

VigorSwitch P2540xs & G2540xs

10GbE Gigabit Switch with 48 Gigabit Ports & 6
10GbE SFP+ Uplink Ports

Datasheet



Product Overview

The VigorSwitch P2540xs & G2540xs are high-performance, Layer 2+ Managed switches with a plethora of management options and enterprise-level features to improve network stability and security for businesses.

The VigorSwitch P2540xs model provides up to 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.

Designed for centralised management, the VigorSwitch P2540xs & G2540xs can be provisioned and monitored through both the VigorACS management platform and/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

High Speed 10 Gigabit SFP+ Uplinks

6 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.

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.

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.

400W PoE Power Budget

The VigorSwitch P2540xs 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.

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

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.

ONVIF IP Camera Surveillance Management

Make IP camera management easier with detection and management of ONVIF cameras. View a topology of all cameras connected. Use PoE Device Check and Camera Snapshot Email Alerts to rapidly detect & troubleshoot problems.

Benefits: Easily configure, deploy & manage connected IP Cameras.

Key Specification

- 48 x RJ-45 Gigabit Ethernet Ports
- 6 x SFP+ 10GbE Ports for Uplink / Fibre
- VigorSwitch P2540xs only: PoE+ on all RJ-45 ports
- VigorSwitch P2540xs only: 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)
- Access Control List (ACL)
- Port Mirroring & Link Aggregation
- IGMP Snooping & Querying
- IPv4 and IPv6 Support with IP Conflict Prevention
- Hardware Monitor with smart fan control
- Centrally managed or standalone operation
- Console Port

VigorSwitch G2540xs / P2540xs Specifications

UK Product Code	EAN	Product Name	Product Description
VSG2540xs-K	4710484745194	VigorSwitch G2540xs (UK/IE)	54-port Gigabit L2+ Managed switch with 48 RJ-45 LAN ports & 6 10GbE SFP+ ports
VSP2540xs-K	4710484745224	VigorSwitch P2540xs (UK/IE)	54-port PoE+ Gigabit L2+ Managed switch with 48 PoE+ RJ-45 LAN ports & 6 10GbE SFP+ ports

Technical Specification (UK Hardware Spec.)

Physical Interfaces

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

PoE Specification (VigorSwitch P2540xs only)

- 48-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
- 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

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)

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: 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

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 (Authentication, Authorisation, Accounting)

- 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
- 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:
 - VigorSwitch G2540xs: 52 Watts
 - VigorSwitch P2540xs: 478 Watts
- BTU per Hour:
 - VigorSwitch G2540xs: 174.61(BTU/h)
 - VigorSwitch P2540xs: 1631.18(BTU/h)
- Cooling: Dual Smart Fan
- Operating Temperature: 0 °C to 50 °C
- Storage Temperature: -20 °C to 70 °C
- Operating Humidity: 10% to 90% RH (non-condensing)

Physical Specifications

- Dimensions:
 - VigorSwitch G2540xs: 441 x 270 x 45 mm (W x D x H)
 - VigorSwitch P2540xs: 441 x 330 x 45 mm (W x D x H)
- Rack mountable: 1U
- Weight:
 - VigorSwitch G2540xs: 4Kg (excluding SFP modules/cables)
 - VigorSwitch P2540xs: 5.66Kg (excluding SFP modules/cables)
- Brackets included for rack or wall mounting

ROHS & CE Compliant

Warranty : 2 Year Manufacturer's RTB

Box Contents

- VigorSwitch G2540xs / 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

*- All specifications are subject to change without notice

* - The throughput figures are maximum, based on DrayTek internal testing with optimal conditions. The actual performance may vary depending on the different network conditions and applications activated.