RY-LPIGE-804GBTME, industrial Layer-2/3 IP-switch for video with PoE 30W and four optical UpLinks

# General description

## Short description

## Industrial PoE Gigabit IP switch, Layer 2/3 with 8 electrical ports 10/100/1000BaseTX with PoE+, four UpLink ports for 100/1000-SFP, manageable

## Special features

* DMS (Device Management System), the switch has an integrated network monitoring and control system, which gives the user a good overview of the entire network in a very simple way.
* PoE 802.3af/at with max. 30W per port
* Fan-less switch, no noise
* High network security
* Four optical ports for UpLinks
* High backplane performance
* Layer3, static routing

# Special features for video networks

* **Active monitoring of the camera**  
  The switch continuously monitors PoE-powered cameras. In the event of a camera failure, the switch automatically restarts the camera. At the same time, the switch sends an SNMP message.
* **Active monitoring of the PoE supply**  
  If, for example, too much power is demanded from the switch due to a defective camera, the switch alerts via SNMP.
* **Active integration of the switch in video management systems**  
  For the popular video management systems Milestone and Siveillance Video, SW modules are available which allow direct integration of the switch management and the DMS into this VMS
* **Jumbo frames even at 100 Mbps**  
  Jumbo Frames up to 9'600Bytes are also supported at 100MBit/s.

# Device Management System DMS

**The switch has an integrated network management system with which the following functions are possible:**

* **Dynamic schematic representation of the network**
* **The whole network is shown schematically. All switches, servers and end devices are shown individually. The representation can be switched between a schematic view and a tabular view.**
* **All displays can be exported as snapshot.**
* **Display of the IP addresses of all network and end devices.**
* **Display of the device type, switch, IP camera, server, etc.**
* **Simultaneous upload of new firmware via the DMS of all identical switches in the network.**
* **Analysis of the data cables connected to the switch**

# Safety features

* **Certified authentication HTTPS  
  It must be possible to install a private HTTPS key for management access.**
* **User management  
  The rights of the users must be freely adjustable on at least 15, freely adjustable levels.**
* **MAC address table  
  It must be possible to manage the MAC table automatically and manually. Static entries must be possible.**
* **ARP table  
  The ARP must be able to be managed dynamically and statically. It must be possible to convert a dynamically created table into a static one.**
* **IP source guard  
  The machine must be capable of checking the MAC address in combination with the IP address.**
* **Private VLANs  
  It must be possible to separate terminal devices within a VLAN with private VLANs.**
* **ACL access control  
  It must be possible to define rules and conditions for incoming packets per port. The rules must be able to operate according to either the authorisation or the exclusion procedure. Filtering can be based on source and destination addressing and includes MAC, IP and VLAN ID.**
* **RADIUS and TACACS+ authentication  
  Authorisation and billing. MD5 hash, guest VLAN, single/multiple host mode and single/multiple sessions. Supports IGMP-RADIUS based 802.1X. Dynamic VLAN assignment**

# Technical specification

### **Port list**

Optical ports 4 SFP-slots for SFP (Mini GBIC) fort he following interfaces:  
1000BaseSX (Gigabit Multimode)  
1000BaseLX (Gigabit Singlemode)  
1000BaseLX bidi (Gigabit Singlemode only one fibre)  
100BaseFX Multimde for one or two fibres  
100BaseFX Singlemode for one or two fibres

Electrical ports 8 x 10/100/1000BaseTX (RJ45) with PoE 802.3af/at  
Total 240W PoE power

Console port RS232, CLI, RJ45

### **Hardware**

Architecture Store and forward

Switch Backplane min. 24GBit/s

MAC adresses 8K

Jumbo Frame 9600kBytes

### **Management**

System configuration Web Browser, DMS, console CLI, SNMPv1, v2c and v3 (USM), http, HTTPS, USB-Port Telnet  
It must be possible to lock individual configuration methods.

Port configuration Port disable/enable. Auto-negotiation 10/100/1000Mbps. Flow Control disable/enable. Data rate control on each port. Max. framesize, Power Control, PoE schedule.

Port status Display per port Speed Link Status, Flow Control Status. Auto negotiation status, trunk status.

VLAN 802.1Q Tagged Based VLAN ,up to 64 VLAN groups, Q-in-Q, private VLAN

Link Aggregation IEEE 802.3ad LACP / Static Trunk, supports 18 groups of 8-port trunks or static trunk

QoS Traffic classification based, Strict priority and WRR, 8-level priority for switching, Port number, 802.1p priority, - DS/TOS field in IP Packet

IGMP Snooping IGMP (v1/v2) Snooping, up to 256K multicast groups, IGMP Querier mode support, MLD v1/v2, Proxy

Access Control Liste IP-Based ACL/MAC-Based ACL, 256 entries, VLAN ID, u.v.a.

SNMP MIBs v1, v2c and v3 with fortraps

### **Standards** IEEE 802.3 10Base-T

IEEE 802.3u 100Base-TX/100BASE-FX

IEEE 802.3z Gigabit SX/LX

IEEE 802.3ab Gigabit 1000T

IEEE 802.3x Flow Control and Back pressure

IEEE 802.3ad Port trunk with LACP

IEEE 802.1d Spanning tree protocol

IEEE 802.1w Rapid spanning tree protocol

IEEE 802.1s Multiple spanning tree protocol

IEEE 802.1p Class of service

IEEE 802.1Q VLAN Tagging

IEEE 802.1x Port Authentication Network Control

IEEE 802.1ab LLDP

IEEE 802.3af/at Power over Ethernet

IEEE 802.az Energy Efficient Ethernet

Free fall: IEC60068-2-32

Schock: IEC60068-2-27

Vibration: IEC60068-2-6

Railway: EN0121-4, EN50155

**Electrical and thermal values**

Power voltage 48-57VDC  
Redundant Power input must be possible  
When one of the two power inputs fails a closure contact must switch

Power need without PoE 15W

Power need with PoE 255W

Operating temperature: -45°C to +75°C

Storing temperature: -45°C to +75°C

Humidity: 20% to 95% relative humidity non-condensing

**Manufacturer** barox Kommunikation