®

Quick Install Guide

ReadyLINK

Compex
24-Port 10/100 + 1
Modular Exp Slot
Web-Managed
Switch

SXP2224WM (RoHS-compliant)

Version 1.2

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Compex 24-Port 10/100 + 1 Modular Exp Slot
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1. Introduction

Figure 1.1   Compex SXP2224WM

The Compex SXP2224WM is a 24-ports 10/100 Mbps + 1 modular slot web-managed switch that offers fiber or copper-based gigabit connectivity through its expansion module. The SXP222WM comes with enhanced features that can be catered for today's most demanding Ethernet-based switching applications. It is the most ideal workgroup switch for any small and medium enterprises.

2. Packaging Content

♦ 1 x Compex SXP2224WM unit
♦ 1 x power cord
♦ 1 x RS232 console straight cable
♦ 2 x brackets with 8 screws
♦ 1 x Quick Install Guide with Warranty card
♦ 1 x Product CD ROM

3. Panel Views

Figure 3.1   Front Panel View of Compex SXP2224WM
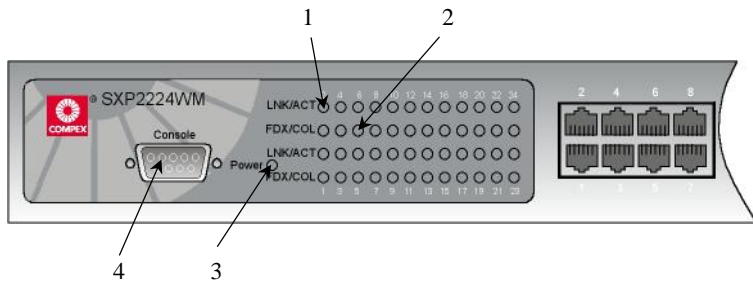

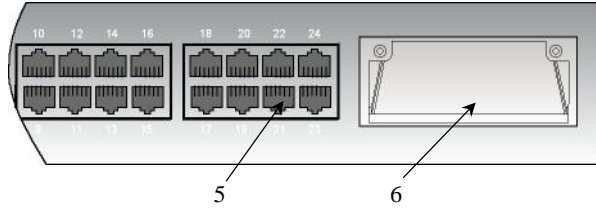**Figure 3.2   Front Panel View of Compex SXP2224WM (Section #1)**

Figure 3.3   Front Panel View of Compex SXP2224WM (Section #2)

Figure 3.4   Back Panel View of Compex SXP2224WM

4. **Panel Features**

	Features	Status and Indication	
1	**LNK/ACT LEDs**	Steady Green	The port is connected to the switch.
		Blinking Green	The port is transmitting or receiving data.
		Off	There is no connection established in the network.
2	**FDX/COL LEDs**	Steady Amber	The port is operating in Full Duplex mode.
		Off	The port is operating in Half Duplex mode.
		Blinking Amber	Collision occurs in the network segment of the respective port.
3	**Power LED**	Steady Green	Power is supplied to the switch.
		Off	No power is supplied to the switch.
4	**Console Port**	A serial 9 Pin (DB9) RS232 straight socket is connected to PC COM Port for monitoring the switch.	
5	**24 RJ45 Management Ports**	Connect to web-browser via RJ45 UTP/STP network cable • 10Base-T • 100Base-TX • Auto-negotiation	
6	**Open Expansion Module Slot**	Types of Optional Module used: • SXM1000T/2: 2 Gigabit Copper Module • SXM1000T/MGBIC: 1 Gigabit Copper + 1 GBIC (3.3V) slot	
7	**Power Socket**	Flexible power input (range 100VAC ~ 240VAC, 50~60Hz)	

5. Specifications

•	**Industry Standards**	Complies with • IEEE 802.3 10Base-T • IEEE 802.3u 100Base-TX • IEEE 802.3ab 1000Base-T • IEEE 802.1p Priority Queuing • IEEE 802.3z 1000Base-SX
•	**Safety Certifications**	• CE Mark • FCC Part 15 Class A • Gost • C-Tick • UL
•	**Interface**	• 24-Port auto-negotiating • 10Base-T • 100Base-TX
•	**Protocol**	CSMA/CD
•	**Speed**	• 10Mbps • 100Mbps
•	**LED Indicators**	• LNK/ACT • FDX/COL • Power
•	**Optional modules**	• SXM1000T/2: 2 Gigabit Copper Module • SXM1000T/MGBIC: 1 Gigabit Copper + 1 GBIC (3.3V) slot
•	**Switching Method**	Store and Forward

