PRODUCT TEST

barox RY-LPITE-802GBTME
Network Switch

What's in the box?
Network Switch
Console lead
Mounting bracket
Quick Install sheet
Power Supply

The barox RY-LPITE-802GBTME is a 10-port managed switch with features beneficial to PoE supplied surveillance camera systems. It supports Layer 2 & 3 switching and can be configured for diverse route, ring redundant networks. With 8 Gigabit PoE++ ports and a 24Gb/s backplane, the switch can support high bandwidth video networks.

Getting started

This particular model of barox switch is supplied with a bracket for fixing to the rear of the unit that is used for Din rail mounting. The separate power supply (NDR-480-48) has a pre-fitted Din-rail mounting plate.

The supplied Quick Install sheet simply notes the IP address scheme to be used and refers the user to the barox website for further details and manual.

The power supply has a three-way terminal strip at the bottom for main input so appropriate care must be taken when installing. The input range is from 100 – 240 V AC at 5.3 Amps. The output terminals at the top of the unit supply 48 volts at up to 10 Amps. A green LED confirms power is available and a variable control allows the output to be set from 48 to 55 volts.

The switch has eight PoE enabled RJ45 ports with a further two SFP optical fibre ports for backbone links. 48-volt power is supplied via a 4 way removable terminal block which allows for a redundant supply to be connected on the additional pins. The data sheet states that for PoE+ and PoE++ a minimum of 54v DC must be supplied. A further four-way block connects the normally open relay output and an input D1 connection. A further RJ45 socket is used for Console connection. All RJ45 and SFP sockets are capped until needed.

LEDs on the front panel show System on, PSU input 1 and 2 if a redundant supply is being used, Alarm state, Ring Master status and RC condition.

The switch can be connected to a network using one of the eight RJ45 ports or to a backbone with the addition of an optional SFP fibre interface, this can be single or multimode to suit the installation.

Configuration of the switch can be undertaken using the inbuilt web interface or if a CLI (Command Line Interface) approach is preferred, using a Telnet session or RS232 link through the console port using the supplied lead. RS232 settings are 115.2kb/s, 8, N, 1.

While the downloadable barox manual states the default IP address as 192.168.1.254, the device packaging gives the correct address as 192.168.1.1. There is a possibility that this may clash with a router address so that must be considered when first connecting. On connecting with a browser, the switch requires a simple administrator username and password to be entered. There is no forced strong password at this point and it is down to the installer or IT administrator to establish an appropriate access strategy.

Menu options

Although the switch can be managed in the three ways stated above, the web interface gives the user a graphical representation of the switch ➤

operation. The main page has a barox logo that always links you back to the main or index page that shows the Monitor/System/Information data. Alongside this is a small graphic of the switch with the port connection status identified. This page identifies the switch system description as "Industrial 8-P GbE RJ45 + 2-P GbE SFP L2 Plus Managed Carrier Ethernet PoE++ Switch".

Beneath the barox logo is the model number with two tabs below this for "Switch" and "DMS" (Device Management System).

The Switch tab menu options access drop-down lists for the four categories: Configuration, Monitor, Diagnostics, and Maintenance.

Configuration: System, Green Ethernet, Ports, DHCP, Security, Aggregation, Link OAM, Loop Protection, Spanning Tree, IPMC Profile, MVR, IPMC, LLDP, PoE, EPS, MEP, ERPS, MAC Table, VLAN Translation, VLANS, Private VLANS, VCL, Voice VLAN, Ethernet Services, QoS, Mirroring, UPnP, PTP, GVRP, sFlow, UDLD, Rapid Ring, Switch2go, and SMTP. Of these 34 options, 20 have sub menu lists.

Monitor: 20 options including 14 sub menus relating to the above items that have data to be assessed.

Diagnostics: Ping, Ping 6, Cable Diagnostics, Traceroute, and Link OAM.

Maintenance: Restart Device, Reboot Schedule, Factory Defaults, Firmware, Configuration, and Server Report.

The DMS tab menu options are Management, Graphical Monitoring, and Maintenance.

Management accesses: Google Map API Key Configuration, and Device List.

Graphical Monitoring: Topology View, Floor View, and Map View.

Maintenance: Floor Image Management, Diagnostics, and Traffic Monitor.

When adjusting any configuration values, it is important to realise that the changes when "applied" are only affecting the running configuration of the switch. For these to be stored into Non-volatile Startup configuration memory the disk icon must be pressed. This will have a small red "Click Save Button" message alongside it when changes have not been permanently saved.

Performance

The Switch is not a plug and play option and requires a significant understanding of networking principles to fully configure, however, it is worth the effort to realise all of the device's capabilities. While the devices help files do not give expanded examples of use, there is a comprehensive glossary included for all the terms used.

The Diagnostic menus coupled with the Device Management System options provide an overview of the attached network with a topology view giving a graphic of the various nodes between all connected devices. This can be filtered to show All devices, or Switch, PC, IP Camera, IP Phone, Access Points, Others, or Offline Devices. These graphics can then be saved in SVG, PNG or PDF format for use in system documentation. The Floor view allows up to ten floor maps to be uploaded into the switch to show the installed locations of devices. These can simply be dragged onto the map from the device list. Clicking onto the camera icon gives access to device details and can be used to log in to the camera's web page. The Map view utilises Google Maps to show real-world location of buildings or sites with overlayed icons if applied.

The PoE power availability can be set for each port with up to 60 watts if supported by the correct power supply. Alternatively, the ports can be configured for Class mode where the PD determines the power required or using LLDP PoE+ protocol. Where there may be a high demand at power-up, the individual ports can be given a start-up delay of from 0 to 300 seconds to prevent an initial surge overloading the supply.

Where ports are used for devices such as Security cameras that may need to be monitored; these can be regularly "pinged" with the camera's IP address to check availability. If a failure occurs, after a number of retries, the port will power down and attempt to reconnect for a specified number of times. An SNMP alarm message will be generated after this time if the connection is not re-established. Additionally, the switch can be programmed to restart on a daily or weekly basis at a specified time, however this does appear to be only a full restart so PoE to cameras will also be power cycled. The time can be NTP referenced and is stored in computer (yyyy-mm-dd hh:mm:ss) format with flexible DST settings.

Up to 15 privilege levels can be allocated to users accessing the device configuration. These can be allowed / denied and adjusted for all key elements. Port security can be configured for specific MAC addresses.

Where a ring network backbone is required, the switch supports "Multiple" and "Rapid" versions of standard Spanning Tree Protocol for compatibility.

Conclusion

A very powerful enterprise level command set DIN rail mountable switch with a wide range of security features and support for monitoring and reporting surveillance systems operation.

9.0 out of 10

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NOTE: This PSI Product Test was carried out by an independent third party, not editorial staff. The manufacturer had no input in the review or the final result