Data Sheet
FUJITSU PSWITCH 4032P

Powerful aggregation/ToR Switch for data center connectivity

Data centers continue to evolve, creating a need for an infrastructure that can support growth in virtual machines, distributed applications, data, as well as the transition to public and private cloud environments without compromising performance. Today's networks need to support the flexible connectivity of any device from any place in a secure manner. They have to provide an automated quality of service management when assigning bandwidth to the various usage scenarios as this cannot be done fast enough on a manual basis.
Fujitsu has developed a suite of top-of-rack switches that support flexible and efficient scale-out server infrastructures, especially in combination with new modular servers. This approach results in several improvements, including infrastructure efficiency for cloud computing, end-to-end virtualization and consolidation. Close partnerships with network technology partners complement the portfolio for building complete IT infrastructures. A lot of new use cases are based on Ethernet networks, with high bandwidths and increasingly virtualized fabric architectures for building dynamic data centers. And it goes without saying that Fujitsu server and storage systems are fully compatible with our own products as well as products from our partners.

PSWITCH 4032P

The FUJITSU Server PSWITCH 4032P delivers innovative technology to enhance and simplify networks. It is a 1U low-latency, Layer 2/3, Ethernet switch and provides a rich set of advanced networking features, making the PSWITCH 4032P an ideal platform for traditional Top-of-Rack (ToR) as well as Spine/Aggregation switch deployments. With support for thirty-two 40GbE QSFP+ ports, this switch provides the efficiency and flexibility you need to support cloud computing, virtualization and consolidation. For organizations seeking automated provisioning capabilities to improve IT agility, the PSWITCH 4032P accelerate time to production through automatic discovery of network devices. This reduces the initial efforts, ongoing maintenance time and costs. The switch is designed for the data centers with advanced features such as Data Center Bridging (DCB), Edge Virtual Bridging (EVB) and VXLAN Tunnel End Point (VTEP) to support large-scale virtualization and software-defined Networking (SDN). In order to adapt to the individual situation as best as possible, the switch can be used in various switch modes. Beside the default Layer2 switching support it provides the possibility of the end host mode (EHM) to simplify the port settings for connecting to a network in operation. This functionality can be beneficial in blade transition projects.
The PSWITCH 4032P provides an ideal complement to the existing Fujitsu Ethernet switch portfolio and can be used e.g. in leaf/spine configurations or as aggregation of the PSWITCH 2048. Moreover it is ideally suited for a variety of different solutions such as hyper-converged infrastructures, e.g. VMware VSAN or Storage Spaces Direct (S2D).

Features & Benefits

Main Features	Benefits
Switch Management	
■ Command Line Interface (CLI) ■ Simple Network Management Protocol (SNMP) ■ Network Configuration Protocol (NETCONF) ■ Open vSwitch Database (OVSDB)	■ Various management interface for administrator as well as for the management software. ■ Three management interfaces – console, management port, and inbound network interface. Remote management of the switch is available through these port or interface.
Auto Discovery	
■ Management software discovers and identifies the switch automatically	■ Reduce the initial effort of introducing the switch into network.
End Host Mode (EHM)	
■ End Host Mode is a mode to simplify the port settings for connecting to a network in operation.	■ Establish a set of secured ports to be connected to the network without any considerations about STP, VLAN, load balancing, or other settings.
Data Center and Virtualization	
■ Data Center Bridging (DCB) ■ FIP Snooping ■ Edge Virtual Bridging (EVB) ■ DCVPN gateway (VXLAN, VTEP, NVE)	■ Deliver key scalable features that meet the demands of today's virtualized and cloud multi-vendor environments. ■ Manage network connection for virtual machines and physical server (heterogenous/mixed network environments).
High-performance and Availability	
■ 32x QSFP+ Port	■ Enable the efficiency and flexibility you need to support cloud computing, virtualization, mobility, and consolidation.

Technical details

PSWITCH 4032P	
Connection type	Ethernet ToR Switch 40 Gbit/s Ethernet Switch, Layer2 switching support / Layer3 Service support, End Host Mode (EHM)
Interfaces	
Up-link ports	32 x 40 Gbit/s Eth (QSFP+)
Management ports	1 x RJ45 Serial Port 1 x 10/100/1000Mbps LAN Port
Technical specifications	
Layer 2 feature	Virtual LAN(IEEE802.1Q) Link Aggregation(LAG) Spanning Tree Protocol Loop detection Link Down Relay Remote Switch Port Analyzer(RSPAN) Unidirection Link Detection(UDLD) End Host Mode (EHM) Provider Backbone Bridging (IEEE 802.1ah) Shortest Path Bridging (IEEE 802.1aq)
Layer 3 feature	IPv4 - ARP / ICMP / IRDP IPv6 - NDP Routing Routing Information Protocol (RIP / RIPng) Open Shortest Path First (OSPF) Boarder Gateway Protocol 4 (BGP4) Virtual Router Redundancy Protocol (VRRP) Equal Cost Multi-Path (ECMP) UDP Relay / IP Helper DNS Client and DNS Relay Link-Local Multicast Name Resolution (LLMNR) Virtual Routing and Forwarding (VRF)
Quality of service	Acess Control List (ACL) Class of Service (CoS) Differentiated Services (DiffServ) Explicit Congestion Notification (ECN)
Link aggregation	Static LAG IEEE 802.1ax-2008 standard (LACP) support up to 32 ports in a LAG virtual port channels (VPCs)
Spanning tree	Spanning Tree Protocol (STP) Rapid Spanning Tree Protocol (RSTP) Multiple Spanning Tree Protocol (MSTP)