• Management	• Console Interface • Web-based Management Interface
• Transfer Rate	• 14,880pps Ethernet port • 148,800pps Fast Ethernet port • 1488,000pps Gigabit port
• Transmission Mode	• Full Duplex • Half Duplex
• MAC Address Table	6K
• Packet Buffer	3Mbits
• Virtual LAN	Port-based VLAN with VLAN ID up to 255
• Port Trunking	Provide 7 Trunk groups of a maximum of 4 member ports (minimum 2 member ports) within 24 ports.
• Port Mirroring	Global System support 3 mirroring type RX, TX and both packet. The maximum of mirror entries up to 25.
• Priority Queuing	Supports 8 priority levels ID for high/low priority queue.
• Physical Dimension	440mm x 161mm x 44mm (L x B x H)
• Environmental Requirements	Operating temperature: 0ºC to 45ºC Storage temperature: -20ºC to 70ºC Operating humidity: 10% to 90% RH Storage humidity: 5% to 90% RH RH = Relative Humidity

6. Hardware Installation

Compex SXP2224WM is suitable for corporate network installation. Compex SXP2224WM can either be placed on a flat surface or mounted on a 19-inch rack. The following steps illustrate the proper installation.

6.1. Desktop installation

1. Unpack Compex SXP2224WM.

2. Place it near to a power outlet. Ensure that there is sufficient space for heat ventilation.

3. The surface to place Compex SXP2224WM should be clean, smooth, level and sturdy.

4. Ensure there is enough spacing around the unit to allow attachment of network cables.

5. Attach the rubber foot at the bottom of the metal chassis.

6. Insert the power cord into the socket located at the back of Compex SXP2224WM.

7. Use a RJ45 network cable and insert to any of the port and power on the switch.

8. Check that the **Power** LED at the front panel of Compex SXP2224WM has lighted up.

9. The unit is now ready to use.
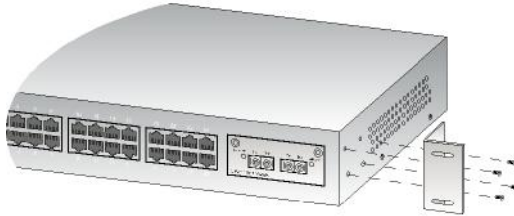
6.2. Rack installation

Figure 6.1   Secure brackets onto Compex SXP2224WM

1. Position one bracket to align with the holes on one side of Compex SXP2224WM and secure it with the smaller bracket screws (3mm diameter) as shown in Figure 6.1. Then attach the other bracket to another side of it.
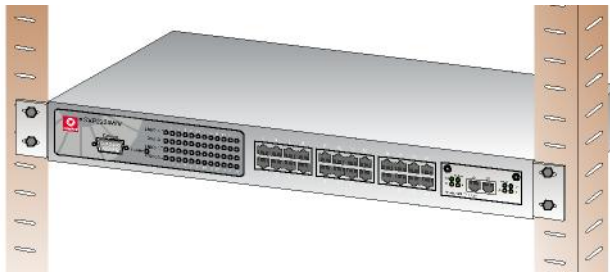
Figure 6.2   Compex SXP2224WM on rack

2. After attaching both mounting brackets, position the device in the rack by lining up the holes in the brackets with the appropriate holes on the rack. Secure it to the rack using the rack-mounting screws (8mm diameters) with a screwdriver.

3. Insert the power cord to the socket located at the back of Compex SXP2224WM.

4. Use a RJ45 network cable and insert to any of the port and power on the switch.

5. Check that the **Power** LED at the front panel of Compex SXP2224WM has lighted up.

6. The unit is now ready to use.

NOTE	**NOTE** Please allow at least 10 cm of clearance on the front and back of the switch for proper ventilation. This is especially important for enclosed rack installation.

