Multi-Function Switch Systems RCM-200 Series

50Ω

The Big Deal

- Flexible mechanical switch system
- USB and Ethernet Control
- Full software support
- Custom configurations shipped in 2-3 weeks!

Included Accessories

CBL-3W1-XX	AC power cord (see ordering information)
AC/DC-24-3W1	AC/DC 24 V power adapter
USB-CBL-AB-+	USB cable (2.7 ft.)
HT-4-SMA	SMA cable connector wrench

RoHS Compliant
See our web site for RoHS Compliance methodologies and qualifications

Typical Applications

- Automated production testing
- Laboratory testing / R&D
- Switch matrices
- Component characterisation / qualification

Product Overview

Mini-Circuits' RCM-200 series multi-function switch systems offer flexibility and fast turnaround for compact test setups. The design consists of a small, light-weight chassis comprising up to three open hardware windows, providing a choice of mechanical switch options with exceptionally fast turnaround time:

- 6 mechanical SPDT or transfer (DC-18 GHz) switches
- 3 mechanical SP4T (DC-18 GHz) or SP6T (DC-12 GHz) switches
- 2 mechanical SP8T switches (DC-12 GHz)
- Custom combinations of SPDT, SP4T, SP6T and transfer switches

With the use of Mini-Circuits' low cost Hand-Flex™ interconnect cables, multiple matrix configurations can be easily created by the user.

The system can be controlled via USB or Ethernet (supporting both HTTP and Telnet network protocols). Full software support is provided and can be downloaded at any time from https://www.minicircuits.com/softwaredownload/ztm_rcm.html. The package includes our user-friendly GUI application for Windows and a full API with programming instructions for Windows and Linux environments (both 32-bit and 64-bit systems).

Key Features

Feature	Advantages
User configurable test system	Specify the precise switching configurations required in your test setup
Fast turnaround time	2-3 weeks from order to shipment allows test configuration to be rapidly updated without causing production delays.
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.

Configuration

The RCM-200 Series switch platform contains up to three open hardware windows, providing a choice of mechanical switch options with exceptionally fast turnaround time:

- 6 mechanical SPDT or transfer (DC-18 GHz) switches
- 3 mechanical SP4T (DC-18 GHz) or SP6T (DC-12 GHz) switches
- 2 mechanical SP8T switches (DC-12 GHz)
- Custom combinations of SPDT, SP4T, SP6T and transfer switches

