

**DrayTek**

VigorSwitch P2540xs

10-Gigabit Fully Managed Switch with
6 10Gb SFP+ Ports and 48 PoE+ Gb
Ports

Product Overview

VigorSwitch P2540xs is a 54 port PoE+ Gigabit L2+ Managed switch with a plethora of management options and enterprise-level features to improve network stability and security for businesses. It has 48 PoE+ (Power over Ethernet) RJ-45 LAN ports and 6 10-Gigabit Ethernet SFP+ ports for high bandwidth uplinks to Servers, Network Attached Storage and Switches.

Key Features & Benefits

Manage Centrally or Stand-Alone

Configure and monitor the switch through the VigorACS cloud management platform, through VigorConnect, through a DrayTek Vigor router, or directly via the device's web interface.

High Speed 10 Gigabit SFP+ Uplinks

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

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.

400W PoE Power Budget

Provides power through Ethernet to each of the 48 PoE /PoE+ enabled Gigabit LAN ports. PoE scheduling, priority & monitoring features ensure your PoE devices are powered and working.

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.

IP Camera management

Manage IP Cameras easily with detection and management of ONVIF cameras. Use auto-generated IP Camera topology and Camera Snapshots to detect & troubleshoot problems.

Key Specification

48 x RJ-45 Gigabit Ethernet Ports with PoE+
6 x SFP+ 10GbE Ports for Uplink / Fibre
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
Virtual Router Redundancy Protocol
QoS for Application traffic prioritisation
802.1x RADIUS / TACACS+ Port Authentication with Accounting
Voice VLAN for QoS (OUI Mode)

Full Specifications

Physical Interfaces:

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

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

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

PoE Specification:

- 48-ports 802.3af & 802.3at (High Power) PoE PSE
- 400 Watts Total Power Budget for PoE
- Up to 30 watts per port
- Scheduling
- PoE PD Priority
- Restart PoE PD if not responding to ping
- Restart PoE IP Camera if not providing camera output
- 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:

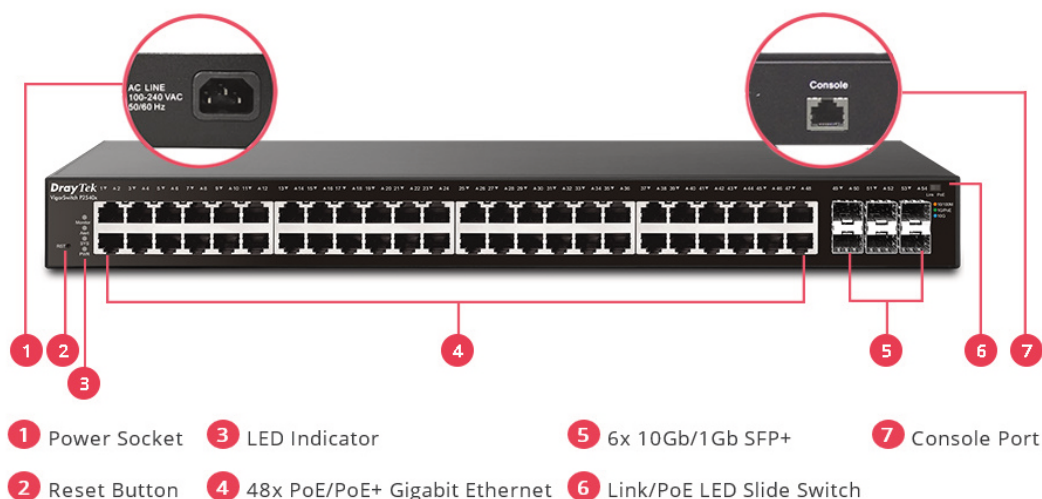
- 802.1q Tag-based VLAN
- Port-based and MAC-based VLANs
- QinQ (Basic)
- GVRP – General VLAN Registration Protocol
- Up to 256 VLANs (out of 4096 VLAN IDs)
- 802.1v Protocol-Based VLAN
- Voice VLAN (OUI Mode)
- Surveillance VLAN (OUI Mode)
- Protocol VLAN
- MAC-based VLAN
- Management VLAN
- Port Isolation

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)



Technical Specification (UK Hardware Spec.)

Networking Performance:

- Switching Capacity: 216Gbps
- Forwarding Rate: 160.7Mpps at 64 bytes
- MAC Addresses Supported: 32,000
- Jumbo Frames up to 12KB
- Packet Buffer size: 16Mbit
- Layer 3 Routing Table: Up to 2000 Entries

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

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
- 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

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

Physical Specifications:

- Dimensions: 441 x 270 x 45 mm (W x D x H)
- Rack mountable: 1U
- Weight: 4 kg (excluding SFP modules/cables)
- Brackets included for rack or wall mounting

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

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

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)

Layer 3 Networking Features:

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

IPv4 Features:

- DHCP Client
- DNS Client
- DHCP Server
 - Up to 8 subnets
 - 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

Box Contents:

- VigorSwitch P2540xs Network Switch
- UK IEC13 Power Cable
- 1U Rack Mount Fittings
- RJ-45 to RS-232 Console Cable Adapter
- Console Cable (RJ-45)
- Quick Start Guide