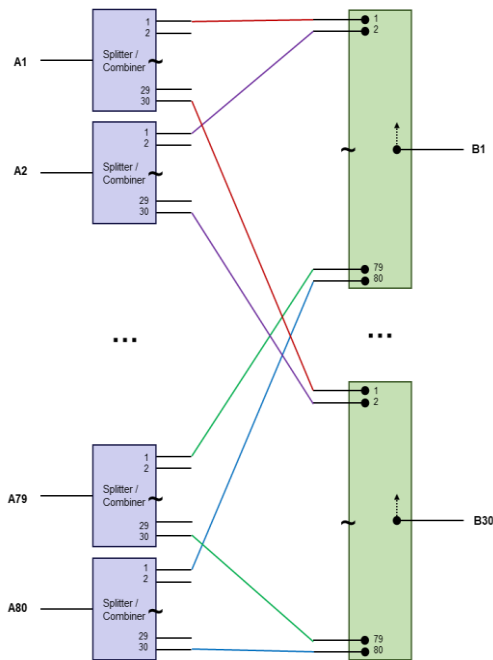


80x30 Non-Blocking Switch Matrix

ZT-80X30NB

50Ω 600-6000 MHz



* Functional block diagram

Typical Applications

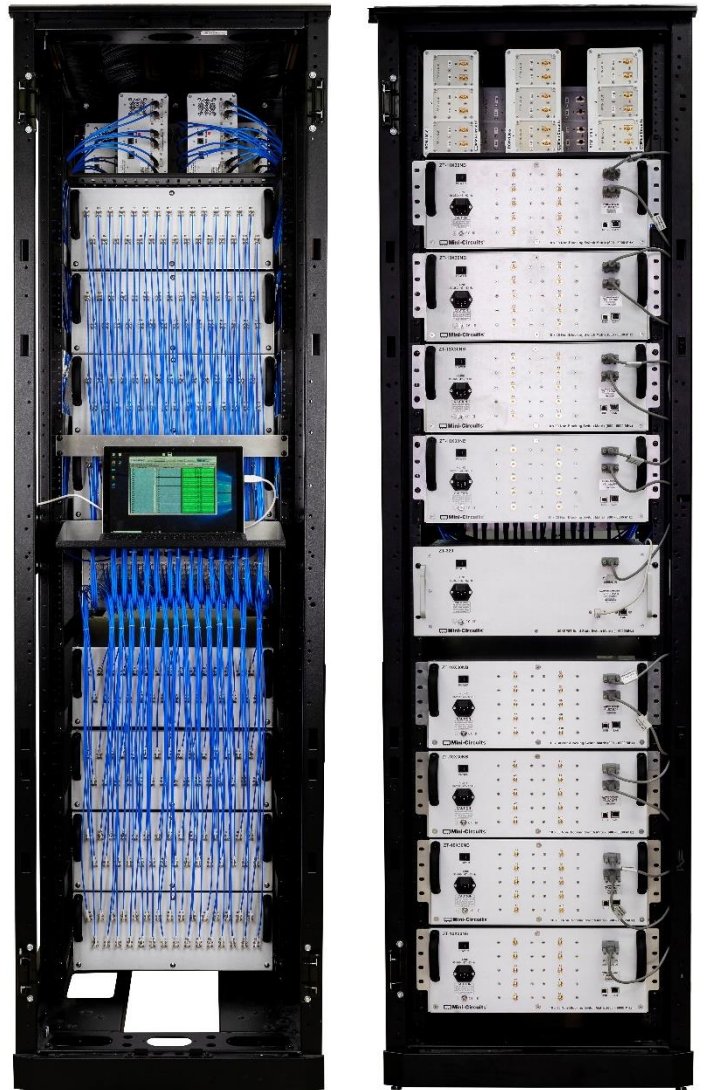
- Cellular base-station certification
- Cellular handset qualification
- Production testing of multi-port devices
- Testing of multi-channel MIMO systems

Product Overview

Mini-Circuits' ZT-80X30NB is a high performance, 80 by 30 non-blocking switch matrix, covering the key worldwide telecoms bands from 600 MHz to 6GHz. The system has been developed in a modular format for ease of deployment and expandability, and can be quickly installed on site by Mini-Circuits' expert engineers in a standard 42U rack cabinet. 30 "input" RF ports (SMA) are accessible from the front of the cabinet with the 80 "output" RF ports accessible from the rear.

This bi-directional switch matrix can be programmed to connect any of the 30 "B" ports to any combination of the 80 "A" ports, in a non-blocking configuration (allowing all "B" ports to connect simultaneously to the same "A" port). In addition, programmable attenuators can be included as an option on the 30 "A" ports, allowing the signal loss to be independently varied by path, from 0 to 95 dB, in 0.25 dB steps. These combined features make the matrix ideally suited to a wide range of multi-user and multi-device test systems, particularly in the cellular base-station test market where multiple base-stations, access points and user equipment can be routed and re-routed between each other, with additional simulation of transmission loss.

The complete system is stacked for control via a single USB or Ethernet interface (supporting SSH, HTTP and Telnet 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.



System Mechanical Specifications

Dimensions	19" (W) x 38U (H) x 24" (D)
RF Connectors	SMA female
Power supply	9 x AC mains power supply, 90-260 V, 47-63 Hz (to each module)
Operating temp	0° to +50° C

Included Modules

Model Name	Quantity	Rack Height	Description
ZT-320	1	4U each	30 x SP8T Solid-State Switch Rack
ZT-10X30NB	8	4U each	10 x 30 Non-Blocking Switch Matrix
086 Series	240	N/A	RF Interconnect Cables

ZT-10X30NB: <https://www.minicircuits.com/pdfs/ZT-10X30NB.pdf>



ZT-320: <https://www.minicircuits.com/pdfs/ZT-320.pdf>



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
- Please contact testsolutions@minicircuits.com for support

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 paths with simple button clicks
- Manually set or step the attenuation at any port or group of ports
- Graphically view the active switch paths
- Configure Ethernet settings
- Upgrade firmware
- Send SCPI commands for custom control

