SWITCHING SOLUTIONS

DIGISOL 10-Slot Layer 3 Chassis Switch

DG-CS7010

Key Features:-

- Performance and Scalability
- Continuous Availability
- Simplified Management
- Advance L3 Features
- Comprehensive QoS
- Enhanced Security

Introduction:-

DIGISOL DG-CS7010 is a high performance, 10-slot, Layer 3 chassis switch. It can work in single or redundant management module mode. Slots can accommodate any combination of network interface modules and 1 or 2 management modules.

With redundant power supply, fans, and management modules, the DIGISOL DGCS7010 ensures continuous operation and is a fully redundant system. Moreover, all parts are hot swappable. They can be added or exchanged without interrupting the whole system.

The DG-CS7010 is ideal for the core layer of campuses, enterprise networks and the aggregation layer of IP metropolitan networks.

Performance and Scalability

The DG-CS7010 supports up to 32 10G ports or 384 (48x8) Gigabit ports, providing flexibility and high port density. Each 10G modules support 4 interfaces and the optional 10Gigabit Ethernet XFP transceivers can be chosen for different distance fiber uplinks. Every module is hot swappable, ensuring continuous operation of the system while adding or removing a module. Firmware & configuration are automatically upgraded from master to slave units for management simplicity. Intensive protocol support is included for MPLS, MPLS-VPN, MPLS-TE and IPv6 policy routing ensuring future investment protection.

Continuous Availability

IEEE 802.1w Rapid Spanning Tree Protocol provides a loopfree network and redundant links to the core network with rapid convergence. IEEE 802.1s Multiple Spanning Tree Protocol runs STP per VLAN base, providing Layer 2 load sharing on redundant links. IEEE 802.3ad Link Aggregation Control Protocol (LACP) increases bandwidth by automatically aggregating several physical links together as a logical trunk and providing load balancing and fault tolerance for uplink connections. IGMP snooping prevents flooding of IP multicast traffic and limits bandwidth intensive multicast traffic to only the subscribers.

Simple Management

Industry standard Command Line Interface (CLI) via console port or Telnet can be used for switch management. Embedded user friendly web interface helps users quickly and simply configure switches. Backup and restore Firmware and configuration files via TFTP, FTP and xmodem.

L3 Features

The DG-CS7010 delivers high-performance hardware based IP routing. RIP and OSPF provide dynamic routing by exchanging routing information with other Layer 3 switches or routers. DVMRP, PIM-DM Multicast Routing Protocols send IP multicast traffic from one subnet to another. VRRP helps maintain constant network reachability in events of switch failure.

Comprehensive QoS

8 egress queues per port enable differentiated management of up to 8 traffic types. Traffic is prioritized according to 802.1p, DSCP, IP precedence and TCP/UDP port number, giving optimal performance to real-time applications such as voice and video. Bidirectional rate-limiting, per port or traffic class, preserves network bandwidth and allows full control of network resources.

Enhanced Security

IEEE 802.1X port- and MAC-based access control ensures all users are authorized before being granted access to the network. Access Control Lists (ACLs) can be used to restrict access to sensitive network resources by denying packets based on L2/L3/L4 headers. RADIUS and TACACS+ authentication rotect data communication and ensure data privacy

Technical Specifications:-

Module Slots
- No. of Module Slots 8 for port module, 2 (shared) for control module
- Management Module Redundancy

Ports
- 1G ports: Upto 384
- 10GE XFP ports: Upto 32

Performance
- Backplane Bandwidth: Upto 2.4TBps
- Switching Capacity: 768 Gbps
- Max. Packet Forwarding Rate: 571 Mpps
- MAC Address Table: 128K
- Routing table size: 128K
- Vlan: 4K

Physical Features
- 19" Rackmountable
- Power Supply: AC
- Power Supply Slots: 3

Layer 2 Features
- SPANNING TREE PROTOCOL
  IEEEE802.1d(STP)
  IEEEE802.1W(RSTP)
  IEEEE802.1S(MSTP) Max 48 instance
  Root Guard
  BPDU Guard
  BPDU forwarding
- VLAN
  Vlan based on Port/ MAC/ IP segment/ Portocol/ Voice/ Private vlan
  Support port-based 802.1Q
  QinQ
  GVRP
- LACP
  Support LACP 802.3ad
  max 128 group trunk with
  max 8 ports for each trunk
  Support load balance
- MULTICAST
  IGMP v1/v2/v3
  IGMP v1/v2/v3 Snooping
  IGMP proxy
  ICMPv6 MLDv1/v2, MLDv1/v2 snooping
  Multicast Vlan register/MVR for IPv4 and IPv6

- Multi-layer Ring Protection Protocol
- Loopback interface
- 9k Jumbo Frame
- Port loop detect
- LLDP and LLDP-MED
- UDLD
- PORT MIRROR
  one to one or any to one mirror
  Mirror across slots
  RSPAN
- MAC, MAC binding (IPv4 /Ipv6)
  MAC filter, MAC limit