6.3. Installation of Expansion Module

A series of optional expansion modules are available for Compex SXP2224WM. You need to install the modules before turning on Compex SXP2224WM. Please refer to **"Specifications"** for the types of optional modules to be used.

Remove the metal plate from the expansion slot.
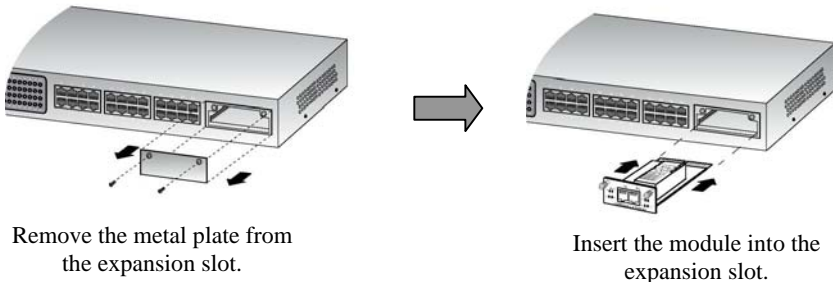
Insert the module into the expansion slot.

Figure 6.3   Installing expansion module

1. Power off Compex SXP2224WM.

2. Unscrew and remove the metal plate from the expansion slot.

3. Insert the module carefully into the expansion module window and push it along the rail until it is firmly inserted into the connector of the PCB board of Compex SXP2224WM.

4.   Tighten the screws on the module.

6.4.   Removal of Expansion Module

1.   Power off Compex SXP2224WM and remove any cable connecting to the module.

2.   Loosen the captive screws which are used to secure the module and slide the module out completely from the window.

3.   Cover the empty expansion module window with the metal plate and tighten it up with the screws provided.

7.   <u>Configuration of Compex SXP2224WM through Hyper Terminal</u>

We can configure Compex SXP2224WM through Hyper Terminal by connecting one end of RS232 crossover console cable to a PC, and the other end to Compex SXP2224WM. You need to set your configuration as:

Bits per seconds: 9600
Data Bits: 8
Parity: none
Stop bits: 1
Flow Control: none

The authentication page will appear and prompt you to enter your password. The default Username and Password is "*admin*".

Figure 7.1   Authentication Page in Hyper Terminal screen

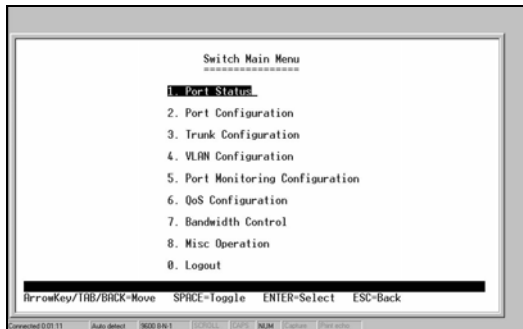The main page will appear as shown. From here, you can configure Compex SXP2224WM easily.

Figure 7.2   Main Page in Hyper Terminal

8. <u>Configuration of Compex SXP2224WM using Web-based Interface</u>

An Internet browser would be used to configure Compex SXP2224WM. The most commonly used browsers are Netscape Navigator, Netscape Communicator and Microsoft Internet Explorer as they support frames and Java. We recommend you to use the Netscape Communicator V4.06 or higher, or Microsoft Internet Explorer 4.0 or higher.

Start by running your browser on a workstation connected to Compex SXP2224WM. Enter URL Address, http://192.168.100.128.

8.1. **Login to Web Browser Interface**

The following is a list of ways for different browsers to access the web-based management interface. Follow the instructions of the browser that you will be using.

<u>For Netscape Navigator</u>

1. Select the **File** menu and click on **Open Location**.

2. In the **Open Location** dialog box, enter the IP address http://192.168.100.128. The switch default management IP address is set to 192.168.100.128.
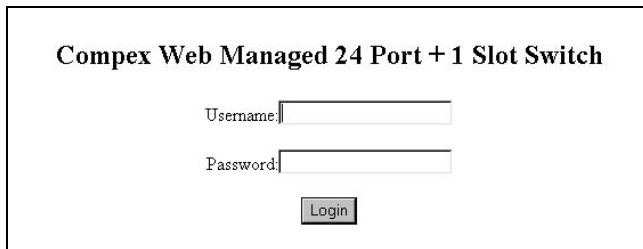
3. Click on the "Open" button.

