

Introduction

The purpose of these instructions is to introduce the user to Mini-Circuits' ZTM2 Series GUI. This GUI is meant to be used in conjunction with our ZTM2 line of modular test systems.

When you first open the GUI, you'll see the above window. By default, only the Admin Profile is available and no password is required. You can create more later from within the GUI when you're signed in as the Admin.

🖏 Mini-Circuits ZTM2 (Ver. X0)	_	\times
Select Profile: User Name: Admin		
Password:	Start	

Once signed on, the main screen of the GUI will appear. There are multiple sections to this GUI which will be explained below.

The Current Switch States section simply shows all the switches in the connected unit and their current states.

	Mini-Circuits ZTM2 (Ver. X0)					-	- 🗆 X]
	Mini-Circuit	e Main	Control		Switch Ty	pe State	Count	
			control	Help		PDT 1: Port 1	Count	
				User: Admin		P4T 0: Disconnected		
	Model Name	Serial Number			3: Switch 3 M			
	ZTM2	Demo Mode	- P	Change User Profile 😽		P6T 0: Disconnected		
Unit/Connection	Protocol	IP Pas	sword			P8T 8: Port 8	-	
Information						PDT 1: Port 1		
internation				Profile Management	7: Switch 7 SF	P4T 0: Disconnected		
	Connection Status	Firmware	hernet Config	Prome management	8: Switch 8 M	TS 1: Port 1		
	Demo Mode	Upgrade			9: Switch 9 SF	P6T 0: Disconnected		
					10: Switch 10 SF	P8T 8: Port 8	-	
	Switch 1	Switch 2	Switch 3	3 Switch 4	11: Switch 11 SF	DT 1: Port 1	-	Current
			,		12: Switch 12 SF	P4T 0: Disconnected	· ·	
	Switch 5	Switch 6	Switch 7	7 Switch 8	13: Switch 13 M			Switch States
C 11 J	Switch 9	Switch 10	Switch 11	1 Switch 12		P6T 0: Disconnected	-	
Switch	511101 5	54410				P8T 1: Port 1	-	
Buttons	Switch 13	Switch 14	Switch 15	5 Switch 16		PDT 1: Port 1	-	
	0.11.17	0.11.1.40		a a ½ 400		P4T 0: Disconnected	•	
	Switch 17	Switch 18	Switch 19	9 Switch 20	18: Switch 18 M		•	
	Switch 21	Switch 22	Switch 2:	3 Switch 24		P6T 0: Disconnected	· ·	
]			P8T 5: Port 5		
	Manual Commands					PDT 1: Port 1	· ·	
						P4T 0: Disconnected	· ·	
	Switch Commands	Switch State Queries	Switch Co	ounters System Queries	23: Switch 23 M		· ·	
Manual			-	· · · · · ·	24: Switch 24 SF	P6T 0: Disconnected	-	
Commands	Command X							
	Command 🔨			- SEND				
	J			- SEND	1			
					Temperature / Fans Status			
	Command History X							
				^	Temperature Normal			
					Fan1 operation OK			
				~	Fan2 operation OK Fans state OFF			
	<			>	Fans state OFF			
	P							4

Model Name

Connection State

emo Mode

Protocol

ZTM

Main Control

Help

Prompt Ethernet Connection

The *Help* button brings at the top of the GUI brings up the below window with instructions on how to connect to the unit via Ethernet and some example commands to control the unit, it also includes a button to bring up the unit's User Manual.

