

QSSC-LB400GR (LB4M)

L2/L3 Stackable Network Switch



- Support 10/100/1000 Base-TX Ports x48
- Support 10Gbps Uplink Interfaces
- User-friendly Management Interface
- High-availability L2/L3+QoS Software Features
- High Security Mechanism
- Highly-Standard Compliance
- High Reliability
- High Scalability
- High Performance
- Dual AC/DC Redundant PSU

Physical Ports

- 48 1000/100/10 RJ45 -Giga ports
- Daughter card type:
 - 2* 10GE SFP+ network interface card
- 1000/100/10 service ports:
 - Upgraded switch firmware code via FTP or TFTP
 - Managed switch status and configured the switch □ via web or telnet
- RJ-45 console
 - Upgraded switch firmware code via X-modem
 - Managed switch status and configured the switch □ via terminal tools (ex: HyperTerminal)

Power Supply

- Support two dual Hot Swap AC/DC Power Supply

LEDs

- Per 10G port: Link, Activity
- Per service port: Speed, Link, Activity
- Per device: power, status

Dimension Size User Interfaces

- W435mm(17.13") x D393.7mm(15.5") x H42.6mm(1.67")
- Command Line Interface via console port
- Web-based management via web browser
- Telnet remote login
- SNMP v1/v2c/v3

L2 Features

- Support Jumbo frame up to 9KB
- Provide wire speed of L2 switching performance
- Support up to 16K MAC address entries
- Support Flow Control
 - IEEE802.3x for full duplex mode
 - Back-Pressure flow control in half duplex mode
- Provide store-and-forward forwarding scheme
- Provide Broadcast, Unicast, Multicast storm protection
- Support IGMP snooping
- Support VLAN
 - IEEE 802.1Q VLAN
 - GARP/GVRP/GMRP
 - up to 512 VLANs, out of 3965 VLAN IDs
 - port-based VLAN
 - protocol-based VLAN
 - Voice VLAN
 - VLAN Trunking Protoco
 - Guest VLAN
 - MAC-based VLAN
 - IP-subnet-base VLAN
 - protected ports (private Edge VLAN)

L3 Routing Features

- Support VTP
- Support Spanning Tree
 - STP, IEEE 802.1d
 - RSTP, IEEE 802.1w
 - MSTP, IEEE 802.1s
 - VTP
- Support Link Aggregation
 - up to 6 trunk groups
 - up to 8 ports per trunk group
 - 802.3ad Link Aggregation and LACP
 - load balance for both unicast and multicast traffics
- Provide Port Mirror (many-to-1)

L3 Multicast

- Support RIP v1 and v2
- Support OSPF v1/v2
- Support router discovery (IRDP)
- Support VLAN routing
- Support VRRP
- Support IP routing
- Support route redistribution
- Support route preferences
- Support tunnels
- Support loopbacks

- Support PIM-DM and PIM-SM
- Support Mdebug
- Support DVMRP
- Support IGMP v1/v2/v3

IPv6 L3 Routing Features

- Support RIPng
- Support OSPFv3
- Support IPv6 Routing

IPv6 L3 Multicast

- Support PIM-DM6 and PIM-SM6
- Support MLD (Multicast Listener Discovery)
- Support MLD Snooping

Security

- User/Password protected system management
- L2/L3/L4 ACL (access control list)
- RADIUS client
- TACACS+ client
- SSH v1/v2
- SSL v3/TLS v1
- IEEE 802.1x
- port MAC lock
- MAC Filter
- Denial of Service

Quality of Service (optional: 2nd stage)

- 802.1p based CoS
- 8 priority queues per port
- IP TOS/Precedence based Cos
- DSCP based CoS
- Policy based Diffserv
- Port Channel load balance
- sFlow (RFC 3176)

