

Compact Modular Test System

RCM Series

50Ω 1 to 6000 MHz

The Big Deal

- Customizable Front Panel Layout
- USB and Ethernet Control
- User-Friendly GUI and DLLs Included
- Fast Turnaround



Product Overview

To simplify and accelerate the development and delivery of custom test solutions, Mini-Circuits developed the RCM-series of compact modular test systems. The design consists of a compact half-rack chassis with three open hardware slots on the front panel, each of which may be outfitted with a module comprising your choice of the following programmable attenuators:

- 0 to 30 dB range, 0.25 dB step size, 1 to 6000 MHz
- 0 to 60 dB range, 0.25 dB step size, 1 to 6000 MHz
- 0 to 90 dB range, 0.25 dB step size, 1 to 6000 MHz
- 0 to 110 dB range, 0.25 dB step size, 1 to 6000 MHz
- 0 to 120 dB range, 0.25 dB step size, 1 to 4000 MHz

All models come with USB and Ethernet-TCP/IP (HTTP and Telnet protocols) control options, allowing setup flexibility and easy remote test management. The units may be controlled with our easy-to-install, easy-to-use GUI or through your native test software using the supplied API objects for Windows® environments. The hardware is supplied with a complete set of DLLs for 32-and 64-bit Windows operating systems, programming instructions for both Windows® and Linux® operating systems, and all the accessories you need for immediate use right out of the box!

Key Features

Feature	Advantages
User Configurable Test System	Flexible design allows you to specify the exact test system you need without the cost of unnecessary features.
Compact Half-Rack Chassis	Compact, light-weight design enables easy bench-top use. Shelving in a standard 19-inch equipment rack accommodates two RCM units side by side.
Ethernet-TCP/IP-HTTP and Telnet Protocols (Supports DHCP and Static IP)	RCM Series test racks can be controlled from any Windows®, Mac®, or Linux® computer, or even a mobile device with a network connection and Ethernet-TCP/IP (HTTP or Telnet protocols) support. Using a VPN would allow remote control from anywhere in the world.
USB HID (Human Interface Device)	The RCM Series can also be controlled via USB connection. Plug-and-Play, no driver required. Compatible with Windows® or Linux® operating systems using 32 and 64 bit architecture.
GUI Software CD, programming instructions, USB & Ethernet cables, and 24VDC power adaptor included	The RCM Series comes ready to use out of the box with all software, accessories, and instructions needed for immediate operation included.



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Features

- 3 customizable hardware windows, each of which can be populated with 1 or 2 of the following attenuators:
 - 0 to 30 dB range, 0.25 dB step size, 1 to 6000 MHz
 - 0 to 60 dB range, 0.25 dB step size, 1 to 6000 MHz
 - 0 to 90 dB range, 0.25 dB step size, 1 to 6000 MHz
 - 0 to 110 dB range, 0.25 dB step size, 1 to 6000 MHz
 - 0 to 120 dB range, 0.25 dB step size, 1 to 4000 MHz
- USB and Ethernet-TCP/IP (HTTP and Telnet protocols) control User friendly GUI and DLLs included
- Easy maintenance



Applications

- Automated production testing
- Base-station handover testing
- Cellular handset testing
- Simulation of transmission loss
- Laboratory instrumentation
- Control systems