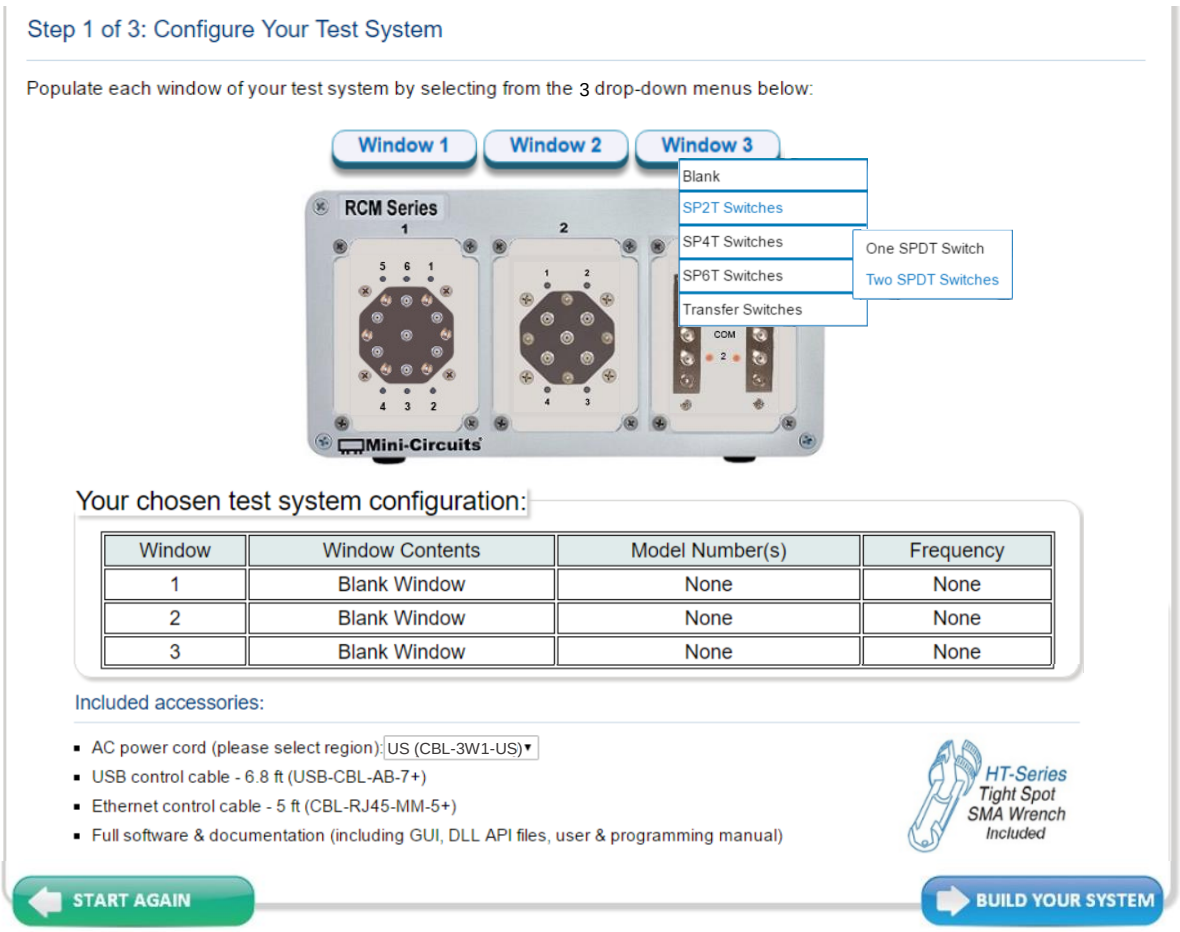
Select from the standard options or configure your custom switch combination in 3 easy steps using our simple online configuration tool at:

https://www.minicircuits.com/WebStore/rcm.html

Step 1: Choose your configuration

Step 2: Enter your contact details

Step 3: We will be in touch within 24 hours!



Typical Electrical Performance for Each Switch (at +25 °C)*

Switch Type	Model Number	Frequency Range (GHz)	Insertion Loss (dB)	Isolation (dB)
SPDT	MSP2TA-18XL+	DC – 18	0.2	85
SP4T	MSP4TA-18+	DC – 18	0.2	85
SP6T	MSP6TA-12+	DC – 12	0.2	90
SP8T	MSP8TA-12-12D+	DC - 12	0.2	90
Transfer	MTS-18XL+	DC - 18	0.2	85

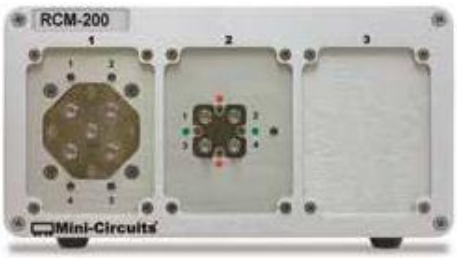
*See individual model data sheets at www.minicircuits.com for full specifications and performance data

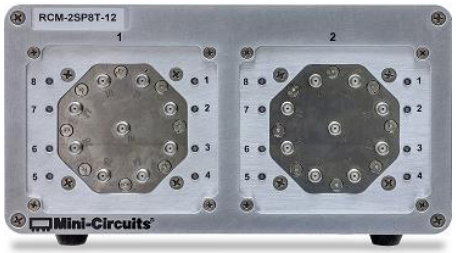
Mechanical Specifications

Dimensions	8.25” (w) x 4.25” (h) x 8.25” (d); mounting feet add 0.28” height
Case	Aluminum with protective coating
Front Panel	SMA female for all RF connections
Rear Panel	a) Power ON/OFF switch with indicator light b) 24 V DC Input c) USB type B connector for local control d) RJ45 LAN jack for Ethernet control
Operating Temp	+5 to +45 deg C