Technical specifications

DCB features	Priority Flow Control (PFC) Enhanced Transmission Selection (ETS) Congestion Notification (CN) Data Center Bridging Extensions (DCBX)
FCoE features	FIP snooping
Network protocol and standards compatibility	IEEE 802.1ab LLDP IEEE 802.1d Spanning Tree Protocol IEEE 802.1p Class of Service IEEE 802.1Qau Congestion Notification IEEE 802.1Qaz Enhanced Transmission Selection (ETS) IEEE 802.1Qbb Priority Flow Control (PFC) IEEE 802.1q VLAN IEEE 802.1s Multiple Spanning Tree Protocol IEEE 802.1v Protocol VLAN, Port VLAN IEEE 802.1w Rapid Spanning Tree Protocol IEEE 802.1x Port Based Network Access Control IEEE 802.3x Flow Control IEEE DCBX Data Center Bridging Exchange protocol proposal for 802.1 Qaz IPv4, IPv6 and mixed IPv4/IPv6 network protocols IEEE 802.1ax-2008 Link Aggregation
Performance	1280Gbps switching bandwidth (2560Gbps duplex) Automatic address learning function to build the packet-forwarding information table. The table contains up to 96K MAC addresses 12 MB of packet buffer memory Support Jumbo Frame up to 9198 bytes Alternate Store-Forward (ASF) mode - Cut-through is available to minimize the latency Latency < 1 microsecond (64-byte packets)
IP multicast features	IGMP Snooping MLD Snooping Snooping Querier Multicast Static Routes (MRoutes) Internet Group Management Protocol (IGMP) v2/v3 Mluticast Listerner Discovery (MLD) v1/v2 Distance Vector Multicast Routing Protocol (DVMRP) Protocol Independent Multicast - Dense Mode (PIM-DM) Protocol Independent Multicast - Sparse Mode (PIM-SM)
VLAN	Port Based VLAN MAC Based VLAN Protocol Based VLAN IP Subnet Based VLAN Private VLAN
Management	Telnet/SSH Network Configuration Protocol(NETCONF) Simple Network Management Protocol(SNMP) Remote Monitoring(RMON) Open vSwitch Database(OVSDB) management protocol

Floor-stand (W x D x H)	
Dimensions (W x D x H)	440 x 460 x 44 mm
Weight	8.8 kg
Environmental compliance	
Operating ambient temperature	0 - 40 °C
Operating relative humidity	10 - 90 % (relative humidity)
Power supply configuration	2
Hot-plug power supply redundancy	Yes
Rated voltage range	100 V - 127 V / 200 V - 240 V
Rated frequency range	50/60 ±1 Hz
Active power (min. configuration)	105 W
Active power (max. configuration)	210 W
Rated power max.	460 W
Apparent power (max. configuration)	210 VA
Heat emission (max. configuration)	756.0 kJ/h (716.5 BTU/h)
Product	
Europe	CE
USA/Canada	FCC Class A UL/CSA
Global	CB RoHS
Japan	VCCI:V3 Class A + JIS 61000-3-2
Russia	EAC
South Korea	KC
China	CCC
Australia/New Zealand	RCM
Taiwan	BSMI
Saudi Arabia	SASO
Compliance link	https://sp.ts.fujitsu.com/sites/certificates

More information

Fujitsu products, solutions & services

In addition to FUJITSU PSWITCH 4032P, Fujitsu provides a range of platform solutions. They combine reliable Fujitsu products with the best in services, know-how and worldwide partnerships.

Fujitsu Portfolio
Built on industry standards, Fujitsu offers a full portfolio of IT hardware and software products, services, solutions and cloud offering, ranging from clients to datacenter solutions and includes the broad stack of Business Solutions, as well as the full stack of Cloud offerings. This allows customers to select from alternative sourcing and delivery models to increase their business agility and to improve their IT operation's reliability.

Computing Products
www.fujitsu.com/global/products/computing/

Software
www.fujitsu.com/software/

More information

Learn more about Fujitsu PSWITCH 4032P, please contact your Fujitsu sales representative or Fujitsu Business partner, or visit our website.
http://www.fujitsu.com/PRIMERGY

Fujitsu green policy innovation

Fujitsu Green Policy Innovation is our worldwide project for reducing burdens on the environment.
Using our global know-how, we aim to contribute to the creation of a sustainable environment for future generations through IT.
Please find further information at http://www.fujitsu.com/global/about/environment

Copyrights

Disclaimer

Technical data is subject to modification and delivery subject to availability. Any liability that the data and illustrations are complete, actual or correct is excluded. Designations may be trademarks and/or copyrights of the respective owner, the use of which by third parties for their own purposes may infringe the rights of such owner.

CONTACT
Fujitsu Technology Solutions GmbH
Mies-van-der-Rohe-Straße 8
80807 München
Germany
Website: www.ts.fujitsu.com
2018-12-18 INT-EN

All rights reserved, including intellectual property rights. Changes to technical data reserved. Delivery subject to availability. Any liability that the data and illustrations are complete, actual or correct is excluded.
Designations may be trademarks and/or copyrights of the respective manufacturer, the use of which by third parties for their own purposes may infringe the rights of such owner.
For further information see http://www.fujitsu.com/fts/resources/navigation/terms-of-use.html
Copyright 2018 FUJITSU LIMITED