Terrabit Networks

PRODIGY LAYER 3- ETHERNET ROUTING SWITCH

PRODIGY

PD1-S31-9381-F
Layer 3- Ethernet Routing Switch

PRODUCT OVERVIEW

PD1-S31-9381-F is a new generation of aggregation 10G switches introduced by Terrabit Networks. It is targeted at the IP MAN (metropolitan areanetwork), campus networks and enterprise networks. It is developed on the basis of highperformance hardware and TerOS software platform with Terrabit Networks own independent intellectual property rights. It supports multiple services like IPv6, VPN and network Protection based on L2/L3/L4 wire-speed switchingservice. It also supports non stop upgrade,continuous forwarding, graceful restarting and redundancy protection.
PD1-S31-9381-F It supports up to 32GE ports and 6 10GE ports.

INNOVATIVE VIRTUAL CLUSTER SWITCHING TECHNIQUE

BVSS (Terrabit Networks Virtual Switch System):

BVSS makes full use of each link in the physical devices, which avoids STP blocking the link and protects the original link to the maximum extent.

Improved Performance:

Virtualize multiple physical devices into one. The performance, reliability and management of the virtual system are superior to the physical ones.

High Reliability:

Based on the advanced distribution mechanism and efficient cross-physical link aggregation link function, the logic control plane, service control plane and service data plane are separated. Thus, the device can support continuous layer-3 routing forwarding, avoiding service interruption as a result of a single point of failure.

Easy Management:

BVSS realizes single IP management, greatly improving the networking efficiency and lowering the operating cost.

PRODIGY LAYER-3 ETHERNET ROUTING SWITCH

PRODUCT CHARACTERISTICS

Carrier-Level QoS Policies

Supports priority retagging and complicated flow classification based on VLAN, MAC, source address, destination address, IP or priority to better streamline carrier's services.Supports flexible bandwidth control policies and supports port-/flow-based flow limit, and ensuring the line speed forwarding of each port to make sure the high quality of video, audio and data services. Supports 8 priority queues by each port.Supports multiple queue schedule algorithms such as SP, WRR, and SP +WRR.

Varied Service Characteristics

Supports layer-2 and layer-3 multicast routing protocol, which enable the device can access to IPTV, HD video surveillance and HD video conference.Supports layer-3 routing protocol and super-large routing table capacity, which enables the device is available in large campus networks, enterprise networks and industry networks.

Versatile IPv6 Solution

Supports the IPv6 protocol suite, IPv6 neighbor discovery, ICMPv6, path MTU discovery, DHCPv6, etc.Supports Ping, Traceroute, Telnet, SSH, ACL. Supports MLD, MLD Snooping, IPv6 static routing, RIPng, OSPFv3 and BGP4+, etc. Supports IPv6 tunnel: manual tunnel, automatic tunnel, GRE tunnel, 6to4, ISATAPSupports IPv4 transits to IPv6: IPv6 manual tunnel, automatic tunnel, 6 to 4 tunnel, ISATAP tunnel.

Industrial Ethernet Ring with Zero Delay and Zero Packet Loss

Supports industry-level EAPS and ERPS, and their protection recovery time is less than 50ms. Their high reliability is represented by the null packet loss, which has been proved by many years of application in the Grid, rail transportation and defense systems.

Complete Protection Mechanism

Equipment-Level Protection: The advanced hardware infrastructure design realizes the level-based packet schedule and packet protection, prevents DoS-/TCP-related SYN Flood, UDP Flood, Broadcast Storm or large traffic attacks, and supports level-based command line protection, endowing different levels of users with different management

permissions protection Authentication Mechanism: IEEE 802.1x, Radius and TerTacacs+Enhanced Service protection Mechanism: supports the plaintext or MD5 authentication of relevant routing protocol, URPF, deep inspection of hardware packet, control packet and data packet and filtering technology.

Innovative Energy-Saving Design

Intelligent power management: The power system of PD1-S31-9381-F supports real-time monitoring the device and the slow-start. It is also power-saving. Intelligent fan management system: The fan system of PD1-S31-9381-F supports automatic speed regulation, which efficiently slow the fan speed and mitigate the noise. Complies with the international standard IEEE 802.3a

Flexible and Convenient Management and Maintenance

Supports management modes such as the console port, Telnet, SSH, etc.

Supports the WEB management mode, which is easy and efficient so that it makes installation and debugging convenient.Supports TFTP-patterned file upload/ download management.