Management

- Provide RJ-45 console/Auxiliary ports
- Support BOOTP and DHCP for IP address assignment
- Support DHCP relay function
- Support DHCP Filtering
- Support DHCPv6
- Support Link Layer Discovery Protocol (LLDP)
- Support software upload/download via XMODEM or FTP/TFTP
- Support dual firmware images
- Support configuration upload/download via XMODEM or FTP/TFTP
- Support up to three configuration files including factory default
- Support SSH v1/v2 switch management
- Support SSL v3/TLS v1 switch management
- Support SSH/SSL/TLS keys download via XMODEM or FTP/TFTP
- Support SNTP (Simple Network Time Protocol)
- Support IPv6 packet forwarding
- Support IPv4/v6 Ping function
- Support traceroute function
- Support telnet function
- Support DNS client and DNS Relay functions
- Support message/event/error/trap logs
- Support logging to local file and syslog server
- Support CISCO like CLI (Command Line Interface) switch management
- Support Web switch management
- Support SNMP v1, v2c, and v3 switch management
- Support Private Enterprise MIB
- Support RMON groups 1, 2, 3, and 9
- Support port mirror
- Support cluster
- Network management

Network Protocol and Standards Compatibility

- IEEE 802.3 10BASE-T
- IEEE 802.3u 100BASE-TX
- IEEE 802.3z 1000BASE-SX
- IEEE 802.3x Flow Control
- IEEE 802.3ad Link Aggregation
- IEEE 802.1v Protocol VLAN and Port VLAN
- IEEE 802.1d Spanning Tree Protocol
- IEEE 802.1w Rapid Spanning Tree Protocol
- IEEE 802.1s Multiple Spanning Tree Protocol
- IEEE 802.1ab Link Layer Discovery

Performance Specifications

- Protocol Forwarding modes: Store-and-forward
- Switch latency: less than 20 ms for 64-byte frames
- System memory: 256/512 SO-DIMM DDR RAM
- Flash size: 32MB
- Mean Time Between Failures (MTBF): 193718 hours

Environmental Specifications

- Operating temperature: 10 to 50°C
- Operating humidity: 80% maximum relative humidity

Safety / EMC

- Safety
 - UL60950-1
 - CAN/CSA-C22.2 No. 60950-1
 - EN 60950-1
 - IEC 60950-1
 - AS/NZS 90950
 - IEC 60825-1
 - IEC 60825-2
 - EN 60825-1
 - EN 60825-2
 - 21 CFR 1040
- EMC
 - FCC Part 15 (CFR 47) Class A
 - ICES-003 Class A
 - EN55022 Class A
 - CISPR22 Class A
 - AS/NZS 3548 Class A
 - VCCI Class A
 - EN55024
 - ETS300 386
 - EN50082-1
 - EN61000-3-2
 - EN61000-3-3

System Parameters

Number of VLANs	512
Maximum VLAN ID	3965
Maximum RADIUS servers	3
Maximum RADIUS accounting servers	1
Maximum TACACS servers	3
Maximum IP filter addresses	5
Maximum telnet or SSH sessions	5
Maximum WEB sessions	8
Number of 802.1p traffic classes	8
Number of trunk groups	6
Number of member ports in a trunk group	8
Number of MSTP instances	5
Number of routing table entries (optional: 2 nd stage) V4 6000	512
Number of ACL (optional: 2 nd stage) V6 3000	100
Number of rules in a ACL (optional: 2 nd stage)	10
Maximum Classes (optional: 2 nd stage)	32
Maximum rules per class (optional: 2 nd stage)	7
Maximum member classes per policy (optional: 2 nd stage)	10
Maximum attributes per class (optional: 2 nd stage)	1
Maximum service interfaces	50



N0.211, Wen Hwa 2nd Rd., Kuei Shan, Tao Yuan 33377, Taiwan
E-mail: sales@qssc.com Fax: 886-3-3974770
For more information, please visit <http://www.qssc.com>

All specifications and figures are subject to change without prior notice.
Actual products may look different from the photo.

All trademarks and logos are the properties of their representative holders.
Copyright © 2008 QSSC.