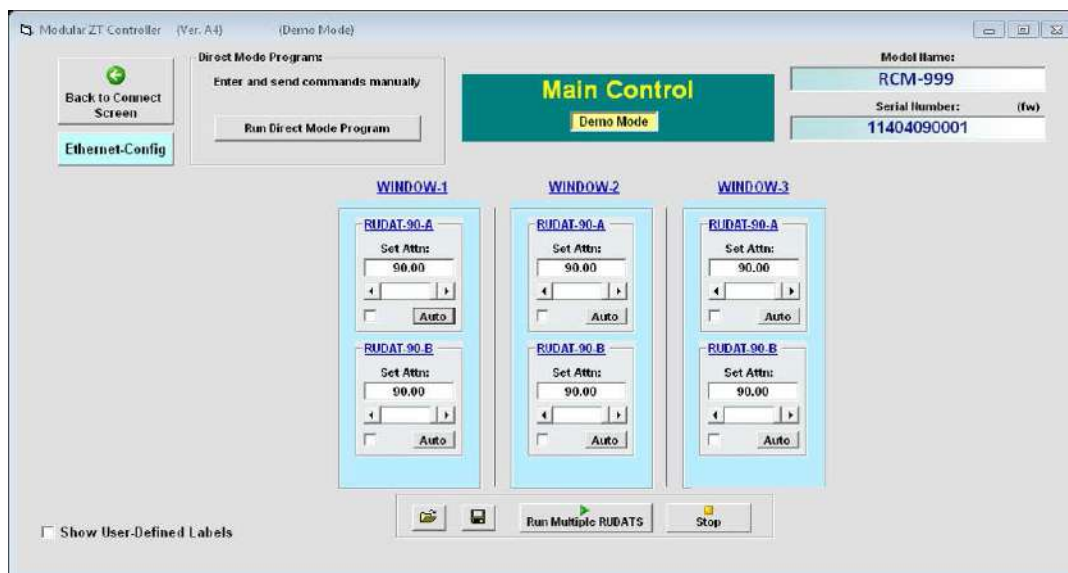
Included Accessories

		Qty
CBL-3W1-XX	AC Power cord (see ordering information)	1
AC/DC-24-3W1	AC/DC 24V Power adapter	1
USB-CBL-AB+	USB Cable (2.7 ft.)	1
CBL-RJ45-MM-5+	RJ45 Cable (5 ft.)	1
HT-4-SMA	SMA cable connector wrench	1

RoHS Compliant

See our web site for RoHS Compliance methodologies and qualifications

Mini-Circuits RCM Series GUI (Graphical User Interface) for USB/Ethernet Control



- For Demo model of any Switch Matrix model select the model name from the drop box and click 'Start Demo' (See user guide for details for details)
- For programming instructions to the Switch Matrix see programming guide and AN-49-001 on Mini-Circuits' website

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RCM Series - Model Selection Guide

RCM Series - 4 Programmable Attenuator Channels

Model Name	Channels	Performance per Channel		
		Frequency (MHz)	Attenuation (dB)	Step Size (dB)
RCM-30	4	1 - 6000	0 - 30	0.25
RCM-60		1 - 6000	0 - 60	0.25
RCM-100		1 - 6000	0 - 95	0.25
RCM-110		1 - 6000	0 - 110	0.25
RCM-120		1 - 6000	0 - 120	0.25

RCM Series - 6 Programmable Attenuator Channels

Model Name	Channels	Performance per Channel		
		Frequency (MHz)	Attenuation (dB)	Step Size (dB)
RCM-30-6	6	1 - 6000	0 - 30	0.25
RCM-60-6		1 - 6000	0 - 60	0.25
RCM-100-6		1 - 6000	0 - 95	0.25
RCM-110-6		1 - 6000	0 - 110	0.25
RCM-120-6		1 - 6000	0 - 120	0.25



See individual **RCDAT attenuator model data sheets at www.minicircuits.com for full specifications and performance data.*

