

VigorSwitch PQ2200xb

DrayTek

16 Port 2.5 GbE 4 Ports 10Gbps SFP+ Switch with PoE+/PoE++

Datasheet



Product Overview

VigorSwitch PQ2200xb is a 2.5 Gigabit L2+ Managed switch with 4 PoE++ 2.5GbE ports, 12 PoE+ 2.5GbE ports (total of 400W output) and 4 additional independent SFP+ 10Gbps interfaces. Ideal for usage with devices where there are throughput demands beyond 1Gbps such as PoE Wi-Fi 6 access points, high bandwidth video or network attached storage.

Supported layer 3 features such as a DHCP Server and VLAN Routing help with network stability and efficiency. The VigorSwitch PQ2200xb can be managed in a standalone mode or provisioned and monitored through the VigorACS management platform or a DrayTek Vigor router's Central Switch Management. Easily provision the VLAN configuration through the router and clone switch configurations. Drastically reduce the setup time required for a complex network, with VLANs spanning multiple switches

Key Features & Benefits

Future Proof multi-Gigabit Ethernet

16 2.5GbE Ethernet ports improve your core network speed while using existing CAT 5E or later cable infrastructure. Ideal for Wi-Fi 6 access point connections such as the VigorAP 1060C

Benefits: Faster LANs run on existing infrastructure

Advanced Layer 2+ Routing Features

Expand your network with support for Layer 3 features. Static Routes, VLAN Routing and Multi-subnet DHCP server connect separate networks through the VigorSwitch

Benefits: Provides a fast and secure bridge between networks.

High Speed 10 Gigabit SFP+ Uplinks

4 SFP+ ports allow your network to utilise 10Gbps ports to link Switches, Servers and Networked Storage with more bandwidth. This helps you reduce the risk of bottlenecks occurring in your network

Benefits: Easily increase network throughput and meet demanding bandwidth requirements.

400W PoE++ Power Budget

Provides power through Ethernet to the PoE enabled 2.5 Gigabit LAN ports. Up to 90W (PoE++) can be delivered to the each of the first 4 dedicated Ethernet ports. PoE scheduling and monitoring features ensure your PoE devices are powered and working.

Benefits: Power a large number of IP cameras, IP phones, and Wi-Fi 6 access points.

Great Security Features

Protect your network against unauthorised access and network problems with 802.1X port authentication, IP Conflict Prevention, DHCP Snooping, IP Source Guard and Access Control List.

Benefits: Secure & control access to your network.

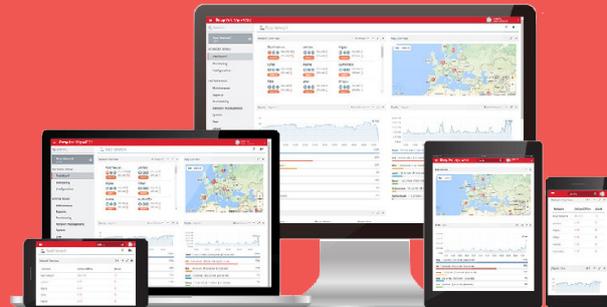
Manage Centrally or Stand-Alone

Configure and monitor the switch through the VigorACS cloud management platform, DrayTek's Central Switch Management for Vigor routers, or directly via the device's Web Interface.

Benefits: Saves time and money. Easily provision, monitor and manage remote sites without on-site IT or dedicated staff.

Key Specifications

- 16 x RJ-45 multi-Gigabit Ethernet Ports (2500/1000/100/10) with PoE (4 PoE++ / 12 PoE+)
- 4 x SFP+ 10GbE Ports for Uplink / Fibre
- Console Port
- PoE (Power-over-Ethernet) for IP phones, wireless access points, IP Cameras etc.
- 400-watt Power-over-Ethernet budget
- 802.1q VLANs with Dynamic MAC-based, Voice & Surveillance VLAN
- VLAN Routing & Static Route with DHCP server / relay
- QoS for Application traffic prioritisation
- 802.1x RADIUS / TACACS+ Port Authentication with Accounting
- Voice VLAN for QoS (OUI Mode)
- Access Control List (ACL)
- Port Mirroring & Link Aggregation
- IGMP Snooping & Querying
- IPv4 and IPv6 Support with IP Conflict Prevention
- Centrally managed or standalone operation



Technical Specification (UK Hardware Spec.)

Physical Interfaces:

- 16 RJ-45 Ethernet PoE (4 PoE++ / 12 PoE+) Ports – 10/100/1000/2500Mbps
- 4 SFP+ Ports – 1000Mbps/10Gbps
- Console Port (RJ-45 physical, RS-232 electrical)

PoE Specification

- 16-ports 802.3af & 802.3at (High Power) PoE PSE
- 4 dedicated 802.3bt PoE++ (90W) Ethernet ports
- Up to 30 watts per port for remaining Ethernet interfaces
- 400 Watts Total Power Budget for PoE
- Auto Detection of Powered Device (PD) and Consumption Levels
- Per Port PoE Status LED Indicators
- Alert LED for high PoE Usage
- Port Power Consumption Monitoring via Web Interface & CLI
- Circuit Protection to Prevent Power Interference between Ports
- PoE PD Monitoring & Maintenance Features (per port)
 - Scheduling
 - PoE PD Priority
 - Restart PoE PD if not responding to ping
 - Restart PoE IP Camera if not providing camera output

VLAN:

- 802.1q Tag-based VLAN
- Port-based and MAC-based VLANs
- QinQ (Basic)
- GVRP – General VLAN Registration Protocol
- Up to 256 VLANs (out of 4096 VLAN IDs)
- 802.1v Protocol-Based VLAN
- Voice VLAN (OUI Mode)
- Surveillance VLAN (OUI Mode)
- Management VLAN
- Port Isolation

QoS:

- Support 8 priority queues
- Port-Based rate control (Ingress & Egress)
- Priority queue schedule (WRR or Strict Priority)
- Rate Limit
- Class of Service
 - 802.1p CoS
 - DSCP
 - CoS-DSCP
 - IP Precedence ToS

Network Security:

- IP Source Guard with ARP inspection
- Storm Control (Broadcast, Unknown Multicast, Unknown Unicast)
- DoS Attack protection
- AAA Authentication
- MAC Authentication
- Protected Port / Port Isolation
- Static Port Security
- Dynamic ARP Inspection
- DHCP Snooping with Option 82
- Loop Detection & Prevention
- Access Control Lists (ACL)
 - Up to 512 ACL Entries
 - Source and destination MAC
 - VLAN ID
 - IPv4/v6 address
 - Protocol
 - TCP/UDP port

Spanning Tree:

- Spanning Tree Protocol (STP)
- Rapid Spanning Tree Protocol (RSTP)
- Multiple Spanning Tree Protocol (MSTP)

VigorSwitch PQ2200xb Specifications

UK Product Code	EAN	Product Name	Product Description
VSPQ2200xb-K	4710484745439	VigorSwitch PQ2200xb (UK/IE)	16 x 2.5 GbE ports (4 PoE++ / 12 PoE+) & 4 x 10Gbps SFP+ Layer 2+ managed switch. 400W PoE budget

Link Aggregation:

- Combine multiple ports to increase bandwidth
- 8 Aggregation Groups
- Up to 8 ports in each group
- LACP or Static setup
- Supports traffic load balancing.

Networking Performance:

- Switching Capacity: 160 Gbps
- Forwarding Rate: 119.04 Mpps at 64 bytes
- MAC Addresses Supported: 16,000
- Jumbo Frames up to 12KB
- Packet Buffer size: 12Mbit
- Layer 3 Routing Table: Up to 6000 Entries

Multicast:

- Up to 256 multicast groups
- Multicast Group Filtering / Throttling
- IGMP Snooping V2/V3 (BISS)
- IGMP V2/V3 Querier
- Multicast VLAN registration
- MLD Snooping V1/V2
 - Immediate Leave
 - Report Suppression
 - IGMP/MLD Querier

AAA

- RADIUS / TACACS+ Authentication for Management
- Multiple AAA Server
- MAC / Inaccessible Authentication bypass
- RADIUS Authentication 802.1X
 - Accounting
 - Guest VLAN
 - Port based Authorisation
 - 802.1X Single/Multi
 - MAC-based
 - Web-based
 - Attribute Assignment
 - User Privilege
 - VLAN
- TACACS+ Authentication
 - Port Authorisation
 - Accounting

ONVIF Surveillance Management

- Discovery of ONVIF-compliant IP Cameras
- Surveillance Topology
- Real-Time Video Streaming
- ONVIF Device Maintenance
 - Device Information
 - Network Settings Configuration
 - Time Settings
 - Reboot
 - Reset to Factory Default Settings
 - Ping Check with Mail Alert on disconnection

Management:

- Central Management
 - VigorACS
 - VigorConnect
 - Vigor Router Switch Management (requires router firmware support)
- Running/Startup/Backup Configuration
- sFlow
- IPv4 & IPv6 Dual-Stack
- LLDP(802.1ab) + MED
- Web User Interface (HTTP or HTTPS)
- Firmware Upgrade/Backup by HTTP/HTTPS
- HTTP (Non-TLS) can be disabled for increased security
- Configuration Backup/Restore
- Factory Default
- System Reboot
- Dual Firmware Image (Active & Backup Firmware)
- Command Line Interface (CLI) via SSH/Telnet
- Console Port (RJ45) for CLI management
- OpenVPN Client with Certificate-based auth
- SNMP v1, v2c, v3 (with Generic Traps)
- RMON Groups 1, 2, 3, 9 (History, Statistics, Alarms, Events)
- SNTP (Simple Network Time Protocol)

Diagnostics:

- Port Status & Usage display
- CPU/RAM Usage display
- MAC Address Table
- Device Check
- Syslog
- Mail Alert
 - Port Status
 - Port Speed Change

- System Restart
- Device Check
- IP Conflict
- ONVIF IP Camera Snapshot
- Port Mirroring
- Ping Diagnostics
- Port-based Cable Test

Hardware Monitor:

- Remote Monitoring through Web Interface & VigorACS
- Hardware Monitor Data Recording & Graphing

Layer 3 Networking Features:

- Static Route
- VLAN Routing
- Virtual Router Redundancy (VRRP) Protocol

IPv4 Features

- DHCP Client
- DNS Client
- DHCP Server
 - Option 82, 66, 67
 - DHCP Relay
 - DHCP Snooping
 - DHCP IP Source Guard

IPv6 Features

- Auto Configuration
- Static IPv6 Address & Prefix Length
- Static IPv6 Default Gateway
- IPv6 Neighbour Discovery (ND)
- IPv6 Duplicate Address Detection
- ICMPv6
- DHCPv6 Client

General IEEE Standards Compliance:

- 802.3af PoE
- 802.3at PoE+
- 802.3bt PoE++
- 802.3 10Base-T
- 802.3u 100Base-T
- 802.3ab 1000Base-T
- 802.3ae 10GBase-T
- 802.3x Flow Control Capability
- 802.3 Auto-negotiation
- 802.3ad Port trunk with LACP
- 802.3az Energy Efficient Ethernet
- 802.1q VLAN
- 802.1p Class of Service
- 802.1d Spanning Tree
- 802.1w Rapid Spanning Tree
- 802.1s Multiple Spanning Tree
- 802.1x Port Based Network Access Control
- 802.1ab Link Layer Discovery Protocol (LLDP)
- 802.1ad QinQ

Operating Requirements:

- Power Input Requirements: 100-240VAC
- Power supply: Internal
- Maximum Input Power Consumption: 550W
- Cooling: Fan
- Operating Temperature: 0 °C to 50 °C
- Storage Temperature: -20 °C to 70 °C
- Operating Humidity: 10% to 90% (non-condensing)

Physical Specifications:

- Dimensions: 440 x 281 x 44 mm (W x D x H)
- Rack mountable: 1U
- Weight: 4.3 kg (excluding SFP modules/cables)
- Brackets included for rack or wall mounting

UKCA, ROHS & CE Compliant

Warranty:

- 2 Year Manufacturer's RTB
- Optional VigorCare Enhanced Warranty Available
 - VigorCare D3 3 Year Subscription: VCARE-D3
 - VigorCare D5 5 Year Subscription: VCARE-D5

Box Contents:

- VigorSwitch PQ2200xb Network Switch
- UK IEC13 Power Cable
- 1U Rack Mount Fittings
- Console Cable (RJ-45)
- Quick Start Guide