Commonly Requested Switch Combinations

Model Name	Switch Type	Number of Switches	Frequency
RCM-6SPDT-18	SPDT	3	DC - 18 GHz
RCM-3SP4T-18	SP4T	3	DC - 18 GHz
RCM-3SP6T-12	SP6T	3	DC - 12 GHz
RCM-2SP8T-12	SP8T	2	DC - 12 GHz
RCM-1SP8T-12	SP8T	1	DC - 12 GHz





Software & Documentation Download:

- Mini-Circuits' full software and support package including user guide, Windows GUI, DLL files, programming manual and examples can be downloaded free of charge from https://www.minicircuits.com/WebStore/rcm.html.
- Please contact testsolutions@minicircuits.com for support

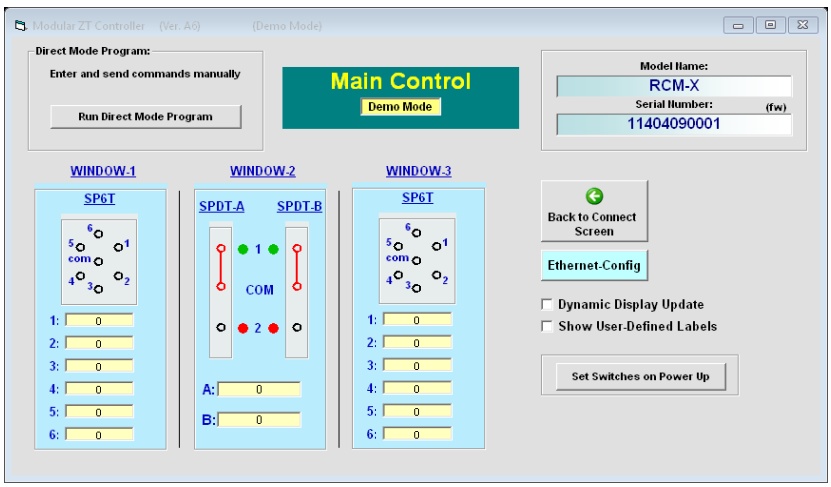
Minimum System Requirements:

Parameter	Requirements	
Interface	USB HID & Ethernet (HTTP Get / Post & Telnet)	
System Requirements	GUI	Windows 98 or later
	USB API DLL	Windows 98 or later and programming environment with ActiveX or .NET support
	USB interrupt API	Linux; Windows 98 or later
	Ethernet	Windows, Linux or Mac computer with a network port and Ethernet TCP / IP support
Hardware	Pentium II or later with 256 MB RAM	

Graphical User Interface (GUI) for Windows

Key Features:

- Control via USB or Ethernet
- Set all switch states
- Monitor switch cycle counters
- Configure Ethernet settings
- Configure initial switch states on power-up



Application Programming Interface (API)

Ethernet Support:

- ASCII commands via HTTP or Telnet
- Supported by most common programming environments

USB Support (Windows):

- ActiveX COM DLL file for creation of 32-bit programs
- .NET library DLL file for creation of 32 / 64-bit programs
- Supported by most common programming environments (refer to application note AN-49-001 for summary of supported environments)

USB Support (Linux):

- Full control in using USB interrupt commands

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 (*Select one power cord from below with each Switch Matrix box)*
	USB-CBL-AB-3+	2.7 ft (0.8 m) USB Cable: USB type A(Male) to USB type B(Male)

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
	CBL-3W1-AU	Power Cord for Australia and China
	CBL-3W1-IL	Power Cord for Israel

[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 testsolutions@minicircuits.com.

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+	5 ft (1.5 m) Ethernet cable: RJ45(Male) to RJ45(Male) Cat 5E cable

Additional Notes

A. 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.

B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.

C. 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