

## DIGISOL Full Fiber L3 Intelligent Switch with 10G Uplink

### DG-GS4654FSE

#### Key Features:-

- Supports wire-speed L2/L3 forwarding
- High routing performance for IPv4 and IPv6 protocols
- Advanced Security Features including RADIUS & TACACS+ Authentication
- ERPS (Ethernet Ring Protection Switching)
- Rich L3 Features (RIP, OSPF, BGP, IS-IS)
- Easy to achieve Policy-based-routing (PBR)
- 6-4 Tunnel, ISATAP Tunnel, GRE Tunnel
- Virtual Switch Framework : VSF Stacking (Upto 4 units)
- MRRP (Multiple Ring Resilience Protocol)
- Supports Multicast Features including MVR (Multicast VLAN Register)
- Supports Dual Firmware images and configuration files
- Traffic Analysis through sflow
- Multiple Secure Network Management Options High Availability and Scalability



#### Introduction:-

**DIGISOL** DG-GS4654FSE switch is a Layer 3 Gigabit fiber series switch. It supports full stackable routing features through built-in 10G uplink ports. Advantage of using a 6x10G uplink ports allow enough interface for uplink while keeping 2x10G slots occupied for VSF stacking. It supports high availability, scalability, security, energy efficiency, and easy operation with rich L3 features. It is ideal for aggregation or access layer for all types of LAN networks.

#### Performance and Scalability

With high switching capacity, DG-GS4654FSE support wire-speed of L2/L3 forwarding and high routing performance for IPv4 and IPv6 protocols. The 10 Gigabit Ethernet connectivity can be accomplished using a hot-pluggable 10 Gigabit SFP+ transceiver over multimode or single mode fibers (The distance depends on the optical module chosen).

#### High-Reliability network

MRPP is a Multi-layer Ring Protection Protocol is a fast Ethernet ring protocol. Comparing to spanning tree protocol, it has the advantages of fast convergence, simple protocol calculation, fewer system resources cost, and so on, which can improve the reliability of Ethernet network operation.

#### Rich L3 Features

DG-GS4654FSE delivers high-performance, hard-ware-based IP routing. RIP, OSPF, ISIS and BGP provide dynamic routing by exchanging routing information with other Layer 3 switches and routers with DG-GS4654FSE, customers could easily achieve Policy-based Route (PBR), which is important when they need a multi exit application.

#### VSF (Virtual Switch Framework)

Virtual Switch Framework can virtualize multiple switches of the series into one logical device, achieving the sharing of information and data tables between different switches. The performance and ports density of the virtualized device is greatly enlarged by VSF. VSF also simplifies management work for the network administrator and provides more reliability.

#### Rich IPv6 Support

DG-GS4654FSE supports IPv6 switching and routing based on hardware for maximum performance with increased network devices, the need for larger addressing and higher security become critical. Digisol's DG-GS4654FSE will be the right product to meet this requirement.

#### Strong Multicast and Comprehensive QoS

DG-GS4654FSE supports L2/L3 multicast protocols such as IGMPv1/v2/v3 and also supports Multicast VLAN Register (MVR), multicast receiver/sender control and illegal multicast source detect functions.

DG-GS4654FSE supports 8 queues per port with differentiated management of up to 8 traffic types. The traffic is prioritized according to IEEE802.1p, DSCP, IP precedence, and TCP/UDP port number, giving optimal performance to real-time applications such as voice and video. The switch also supports Bi-directional rate-limiting, per port or traffic class preserves network bandwidth, and allows full control of network resources.