<u>For Netscape Communicator</u>

1. Select the **File** menu, and then press **Open Page**.

2. In the **Open Location** dialog box, enter the IP address http://192.168.100.128. The switch default management IP address is set to 192.168.100.128.

3. Ensure that the Navigator radio button is selected. Click on the "Open" button.

For Microsoft Internet Explorer

1. Select the **File** menu, then select **Open**.

2. In the **Open Location** dialog box, enter the IP address http://192.168.100.128. The switch default management IP address is set to 192.168.100.128.

3. Click on the "OK" button.

The authentication page will appear and prompt you to enter your password. The default Username and Password is "*admin*". If you wish to set a password, please refer to "**Changing Password"** section of the User's Manual. Click "Login" button to access to the web interface.

Compex Web Managed 24 Port ＋1 Slot Switch

Username:
Password:
Login

Figure 8.1   Authentication Page

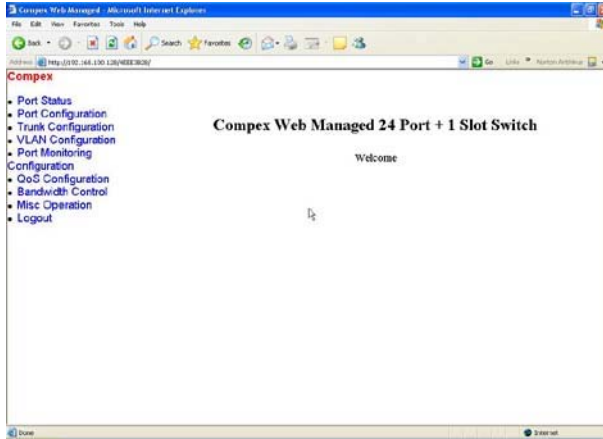After logging to the Management System, the Main Page of Compex SXP2224WM will appear as shown in Figure 8.2.

Figure 8.2   Main Page of Compex SXP2224WM

The overall descriptions for individual sub-functions are listed as shown:

Menu	Description	Reference in User's Manual
Port Status	View every port's status that depends on the user setting and the negotiation result.	Section 6.1
Port Configuration	Change each port's parameters.	Section 6.2
Trunk Configuration	Configure trunk group.	Section 6.3
VLAN Configuration	Create, modify, delete or configure VLAN group/s.	Section 6.4
Port Monitoring Configuration	Keep track of the traffic of switched network.	Section 6.5
QoS Configuration	Configure port priority level to high or low queue.	Section 6.6
Bandwidth Control	Configure the bandwidth rate for individual port in and port out.	Section 6.7
Misc Operation	Change password, set advanced configuration, restore to the system default setting, reboot system, display system information and configure IP address.	Chapter 7
Logout	Exit from the web interface.	Section 7.8

9. Troubleshooting

9.1. Diagnosing LED Indications

Compex 24-port 10/100 + 1 Modular Exp Slot Web-Managed Switch is designed with LED indicators to indicate the operating status such as: Power Supply, Port Activity Status (Transmit/and Receive), Duplex status and 10/100Mbps connection Status. By looking at the LEDs, we may be able to identify which portion of Compex SXP2224WM is faulty so that we can rectify it.

LED indicators	Description of Function
Power LED	If the LED does not light up when power supply is inserted, check that: • Plug/cord is properly inserted into the socket. • Main switch on the power point is ON. If the switch powers off after running for a while, check for loose power connections, power losses or surges at power outlet. If you still cannot resolve the problem, contact your local dealer for assistance.
LNK/ACT LEDs	When the LED does not light up, check that: • Wire pair connections at RJ-45 plug are correct. Ensure that MDIX cross over cable is used if connected directly to PC. • RJ-45 plug is fully inserted until you hear a click sound. • The PC is powered-up. If the LED is not blinking when there is network activity on the network segment, please replace the switch.
FDX/COL LEDs	If the LED does not light up steadily when the particular port is running at Full Duplex mode, check that • The device is configured to Full Duplex mode. Please note that if the LED is not blinking while two or more stations are running in Full Duplex Mode, replace the switch.