Layer 3 Features
- IP Protocol,IP support both of IPv4 and Ipv6
- Default Routing, Static Routing
- RIPv1/V2, OSPFv2, BGP4
- Support 4 byte BGP AS number
- OSPFv3, BGP4+ support
- Graceful restart for OSPF and BGP
- Policy based Routing(PBR) for IPv4 and Ipv6
- VRRP, VRRP v3
- Black hole route
- Support ECMP with maxim 8 groups
- TUNNEL
  6 to 4 Tunnels
  configured Tunnels
  ISATAP
- MULTICAST
  DVMRP, PIM-DM, PIM-SM, PIM-SSM, MSDP
  Static Multicast route
  Multicast edge configure
  Any cast RP for IPv4 and Ipv6
  PIM-SM/DM/SSM for IPv6
  Multicast receive control
- URPF for IPv4 and Ipv6
- Support BFD
- DHCP Server for IPv4 and Ipv6
- ARP Proxy, Binding

QoS
- 8 hardware queues per port
- Support traffic classification based on IEEE 802.1p, ToS, port and DiffServ
- Support SP, WRR.SWRR
- Upto 13Support Traffic Shaping
- Support priority Marking

Security
- 802.1X, Port, MAC username based Support guest vlan and auto vlan
- MAC Based AAA(Client free access)
- ARP inspection
- DoS protection
  ARP-DOS attack Prevention
  Ping Sweep
  PING-DOS attack,
  ICMP unreachable attack
  DDOS attack
  CPU protection
- ACL
- Support standard and expanded ACL
- Support IP ACL and ACL
- Support ACL based on source/ definition IP, MAC, L3 IP, TCP/UDP port number, IP PRI (DSCP, ToS, Precedence), Time
- Supports for port based, vlan based and virtual interface based ACL
- Support RADIUS for IPV4 and Ipv6
- TACACS+
- DHCP v6 and DHCP snooping V6
- IP source guard
- Broadcast / Multicast / Unicast Storm Control
- Port binding (IPv4 /Ipv6)

Management
- Support DCHP Client, Relay, Snooping, Option 82
- DNS Client
- DNS proxy
- Support (IPv4/IPv6) CLI via telnet, SSH
- Console via RS-232
  • SSL
- Management access filter
- AAA Model for Authentication
- Support SNTP and NTP
- Setup time zone and Daylight Saving time
- Support SNMPv1/v2c/v3 for IPv4
- SNMPv1/v2c for IPv6
- Private MIB
- RMON Group 1, 2, 3, 9
- Support max 8 servers for syslog or trap receive
- Multiple Configuration file storage
- Command log

SWITCHING SOLUTIONS

Technical Specifications:-

- Support FTP/TFTP server or client upgrade
- Support X-modem protocol transfer the file
- CPU,temperature monitoring and raise alarm
- Sflow for IPv4 and IPv6
- Support IPFIX (IP Flow Information Export)

Mechanical Specification
- Dimensions (H x W x D): 797 x 436 x 478 mm (19RU)
- AC Power Input 90 ~ 264VAC, 50 ~ 60Hz Built-in Universal Power Supplies Power Output for single power Supply: 600W (max)
- Temperature Temperature: 0°C to 40°C

(Standard Operating) Operating: -40°C to 70°C (Non-Operating)
- Humidity: 10% to 90% (Non-condensing)

Warranty
- One year Warranty

Ordering Information:-

DG-CS7010	:	**DIGISOL DG-CS7010 10 Slot chassis switch which includes 8 Interface Slots,2 Management Slots, 1 AC Power Supply (DG-SA-RPS-7010AC),2 hot-pluggable fan trays including Fans**
DG-CS7004	:	**DIGISOL DG-CS7004 4 Slot chassis switch includes 3 Interface Slots (One can be Shared for Second Redundant Management Module),1 Management Slots, 1 Power Supply (DG-SA-RPS-7004AC), One hot-pluggable fan tray including Fans**
DG-CS7010-MM-II	:	**DG-CS7010 Management Module Type II**
DG-CS7004-MM-16GC8GX	:	**DG-CS7004-management module, with 8 1000Base-X SFP ports and 16 Gigabit Combo (SFP/GT) ports**
DG-CS7004-MM-8GC16GX2SFPP	:	**DG-CS7004-management module, with 16 1000Base-X SFP ports with 8 Gigabit Combo (SFP/GT) ports and 2 10G-SFP+ Ports**
DG-CS7000-16GC8GX4SFPP	:	**DG-CS7000 Interface Module with 4 10G-SFP+-ports ,8 100/1000Base-X ports ,16 Gigabit Combo (SFP/GT) ports**
DG-CS7000-48GT	:	**DG-CS7000 Interface Module 48 ports 10/100/1000Base-T module**
DG-CS7000-28GX4SFPP16GT	:	**DG-CS7000 Interface Module 4*10GbE(SFP+) + 28*100/1000Base-X(SFP) + 16*10/100/1000Base-T, Wire-Speed, IPv6 supported**
DG-CS7000-20SFPP2QSFPP	:	**DG-CS7000 Interface Module with 20*10G-SFP+-ports ,2*40G-QSFPP ports**
DG-CS7000-44SFP4SFPP	:	**DG-CS7000 Interface Module with 4*10GbE (SFP+) ports & 44*100/1000Base-X (SFP) Ports**
DG-SA-RPS-7010AC	:	**220V AC Power Supply (600W) for DG-CS7010**

*Standard Warranty shall be subject to terms and conditions specified in the DIGISOL PRODUCT WARRANTY displayed on the website of the company.

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