### Technical Specifications:-

Item	DG-GS4654FSE
Physical port	48*100/1000Base-X (SFP) + 6*10GbE (SFP+)
	Auto-MIDX
Management port	1 x RJ45 Ethernet Management port
	1x Console port
	1x USB2.0 interface
<b>Performance</b>	
Switching Capacity	216Gbps
Forwarding rate	161Mpps
Jumbo Frame	12K
MAC Address	32K
ARP Table	1K
Routing Table	1K
ACL Table	3K
<b>Physical</b>	
Dimension (W*H*D)	440mm x 44mm x 380mm
Relative Humidity	5%~95%, non-condensing
Temperature	Working: 0°C~50°C, Storage: -40°C~70°C
Power Supply	AC:100~240VAC, 50~60Hz
Power Consumption	<70W
<b>Main Features</b>	
L1, L2 Features	IEEE802.3(10Base-T), IEEE802.3u(100Base-TX), IEEE802.3z(1000BASE-X), IEEE802.3ab(1000Base-T),
	IEEE802.3ae(10GBase), IEEE802.3x, IEEE802.3ak(10GBASE-CX4)
	Port loopback detection
	LLDP and LLDP-MED, UDLD
	802.3ad LACP, max 128 group trunks with max 8 ports for each trunk
	LACP load balance
	ERPS (G.8032)
	N:1 Port Mirroring
	RSPAN
	IEEE802.1d (STP), IEEE802.1w (RSTP), IEEE802.1s (MSTP)
	Root Guard, BPDU Guard, BPDU Tunnel
	802.1Q, 4K VLAN
	MAC VLAN, Voice VLAN, PVLAN, Protocol VLAN, Multicast VLAN
	QinQ, Flexible QinQ
	GVRP
	N:1 VLAN Translation
	Broadcast / Multicast / Unicast Storm Control
	IGMP v1/v2/v3 Snooping and L2 Query
	ND Snooping, MLDv1/v2 Snooping
	Port Security
	Flow Control: HOL, IEEE802.3x
	Bandwidth Control

### Technical Specifications:-

Item	DG-GS4654FSE
L3 Features	Static Routing, RIPv1/v2, IS-IS, OSPFv2, BGP4
	OSPFv3, BGP4+
	OSPF multiple processes
	VRF-Lite
	LPM Routing
	Policy-based routing (PBR) for IPv4 and IPv6
	VRRP, URPF, ECMP, BFD
	IGMP v1/v2/v3, IGMP Proxy
	Static Multicast Route
	Multicast Receive Control
	Illegal Multicast Source Detect
	ARP Guard, Local ARP proxy, Proxy ARP, ARP Binding, Gratuitous ARP, ARP Limit
	Anti ARP Cheat, Anti ARP Scan
	DNS Client, DNS Relay
	GRE Tunnel
IPv6	6to4 Tunnel, Configured Tunnel, ISATAP Tunnel, GRE Tunnel
	ICMPv6, ND, DNSv6
	IPv6 LPM Routing, IPv6 Policy-based Routing (PBR)
	IPv6 VRRPv3, IPv6 URPF, IPv6 RA
	RIPng, OSPFv3, BGP4+
	MLD Snooping, IPv6 Multicast VLAN
	MLDv1/v2, Ipv6 Any cast RP, IPv6 ACL, IPv6 QoS
QoS	8 Queues
	SP, WRR, SP+WRR
	WRED
	Traffic Classification Based on 802.1p COS, ToS, DiffServ DSCP, ACL, Port number
	Traffic Policing
	PRI Mark/Remark
ACL	IP ACL, MACACL, IP-MAC ACL
	Standard and Expanded ACLBased on source/destination IP or MAC, IP Protocol, TCP/UDP port, DSCP, ToS, IP Precedence), VLAN, Tag/Untag, CoS
	Redirect and statistics
	Rules can be configured to port, VLAN, VLAN routing interfaces
	Time Ranged ACL
	ACL rules can be configured to port, VLAN
Security	802.1x AAA, Port, MAC-based authentication
	Accounting based on time length and traffic
	Guest VLAN and auto VLAN
	RADIUS for IPv4 and IPv6
	TACACS+ for IPv4 and IPv6
	MAB
DHCPv4/v6 Traffic Monitor	DHCP Server/Client for IPv4/IPv6, DHCP Relay/Option 82, DHCP Snooping/Option 82

# DIGISOL<sup>®</sup>

## SWITCHING SOLUTIONS



### Technical Specifications:-

Item	DG-GS4654FSE
Traffic Monitors	sFlow Traffic Analysis
Security Net-work Management	CLI, WEB, Telnet, SNMPv1/v2c/v3 through IPv4 and IPv6
	Syslog and external Syslog Server
	HTTP SSL
	SNMP MIB, SNMP TRAP
	FTP/TFTP
	SNTP/NTP
	RMON 1, 2, 3, 9
	Authentication by Radius/TACACS
	SSH v1/v2
	Dual firmware images/ Configuration files
	802.3ah OAM, 802.1ag OAM
Data Center Features	VSF (Virtual Switch Framework)

### Ordering Information:-

**DG-GS4654FSE-B1:** DIGISOL L3 Intelligent Fiber Switch with 48\*100/1000Base-X(SFP) + 6\*10GbE(SFP+). Single AC power supplies (Hot-swappable)

**DG-GS4654FSE-B2:** DIGISOL L3 Intelligent Fiber Switch with 48\*100/1000Base-X(SFP) + 6\*10GbE(SFP+). Dual AC power supplies (Hot-swappable)

\*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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