C3. ZTM2 Help (Ver. X0)			– 🗆 X	
Read Me	ZTM2 Help (Ver. X	(0)	ZTM2 Manual Guide	Use ⁄Ian
Controlling the Device with	JSB/LAN/Ethernet, Protocols Supporte	ed are HTTP(Get/Post) and TELNET:	^	
	vice by Ethernet can be via either static IP Address using TCP/IP Port 80 for H	c, or dynamic IP Address. TTP Protocol and Port 23 for Telnet Protocol.		
		ateway and a valid local IP address by nly parameters the user can control in this m	ode are	
1. HTTP Port - The TCP/IP May be set by user to de		e with the network when operating via HTTP o	control.	
Note: If HTTP PORT is othe Telnet Port is 23 and c	er than 80 it must be included in every l an not be changed.	HTTP command, see example below.		
2. Password - a Password (Factory default is not to use	(up to 20 characters) can be used to se a a password.	ecure commands to the device.		
Static IP: All parameters m	ust be specified by the user using the U	JSB Interface:		
2. Subnet Mask - The Subn	ess of the device - must be a legal and et Mask of your Local Network. letwork Gateway of your Firewall.	unique IP in the local Network.		
Tip: In Windows the Subnet	Mask and Network Gateway can be fo	ound by running the command "IPConfig".		
4. HTTP Port - The TCP/IP	Port the device will use to communicate	e with the network when operating via HTTP of	control.	
Note: If HTTP PORT is othe Telnet Port is 23 and c	er than 80 it must be included in every l an not be changed.	HTTP command, see example below.		
5. Password - a Password (Factory default is not to use	up to 20 characters) can be used to se a password.	ecure commands to the device.		
Note: clicking on on the arro Dynamic configuration to th	w between the Dynamic and static IP e static configuration.	configurations will copy the current		
	utton will store all the Ethernet paramet ers to come into effect immediatly.	ters in the device and reset the		
			~	
Serial Number		Serial Numbe	r	
Demo Mode	• 👂			 6
IP	Password	1170000000		 1
		11702280003 11702280003		
Firmware	Ethernet Config	Demo Mode) - II ²¹	

The top left of the GUI is the Unit/Connection Information. This section provides useful information involved with the unit connected and how it's connected. It is also where you'll select the unit you wish to connect to and via which Protocol.

Pressing the *Magnifying Glass* button expands the drop down menu with available connection options. If you have the unit connected, the available serial number / connection protocol combinations will be shown so you can initiate the connection. You can also select to go into Demo Mode to evaluate the software without a unit connected.

When connected via USB, you can upgrade the firmware and edit the Ethernet configuration of the unit. Please contact Mini-Circuits (<u>testsolutions@minicircuits.com</u>) for firmware upgrade requirements.

All ZTM2 Series modular switch systems are configured with DHCP enabled by default so in most cases a dynamic IP address will be issued by the network's DHCP server on connection. If you wish to change the system's Ethernet configuration (for example to assign a static IP address) then you need to connect the system via the USB connection and click on the GUI's **Ethernet Config** button to bring up the Ethernet Device – Configuration window.

Ethernet Device - Configuration (USB Connection is Required	l)	×
Model Name: ZTM2 Serial Number: 11702280003	✓ Use DHCP (Dynamic IP) Current Configuration: IP Address: IP2.168.6.124	Static Configuration: IP Address:
Help Examples for HTTP Commands:	Subnet Mask: 255.255.255.0 Network Gateway: 192.168.6.254 MAC Address: D0-73-7F-98-2C-03	Subnet Mask: 255 255 0 0 Network Gateway: 10 0 255 250
http://10.0.100.100/CC=2 http://10.0.100.100/CD=4 http://10.0.100.100:800/PWD=1234&CD=2 http://10.0.100.100:800/PWD=1234&GetSSWA http://10.0.100.100:800/PWD=1234&SN?	TCP/IP Port: 80	Store Ethernet-Configuration in the Device Memory Now:
Note: If TCP/IP Port is 80 it may be ommited from the HTTP command.	☐ Use Password 1234 (max 20 characters)	

In this window you can either select DHCP or set a static configuration. If DHCP is enabled but the IP Address in the Current Configuration section states "0.0.0.0" it indicates that the system has not yet been assigned an IP address by the network; wait a moment and then click the **Refresh** button to try again. If an IP address still cannot be retrieved, please check the Ethernet connection and consult your network administrator.

The Ethernet configuration screen also allows you to change the TCP/IP Port of the connection and set a password.

Once everything is properly is set, please press the Store... button so that your settings are saved.

🔁 Ethernet Configuration	1
	l
Serial Number:	l
11702280003	l
IP:	L
192.168.6.124	
Port:	
80	
Password:	
 Use HTTP 	
 Use Telnet (port 23) 	
Connect	
	L

When you choose to connect via Ethernet on the main screen, the window on the left will appear. This screen is where you'll type in the password for your unit (if set). The IP and Port should auto populate, but if you see an error you can change it to the correct values.

You can also choose to control it via HTTP or by Telnet here.

User: Admin	
Change User Profile	47
Profile Management	

The User Profile Settings is where you can refresh, edit, and change your profile, edit your switch and port names, as well as set up your switch sequences.

As the Admin, when you press the *Profile Management* button, the below window comes up. This is where you can create new Profiles, set passwords for these profiles, and also edit the switches available to each profile.

