Path between NA PORT1 - PORT3 is On
	On State4: Path between NA PORT1 - PORT4 is On
Connector	SMA (female) 50Ω connector

Input/Output signal characteristics (25°C ± 5°C)

Frequency characteristics range	300MHz to 6GHz
Input characteristics	
Maximum input level	0dBm
Absolute maximum input level:	+15dBm, DC0V
Insertion loss	
Between On State path	300MHz to 500MHz: <2.5dB
	500MHz to 3GHz: <4.0dB
	3GHz to 6GHz: <5.5dB

General specifications

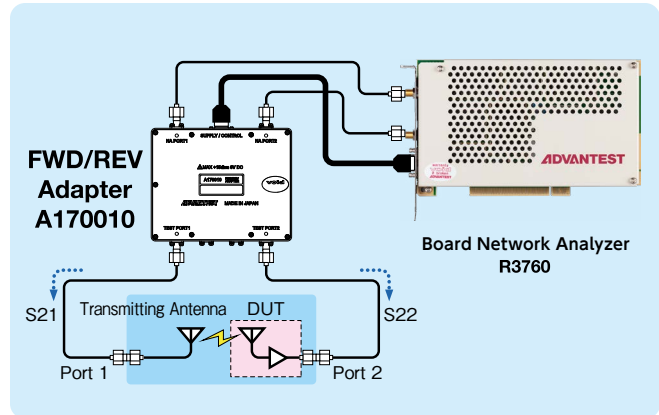
Power supply	+5 VDC (0.5 W) The power supply is supplied from R3760 by accessory cable for parallel I/O.
Power consumption	0.5 W or less
Dimensions, Mass	Approx. 132 (W) x 26 (H) x 126 (D) mm, 1 kg or less

Accessories

DC power and Control cable	1
RF cable	1
Application software (provide in CD-ROM for the operation manual)	1

- Please refer to product manual for complete system specifications.
- Specifications may change without notification.

● Forward/Reverse Adapter A170010



A170010 Key Specifications

Input/Output port

Port numbers	4
Switchable path	On State1: Path between NA PORT1 - TEST PORT1, and path between NA PORT2 - PORT2 are On
	On State2: Path between NA PORT1 - TEST PORT2, and path between NA PORT2 - PORT1 are On
Connector	SMA (female) 50Ω connector

Input/Output signal characteristics (25°C ± 5°C)

Frequency characteristics range	300MHz to 6GHz
Input characteristics	
Maximum input level	0dBm
Absolute maximum input level:	+15dBm, DC0V
Insertion loss	
Between On State path	300MHz to 500MHz: <2.5dB
	500MHz to 3GHz: <4.0dB
	3GHz to 6GHz: <5.5dB

General specifications

Power supply	+5 VDC (0.5 W) The power supply is supplied from R3760 by accessory cable for parallel I/O.
Power consumption	0.5 W or less
Dimensions, Mass	Approx. 132 (W) x 26 (H) x 126 (D) mm, 1 kg or less

Accessories

DC power and Control cable	1
RF cable	1
Application software (provide in CD-ROM for the operation manual)	1

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