Supports ISSU (In-Service Software Upgrade). Suppor ts SNMP and Terrabit Networks NMS smart network management platform to realize automatic equipment discovery,network topology management, equipment configuration management, performance data statistics and analysis and trouble management.

PRODIGY LAYER-3 ETHERNET ROUTING SWITCH

MODEL

PD1-S31-9381-F

- 24 GE SFP ports
- 8 GE TX ports
- 6 10GE/GE SFP+ ports

SPECIFICATIONS

Item		PD1-S31-9381-F
GE Interface	TX	8
	SFP	24
10GE Interface		6 10GE/GE
Console		1 RJ45 Port
Backplane		216 Gbps
Forwarding rate		138 Mpps
Physical Specifications		
Chassis Dimensions (WxDxH mm)		440x350x44
Package Dimensions (WxDxH mm)		576x448x94
Power		
Power supply AC: 100V-240V (hot-swap) 50Hz±10%		75W
Total output BTU (1000BTU/H=293W)		255.97
Noise@25°C(dBA)		45
MTBF(H)		>200,000
Forwarding mode		Store-forward
Flash (MB)		16
DRAM (MB)		512
MAC		32K
Buffer size(MB)		2
Jumbo frame		9K
Routing table	IPv4	12K
	IPv6	6K
ARP table	IPv4	12K
	IPv6	2K
Total SVI		1K

For enquires, please email to info@terrabitnetworks.com

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FEATURES

VLAN
- 4K Active VLAN,
- QinQ & Selective QinQ,
- GVRP,
- Voice-VLAN

Spanning Tree
- 802.1D (STP),
- 802.1W (RSTP) and 802.1S (MSTP) BPDU guard,
- root guard and loopback guard

Multicast
- PIM-SM, PIM-DM, IGMP v1/v2/v3,
- IGMP Snooping, IGMP Fast Leave,
- MVR, IGMP filter

IPv4
- Static routing, RIP v1/v2, OSPF, BGP, PBR, ECMP
- BFD for OSPF, BGP

DHCP
  DHCP server/relay/client
  DHCP snooping/option82

MPLS
- Multi-VRF

IPv6
- ICMPv6, DHCPv6, ACLv6 and IPv6 Telnet
- IPv6 neighbor discovery, Path MTU discovery
- MLD V1/V2, MLD snooping
- IPv6 Static Routing, RIPng, OSPFv3, BGP4+
- Manual tunnel, ISATAP tunnel, 6 to 4 tunnel

QoS
- CAR, HQoS, MAC/IP/TCP/UDP/VLAN/ COS/DSCP/TOS based QoS, 802.1P/ DSCP priority re-labeling, SP, WRR, and "SP+WRR", Tail-Drop, WRED, flow monitoring and traffic shaping

Protection
- Port isolation, Port protection, and "IP + MAC+port" binding, MAC sticky, DAI & IP source guard, PPPoE+
- IEEE 802.1x, Radius and TerTacacs+
- L2/L3/L4 ACL flow identification and filtration Anti-attack from DDoS, TCP's SYN Flood, UDP Flood, etc. Broadcast/ multicast/unknown unicast storm-control
- MD5, SHA-256, RSA-1024, AES256, etc.

Reliability
- Static/LACP link aggregation, Interface backup
- BVSS virtual-stacking
- EAPS and ERPS
- URPF, LLDP
- ISSU
- VRRP
- 1+1 power backup

Management
- Console, Telnet, SSH v1/2, HTTP, HTTPS
- SNMP v1/v2/v3, RMON
- TFTP, FTP, SFTP
- NTP, SPAN, RSPAN
- sFlow

Accessories
- Power cord, rackmount kits, console cable

Environment
- Operating temperature/humidity:
  0°C -50°C ,10%-90% non-condensing
- Storage temperature/humidity:
  –20°C -70°C , 5%-95% non-condensing

Certification
- CE, FCC, ROHS

ORDERING INFORMATION

Item	Description
PD1-S31-9381-F	Ethernet routing switch with 32 GE and 6 10GE ports (1 RJ45 console port, 24 100M/ 1000M SFP ports, 8 GE TX ports, 6 10GE/GE SFP+ ports; 2 power slots with 1 hot-swap AC220V power supply; the cooling fan, 1U, standard 19-inch rack-mounted installation)

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