9.2. Incorrect connections

Compex SXP2224WM can automatically detect straight or cross-over RJ45 network cable when you establish a connection with other Ethernet device.

For RJ45 connector, you should use the correct STP or UTP cable:
- 10/100Mbps port use 2 pairs twisted cable
- Gigabit 1000T port use 4 pairs twisted cable

Please use the appropriate types of fiber module if you want to establish a fiber connection. Refer to **"Technical Specification**" section on page 5 for details.

<u>**Non-standard network cables**</u>
Non standard and miss-wired cables may cause numerous network collisions and other network problem. This might lead to serious impair network performance. A category 5 cable tester is recommended tool for every 100Base-T network installation.

<u>**Improper Network Technologies**</u>
It is important to ensure that you have a valid network topology. Common topology faults include excessive cable length and too many repeaters/hubs between end nodes. In addition, you should ensure that your network topology contains no data path loops between any two ends nodes, there should be only one active cabling path at any time. Data path loops will cause broadcast storms that will severely impact your network performance.

9.3.   Cabling

For RJ45 Ethernet network cable,

Use Unshielded Twisted Pair (UTP) or Shield Twisted Pair (STP) cable for RJ45 connections.
- 100 Ω Category 3, 4 or 5 cable for 10Mbps connections or
- 100 Ω Category 5 cable for 100Mbps connections.

Also ensure that the length of any twisted-pair connection does not exceed 100 meters. Gigabit port should use Category 5 or Category 5e cable for 1000Mbps connections. The length does not exceed 100 meters.

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FCC NOTICE: This device has been tested and found to comply with the limits for a **Class A** digital device, pursuant to **Part 15 of the FCC Rules**. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This device generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this device does cause harmful interference to radio or television reception, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Connect the computer into an outlet on a circuit different from that to which the receiver is connected.
- Increase the separation between the computer and receiver.
- Consult the dealer or an experienced radio/TV technician for help.

Caution: Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment.

FCC Compliance Statement: This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1)   This device may not cause harmful interference, and
(2)   This device must accept any interference received, including interference that may cause undesired operation.

ICES 003 Statement

This Class A digital apparatus complies with Canadian ICES-003

DECLARATION OF CONFORMITY: *Compex, Inc. declares that the product:*

Product Name: Compex 24-Port 10/100 + 1 Modular Exp. Slot Web Managed Switch

Model No.: SXP2224WM *conforms to the following Product Standards:*

Radiated Emission Standards: EN55022A, FCC Part 15 Class A

Conducted Emission Standards: EN60555Pt2 conducted emission; EN55022A conducted emission, LVD 60950 standard, FCC Part 15 Class A

Immunity Standards: IEC 801-2; IEC 801-3; IEC 801-4

Low Voltage Directive: EN 60 950:1992+A1: 1993+A2: 1993+A3; 1995+A4; 1996+A11: 1997.

Therefore, this product is in conformity with the following regional standards: **FCC Class A** — following the provisions of FCC Part 15 directive; **CE Mark** — following the provisions of the EC directive.

Manufacturer's Name: Compex, Inc. **Address:** 840 Columbia Street, Suite B, Brea, CA92821, USA	**European Contact & Technical Support** ReadyLINK Networktechnology GmbH, Albert Einstein Straße 34/M21, 63322 Rödermark, Germany **Fax:** ++49 (60) 749-0668

English

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Europe	
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Website:	**http://www.cpx.com** *or* **http://www.compex.com.sg**

WARRANTY REGISTRATION CARD

Register via the Internet at http://www.cpx.com or http://www.compex.com.sg

[M-0088-V2.4C]

To activate the warranty, please complete this card and return to Compex within ninety (90) days from the date of purchase.

Please e-mail this warranty card to **support@compex.com.sg**.

Product:	Purchase Date:	Model:	Serial No:

Name:	E-mail:

Company:

Email:

Postal/Zip Code:	Country:

Phone: (   )

Note:

For purchases within U.S.A and Canada, please fax to Compex, Inc. at (714) 482 0332

For purchases outside U.S.A and Canada, please fax to Compex Systems Pte Ltd at (65) 6280-9947

English

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Manual Number:
M-0374-V1.2C

Version 1.2
February 2005

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