🖱. User Profile Management	2 Ballin 2	X
Permissions File Location:	,	ew Load
User Profiles:		
Profile Name	Password	Configuration
Admin		Edit
		Edit
Save	Save As	Cancel

Initially you'll have to press **Save** to create a new permissions file. You'll also have to select the location to save this file. To clear the current settings and create a new permissions file, simply press **New**. Press **Load** to load a pre-existing file or press **Save As...** to save the current permissions file in a new location and/or under a different file name.

Permiss	ofile Management ions File Location: Wallace_T\Documents\ZTM	-200 Permissions File.ZT	New M200	Load
User Pro	ofiles: Profile Name	Password	Config	uration
Admin		istrator	Edit	
Fruits		Veggies	Edit	
			Edit	
			Edit	
	Save	Save As	Canc	el

In the above example, the permissions file has been saved as "ZTM2 Permissions File" in the local user's Documents folder. A password has been entered for the Admin Profile so that standard users are not able to log in and overwrite these settings. A new user profile (called "Fruits") has also been created by entering the username and password on one of the empty lines below the Admin user.

Pressing the "Edit..." next to a profile brings up the above window. This shows the GUI settings created for the new user "Fruits". The user is also able to access this screen directly by clicking the *GUI Configuration* button on the main GUI screen. The greyed out boxes simply indicate that that particular switch does not have those ports (Switch Number 12 is labelled Switch 9B, it's a SPDT so it cannot disconnect and only has 2 ports).

The Admin can enable or disable access to each individual switch for any user profile by clicking in the "Switch Active?" column, toggling the state between "Yes" and "NO".

You can change the initial states of each switch by clicking the corresponding numbers under the "Initial State" column. Selecting a port number (1 to 8) specifies which port the switch's Com will connect to when the GUI is launched. Selecting -1 means the switch will remain in whatever state it was already in.

You can also change the label of each switch and their ports, just highlight the switch or port and then type in whatever label you wish to give it. For example, in the screenshot below Switch 1 has been renamed as "Apple", Switch 2 as "Banana" and Switch 3 as "Watermelon". The port names have also been updated to match. "Apple" has an initial state of -1 (will remain whatever state it was last set to), "Banana" is set to 0 (disconnect), and "Watermelon" is set to 1 (Port 1, labelled "Watermelon 1".

Switch Number	Switch Label	Switch Active?	Initial State **	State 0	Port 1
1	Apple	Yes	-1	Disconnected	Apple 1
2	Banana	Yes	0	Disconnected	Banana 1
3	Watermelon	Yes	1	Disconnected	Watermelon 1

Please remember to press Save before closing the window, or else you'll lose everything you've changed.

For Admins, at the top of the window you can decide whether or not to allow the user to use Manual Commands to control the switches. By default this is disabled for all users. This means, the user can only use the Switch Buttons available on the main screen or the Switch Sequence function.

Apple	Banana	Watermelon	No Switch
0 Disconnected	No Switch	No Switch	No Switch
Apple 1	No Switch	No Switch	No Switch
2 Port 2 nds			
3 Port 3	_		
4 Port 4	Switch State Queries	Switch Counters	System Queries
5 Port 5			⊻
6 Port 6			

On the main GUI screen, the Switch Buttons section provides a simple method to control each switch manually. Simply press on the switch you wish to control, and then press on the port you want that switch to go to. The above window corresponds to the Ports of Switch 1. Currently, Switch 1 is set to Port 6.

Since the above examples is logged into the Fruits Profile, only the first 3 switches are visible (notice the labeling mentioned in the previous section. All other switches are inactive since this user profile does not have permission to access them.

	man	us				
witch Commands	•	₽	Switch State Queries	Switch Counters	System (Queries
SP6T:1:STATE:1 SP6T:1:STATE:2 SP6T:1:STATE:3	Î				•	SEND
SP6T:1:STATE:5 SP6T:1:STATE:6						
5		P6T:1:STATE:5 P6T:1:STATE:6	P6T:1:STATE:5 P6T:1:STATE:6	P6T:1:STATE:5 P6T:1:STATE:6	P6T:1:STATE:5 P6T:1:STATE:6	P6T:1:STATE:5 P6T:1:STATE:6

The Manual Commands section is only active if the profile was given authority to access it via the GUI Configuration by the Admin. This section provides an interface for sending ASCII / SCPI text commands to the system directly. Most commands / queries can be accessed through the drop-down menus.

For a full description of the commands you can click on *Help* at the top of the main screen or consult the Programming Manual.

Conclusion

This concludes the instructions for using the Multi-Switch Controller GUI. For further assistance please contact the following:

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