Solid-State Switch Systems ZTS Series

Product Overview

Mini-Circuits' ZTS series platform allows multiple solid-state switch types to be combined and integrated into a compact rack-mount package with control through a single USB / Ethernet interface. Common features of all the available solid-state switch options are wide bandwidth, fast switching and high isolation. The available switch types include:

- SP16T (10 to 8000 MHz)
- SP8T (10 to 6000 MHz)
- SP4T (2 to 6000 MHz)
- SPDT (DC to 8000 MHz)

Each ZTS system can be configured according to your requirements, with switches mounted on the front or rear panels and RC connections using SMA or N-type female connectors.

The system can be controlled via USB or Ethernet (supporting both HTTP and Telnet network protocols). Full software support is provided, including 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).

Please contact testsolutions@minicircuits.com for support

Key Features

Feature	Advantages
Custom switch configurations	A wide range of SPDT, SP4T, SP8T and SP16 T switch combinations can be supported, as required.
High performance switches	Mini-Circuits' high performance "H-Series" solid-state switches are used, providing a unique combination of high isolation and fast switching speeds.
USB & Ethernet control	USB HID and Ethernet (HTTP / Telnet) interfaces provide easy compatibility with a wide range of software setups and programming environments
Full software support	User friendly Windows GUI (graphical user interface) allows manual control straight out of the box, while the comprehensive API (application programming interface) with examples and instructions allows easy automation in most programming environments

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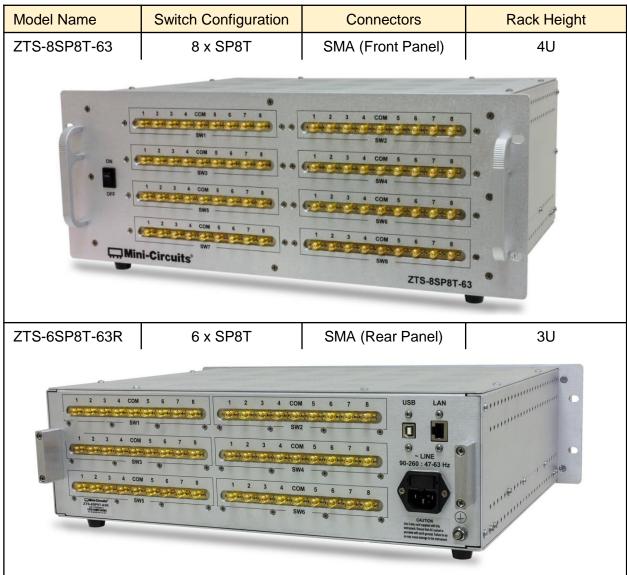
Mechanical & Control

Dimensions	19" width x 13" depth x 2-6U height (dependent on chosen configuration)
Case Material	Aluminum (with protective coatings to prevent corrosion)
Feet	Standard and removable by unscrewing from the bottom
Control Interface	USB and Ethernet TCP/IP supporting HTTP and Telnet protocols
Power supply	AC mains power supply (90-260 V, 47-63 Hz)
Operating Temperature	0° to +50° C

Switch Options

Model Name	Switch Type	Frequency (MHz)	Input Power (dBm)	Typical Isolation (dB)	Switching Time
USB-1SP8T-63H	1 x SP8T	10-6000	+30	80	250 ns
Full Specifications: https://www.minicircuits.com/WebStore/dashboard.html?model=USB-1SP8T-63H					
U2C-1SP4T-63H	1 x SP4T	2-6000	+30	80	250 ns
Full Specifications: https://www.minicircuits.com/WebStore/dashboard.html?model=U2C-1SP4T-63H					
USB-4SP2T-63H	4 x SPDT	10-6000	+30	80	250 ns
Full Specifications: https://www.minicircuits.com/WebStore/dashboard.html?model=USB-4SP2T-63H					
USB-2SP2T-DCH	2 x SPDT	DC-8000	+35	50	14 µs
Full Specifications: https://www.minicircuits.com/WebStore/dashboard.html?model=USB-2SP2T-DCH					
U2C-1SP2T-63VH	1 x SPDT	10-6000	+36	110	700 ns
Full Specifications: https://www.minicircuits.com/WebStore/dashboard.html?model=U2C-1SP2T-63VH					

Example Configurations

Model Name	Switch Configuration	Connectors	Rack Height
ZTS-8SP8T-63	8 x SP8T	SMA (Front Panel)	4U

| ZTS-6SP8T-63R | 6 x SP8T | SMA (Rear Panel) | 3U |

Software Specifications

Software & Documentation Download:

- Mini-Circuits' full software and support package including user guide, Windows GUI, DLL files, programming manual and examples are available on request
- Available for download from https://www.minicircuits.com/softwaredownload/multissw.html

Minimum System Requirements:

Parameter	Requirements	
Interface	USB HID & Ethernet (HTTP & Telnet)	
System Requirements	GUI	Windows 98 or later
	USB API DLL	Windows 98 or later and programming environment with ActiveX or .NET support
	USB Direct Programming	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	

Application Programming Interface (API)

Ethernet Support:
- Simple ASCII / SCPI command set for attenuator control
- Communication 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):
- Direct USB programming using a series of USB interrupt codes

Full programming instructions and examples available for a wide range of programming environments / languages.

Graphical User Interface (GUI) for Windows - Key Features

- Connect via USB or Ethernet
- Run GUI in "demo mode" to evaluate software without a hardware connection
- View and set all switch states
- Configure Ethernet settings
- Upgrade firmware
- Send SCPI commands
- View temperature & fan status