Empowered by Innovation NEC

PF5200

Data sheet

OpenFlow/SDN (Software Defined Networking) product
to easily and cost-effectively deploy, control, monitor, and manage networks

PF5240

4x 10Gb/1Gb Ethernet (SFP+/SFP), 48x 1Gb Ethernet

PF5248

8x 10Gb/1Gb Ethernet (SFP+/SFP), 2x 1Gb Ethernet

- OpenFlow - By managing route control features in a centralized way at the controller, The system develops and deploys simple and flexible network based on new network technology for next generation data center.
  - OpenFlow version 1.3.1 / 1.0.0
  - Large capacity flow table
  - Multiple tables and multiple hit (standard group/visualization group/QoS group)
  - IPv6/MPLS, Arbitrarily wildcard bit, Policing action
  - VLAN configuration, Packet-in message auto-suppression, Fast link-failure recovery
- Full-wire-rate packet forwarding - It makes effective packet forwarding that hardware executes OpenFlow features, searching flow entry and performing action.
- Compatibility - Normal LAN features (multilayer switch, IP router functionality etc.) and OpenFlow features can coexist.

ProgrammableFlow

PF5200

Specifications

MODEL				PF5240-48T4X	PF5248-2T8X
Maximum Switching Capacity				176Gbps	164Gbps
Maximum Packet Processing Performance				131Mpps	122Mpps
Network Interface Features	10/100/1000BASE-T			48	2
	1000BASE-X	SFP(SX/LX/ZX)		4 (*1)	8 (*1)
	10GBASE-R	SFP+(SR/LR, 1M/3M/5M DAC)			
Management Interface				RS-232C/D-Sub9pin x 1, 10/100/1000BASE-T x 1, SD x 1(*2)	
OpenFlow Features	Version			OpenFlow Version 1.3.1 / 1.0.0 + Experimenter (NEC Vendor Extensions)	
	Secure Channel			TCP Connection, TLS Connection(TLS1.0/1.2)	
	OpenFlow Port			Physical port [Physical], Lag, Loopback [Logical], All, Controller, Table, In_port, Any, Local, Normal, Flood [Reserved]	
	Message			Hello, Error, Echo Request, Echo Reply, Features Request, Features Reply, Get Configuration Request, Get Configuration Reply, Set Configuration, Packet In, Flow Removed, Port Status, Packet Out, Flow Mod, Group Mod, Port Mod, Multipart Request, Multipart Reply, Barrier Request, Barrier Reply, Queue Get Config Request, Queue Get Config Reply	
		NEC Vendor Extensions		VLAN_MOD, VLAN_STATUS, POLICER_MOD, POLICER_STATUS, LOCAL_MEP_MOD, LOCAL_MEP_STATUS, REMOTE_MEP_MOD, REMOTE_MEP_STATUS, EMERGENCY_LINKDOWN_MOD, EMERGENCY_LINKDOWN_STATUS	
	Matching Fields (Exact/Wildcard)			Ingress port, Metadata (maskable), Ethernet source address (maskable), Ethernet destination address (maskable), Ethernet type, VLAN ID, VLAN PCP, IP DSCP, IP protocol number, IPv4/IPv6 source address (maskable), IPv4/IPv6 destination address (maskable), TCP/UDP/SCTP source port (maskable), TCP/UDP/SCTP destination port (maskable), ICMPv4/v6 Type, ICMPv4/v6 Code, ARP Op-code, ARP SPA/TPA/SHA/THA (maskable), IPv6 Flow Lable (maskable), IPv6 ND TARGET/SLL/TLL, MPLS Label, MPLS BOS	
		NEC Vendor Extensions		Inner VLAN ID, Inner VLAN PCP	
	Instructions			Apply-Action, Write-Action, Write-Metadata, Goto-Table	