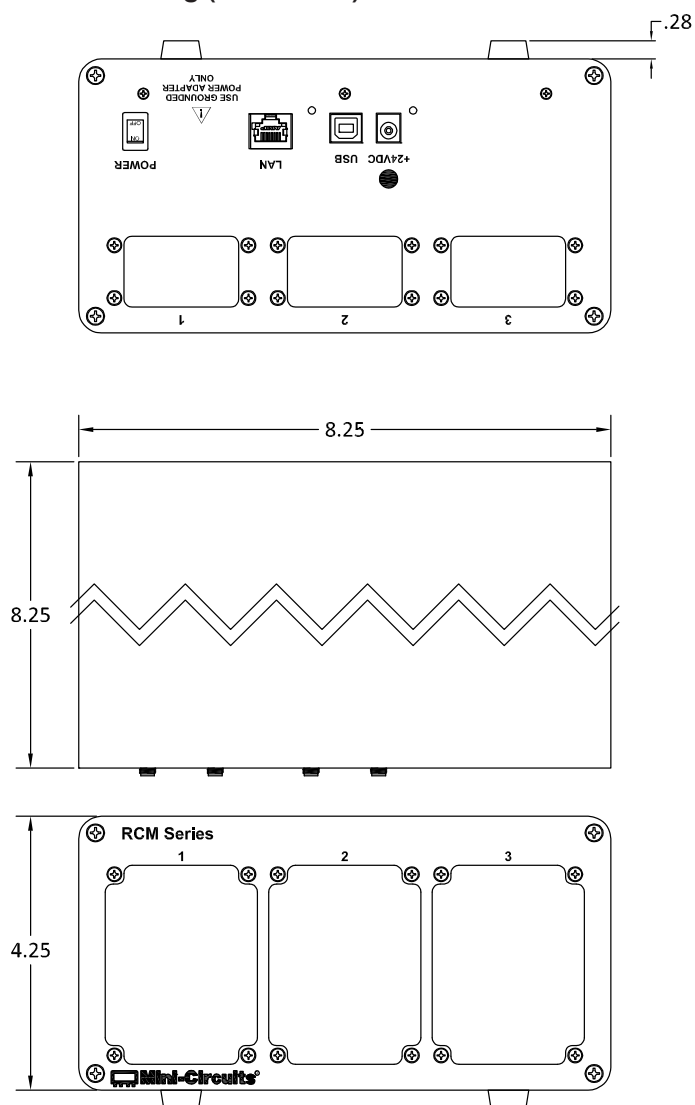
Minimum Software Requirements

Interface	USB HID or HTTP Get/Post or Telnet Protocols
Host operating system - USB Control	Window 32/64 Bit operating system: Windows 98®, Windows XP®, Windows Vista®, Windows 7®, Windows 8® Linux® support: 32/64 Bit operating system
Host operating system - Ethernet Control	Any Windows, Mac, or Linux computer with a network port and Ethernet-TCP/IP (HTTP or Telnet protocols) support
Hardware	Pentium® II or better ¹

Mechanical Specifications

Dimensions	8.25" (w) x 4.25" (h) x 8.25" (d) Mounting feet add 0.28" height
Case Material	Aluminum with protective coating
Front panel	SMA female for all RF connections
Rear panel	SMA female for all RF connections Power ON/OFF switch with indicator light 24 V DC Input USB type B connector for local control RJ45 LAN jack for Ethernet control
Operating Temperature	+5 to +45° C
Control Interface	USB or Ethernet TCP/IP supporting HTTP and TELNET protocols
Software Support	(a) API DLL (ActiveX and .NET) for operating system: 32/64 bit to support typical software platform e.g. C#, C++, LabView and more (b) Mini-Circuits' standard test GUI

Outline Drawing (99-01-2068)



Ordering, Pricing & Availability Information see our web site

Model	Description
RCM Series	USB/Ethernet Modular Test System

Included Accessories	Part No.	Description
	AC/DC-24-3W1	AC/DC 24V _{DC} Grounded Power Adaptor. Operating temperature: 0°C to +40°C, I _{Max} =2.5A
	CBL-3W1-XX	AC Power Cord (<i>Select one power cord from below with each Switch Matrix box</i>)
	RFSW-CD	Software CD
	USB-CBL-AB-3+	2.7 ft (0.8 m) USB Cable: USB type A(Male) to USB type B(Male)
	CBL-RJ45-MM-5+	5 ft (1.5 m) Ethernet cable: RJ45(Male) to RJ45(Male) Cat 5E cable

AC Power Cords ⁶	Part No.	Description
	CBL-3W1-US	Power Cord for United States
	CBL-3W1-EU	Power Cord for Europe
	CBL-3W1-UK	Power Cord for United Kingdom

⁶ Power cords for other countries are also available, if you need a power cord for a country not listed in the table please contact apps@minicircuits.com or check <http://www.minicircuits.com/contact/offices.html> for regional offices e-mail and phone numbers.

Optional Accessories	Description
USB-CBL-3+ (spare)	2.7 ft (0.8 m) USB Cable: USB type A(Male) to USB type B(Male)
USB-CBL-7+	6.8 ft (2.1 m) USB Cable: USB type A(Male) to USB type B(Male)
USB-CBL-11+	11 ft (3.4 m) USB Cable: USB type A(Male) to USB type B(Male)
CBL-RJ45-MM-5+ (spare)	5 ft (1.5 m) Ethernet cable: RJ45(Male) to RJ45(Male) Cat 5E cable

Additional Notes

- Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp

