

# VigorSwitch P2280x

10-Gigabit Fully Managed Switch with four 10Gb SFP+ ports and 24 Gb PoE+ ports

Premium. Reliable. Affordable.

Datasheet



## Product Overview

The DrayTek VigorSwitch P2280x is a 10-Gigabit, high-performance, fully managed Gigabit Ethernet switch with four 10Gb SFP+ ports and 24 Gb PoE+ that can be managed locally or centrally.

## Key Features & Benefits

### High Speed 10 Gigabit SFP+ Uplinks

Four SFP+ ports allows 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 ample power through Ethernet to each of the 24 PoE / PoE+ enabled Gigabit LAN ports. PoE scheduling, priority & monitoring features ensure your PoE devices are powered and working.

**Benefits:** Power a large number of IP cameras, IP phones, wireless APs and other PoE devices.

### 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 devices Web Interface.

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

### Advanced Layer 2+ Routing Features

Expand your network with support for Layer 3 features such as Static Routes and VLAN Routing, to connect separate networks through the VigorSwitch.

**Benefits:** Provides a fast and secure bridge between networks.

### Hardware Monitoring & Smart Fan Control

Monitor switch temperature, power supply and fan status to ensure stable & constant operation. The switch's fans run quieter with Smart fan control.

**Benefits:** Email notification alerts for power loss, downtime or configuration changes.

### Great Security Features

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

**Benefits:** Secure & control access to your network. remotely.

### Voice VLAN & Surveillance VLAN

Automatically assign VLANs and QoS configuration to devices with matching MAC address OUI upon connection to the switch.

**Benefits:** Reduce broadcast traffic and allow more control when implementing security policies.

### Energy-Efficient PoE

Smart power management & IEEE 802.3az compliant. If a non-PoE device is connected, that port's PoE power is turned off to avoid any potential damage to non-compliant devices.

**Benefits:** Reduces power consumption.

# Key Specification

- 24 x RJ-45 Gigabit Ethernet Ports with PoE+
- 4 x SFP+ 10GbE Ports for Uplink / Fibre
- PoE (Power-over-Ethernet) for IP phones, wireless access points, IP Cameras etc.
- Generous Power budget (400W total)
- 802.3af (PoE) and 802.3at (High Power PoE)
- 802.1q VLANs (Tag, Port & MAC-based)
- VLAN Routing & Static Route with DHCP server / relay
- Virtual Router Redundancy Protocol
- 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/Querier (Up to 256 Multicast Groups)
- IPv4 and IPv6 Support
- Hardware Monitor with smart fan control
- Centrally managed or standalone operation
- Console Port

## Full Specifications

### Physical Interfaces:

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

### PoE Specification:

- 24-ports 802.3af & 802.3at (High Power) PoE PSE
- 400 Watts Total Power Budget for PoE
- Up to 30 watts per port
- 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
- PoE PD Monitoring & Maintenance Features (per port)
  - Scheduling
  - PoE PD Priority
  - PoE PD Status / Ping monitoring - restart PoE PD port if no response
- Circuit Protection to Prevent Power Interference between Ports

### VLAN:

- 802.1q Tag-based VLAN
- Port-based and MAC-based VLANs
- QinQ (Basic)
- GVRP – General VLAN Registration Protocol
- Up to 255 VLANs (out of 4096 VLAN IDs)
- 802.1v Protocol-Based VLAN
- Voice VLAN (OUI Mode)
- Surveillance VLAN (OUI Mode)
- Protocol VLAN
- MAC-based VLAN
- Management VLAN
- Port Isolation

### QoS:

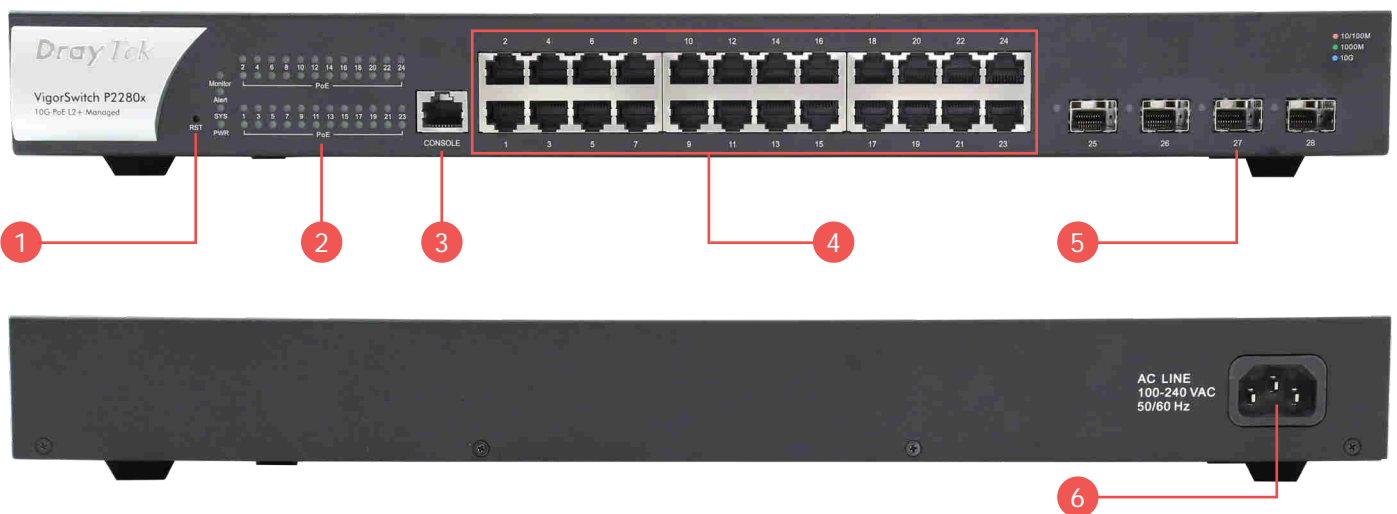
- Support 8 priority queues
- Port-Based rate control (Ingress & Egress)
- Priority queue schedule (WRR or Strict Priority)
  - 802.1p CoS
  - DSCP
  - CoS-DSCP
  - IP Precedence ToS
- Rate Limit
- Class of Service

### Network Security:

- Access Control Lists (ACL)
  - Up to 512 ACL Entries
  - Source and destination MAC
  - VLAN ID
  - IPv4/v6 address
  - Protocol
  - TCP/UDP port
- 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

### Spanning Tree:

- Spanning Tree Protocol
- Rapid Spanning Tree Protocol
- Multiple Spanning Tree Protocol



- 1 Reset Button
- 2 PoE & Activity LED Indicators
- 3 Console Port
- 4 24x PoE Gigabit Ethernet
- 5 4x 10Gb or Gigabit SFP+
- 6 Power Input

# Full Specifications

## 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: 128Gbps
- Forwarding Rate: 95.24Mpps
- MAC Addresses Supported: 16,000
- Jumbo Frames up to 12KB
- Packet Buffer size: 12Mbit
- Layer 3 Routing Table: Up to 1000 Entries

## Multicast:

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

## AAA:

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

## Management:

- Virtual Stacking – Single IP Management \*
- OpenVPN Client
- ONVIF – IP Camera Management
- 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
- DrayTek Switch Management support via router (requires router firmware support)
- VigorACS Compatible (TR-069)
- 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
- PoE activity display
- CPU/RAM Usage display
- Event Log via Syslog or email
- Port Mirroring
- Ping Diagnostics
- Port-based Cable Test

## Hardware Monitor:

- Remote Monitoring through Web Interface & VigorACS \*
- Hardware Monitor Data Recording & Graphing
- Email & LED alert on Fan failure, voltage high/low and overheat
- Temperature Monitoring
- Voltage Monitoring
- Smart Fan Control for low noise operation
- Power Saving Mode

## 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:

- 802.3 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
- 802.3af PoE
- 802.3at PoE+
- 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: 480 Watts
- Cooling: Dual Smart Fan
- Operating Temperature: 0 °C to 45 °C
- Storage Temperature: -20 °C to 70 °C
- Operating Humidity: 10% to 90% RH (non-condensing)

## Physical Specifications:

- Dimensions: 441 x 270 x 45 mm (W x D x H)
- Rack mountable: 1U
- Weight: 4.32Kg (excluding SFP modules/cables)
- Brackets included for rack or wall mounting

## ROHS & CE Compliant

## Warranty: 2 Year Manufacturer's RTB

\* - Not available in initial release firmware but will be available in a later firmware update.