	Group Table Type			All, Indirect, Fast Failover	
	Actions			Output, Set MPLS TTL, Push/Pop VLAN, Push/Pop MPLS, Set-Queue, DEC NW TTL	
		Field-modify Actions (Set Filed)		Ethernet source address, Ethernet destination address, VLAN ID, VLAN PCP, IP DSCP, IPv4/IPv6 source address, IPv4/IPv6 destination address, TCP/UDP source port, TCP/UDP destination port, IPv6 Flow Lable, MPLS Label, MPLS TC	
		NEC Vendor Extensions		Push/Pop L2-VPN MPLS header	
	OpenFlow Statistics			Flow Counter - Received Packets, Received Bytes, Duration (seconds) (*3), Port Counter, Table Counter	
	Flow Entries			160k (Maximum) (*4)	
Normal LAN Features	Routing Protocol	IPv4	Unicast	Static, RIP, RIP2, OSPF, BGP4	
			Multicast	IGMPv2/v3, PIM-SM, PIM-SSM	
		IPv6	Unicast	Static, RIPng, OSPFv3, BGP4+	
			Multicast	MLDv1/v2, PIM-SM, PIM-SSM	
	Layer2 Features	VLAN		Port-VLAN, Tag-VLAN(IEEE802.1Q), Tag translation	
		Spanning Tree Protocol		STP(IEEE802.1D), RSTP/Rapid PVST+(IEEE802.1w), MSTP(IEEE802.1s), PVST+, BPDU filter, Route guard	
		Layer3 Cooperation		IGMP/MLD snooping	
		Jumbo Frame		Maximum 9,234bytes (tagged), 9,230bytes (untagged)	
	Network Features	Security		Filter (L2/IPv4/L4), Interruption of relays between ports	
		QoS		Classifier（L2/IPv4/L4）, Traffic Monitoring, Rate Limiting, Marking（DSCP/UserPriority）, Discard Control, Shaping（8class, Port Nandwidth Control, Scheduling（PQ, WRR, WFQ））, Diffserv	
		Reliability, Availability		ECMP (IPv4/IPv6), VRRP (IPv4/IPv6), Static Polling（IPv4/IPv6）, VRRP Polling (IPv4/IPv6), Link Aggregation (IEEE802.3ad), Strom Limiting, Graceful Restart (helper), UDLD（IEEE802.3ah）, Ring Protocol, Local ProxyARP, L2 Loop Detection, Uplink trunk redundant, CFM(IEEE802.1ag)	
		L2-VPN		VLAN Tunneling（Extended VLAN）	
	Operational & Management Features			SNMPv1/v2c/v3 , MIB II, IPv6 MIB, RMON, syslog, CLI, ping, traceroute, SSHv2, telnet, ftp, tftp, NTP, IPv4 DHCP Server/Relay, Prefix Delegation, LLDP, OADP, Port Mirroring, RADIUS, TACACS+, sFlow	
Power Saving Features				Remote Power Control, Port LED Brightness Control, Power Consumption Monitor	
Redundancy				Internal redundant power supply Hot-swappable	
Input Voltage(AC)				AC100V / 120V / 220～230V / 240V @ 50/60 plus or minus 3Hz	
Maximum Power Consumption				264W (270VA)	
Maximim Heat Value				1260kJ/h	
Operating Conditions	Temperature			0 - 45ºC	
	Humidity			10 - 85% Non-condensing	
	Noise			72dB	
	Vibration			ETSI EN300 019-2-3 Table5 Class3.2	
Dimensions WxDxH (mm)				445×588×44(1U)	
Weight				15kg	
Air Flow				Front to Rear Rear to Front (*5)	

(*1) SFP/SFP+ are available as 1000BASE-X/10GBASE-R.
(*2) Please use standard product of PF5200 Series (1GB). If you have used a non-standard products, does not guarantee operation.
(*3) Combinations of Flow Counter are NOT available at the same time.
(*4) Maximum flow entries depend on condition of registered flow entries.
(*5) Air flow is adjustable by changing direction of fan.

For inquiries, contact :
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