LGB5028A-R2, LGB5052A-R2

GBE MANAGED SWITCHES

24/7 TECHNICAL SUPPORT AT 877.877.2269 OR VISIT BLACKBOX.COM

SPECIFICATION COMPARISON CHART		
	LGB5028A-R2	LGB5052A-R2
RJ-45 PORTS (10M/100M/1G)	24	48
SFP+ UPLINK PORTS (1G/10G)	4	4
CONSOLE PORT	(1) DB9	(1) RJ-45
MANAGED	YES	YES

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OVERVIEW

GBE MANAGED SWITCHES DATA SHEET

INTRODUCTION

LGB5028A-R2, LGB5052A-R2 Gigabit Ethernet (GbE) Managed Switches offer a full suite of L2 Ethernet Switch features and additional 10GbE uplink connections, including advanced L3 features such as Static Route for Enterprise networks via fiber or copper connections.

LGB5028A-R2 has 24 (10M/100M/1G) RJ-45 ports, 4 GbE/10G SFP+ ports and a DB9 console port.

LGB5052A-R2 has 48 (10M/100M/1G) RJ-45 ports, 4 GbE/10G SFP+ ports and an RJ-45 console port.

Both switches provide high hardware performance and environment flexibility for SMBs and Enterprises.

The switches are ideal to deliver management simplicity, optimum user experience, and lower cost. The embedded DeviceManaged System is designed to be extremely easy-to-use/manage/install IP Phone, IP Cam, or Wifi-AP for Enterprise Applications.

FEATURES

- **L2+ FEATURES PROVIDE BETTER MANAGEABILITY, SECURITY, QOS, AND PERFORMANCE**
- **IPV4/IPV6 DUAL STACK MANAGEMENT**
- **SSH/SSL SECURED MANAGEMENT**
- **SNMP V1/V2C/V3**
- **RMON GROUPS 1,2,3,9**
- **SFLOW**
- **IGMP V1/V2/V3 SNOOPING**
- **MLD V1/V2 SNOOPING**
- **RADIUS AND TACACS+ AUTHENTICATION**
- **IP SOURCE GUARD**
- **DHCP RELAY (OPTION 82)**
- **DHCP SNOOPING**
- **ACL AND QCL FOR TRAFFIC FILTERING**
- **802.1D(STP), 802.1W(RSTP) AND 802.1S(MSTP)**
- **LACP AND STATIC LINK AGGREGATION**
- **Q-IN-Q DOUBLE TAG VLAN**
- **GVRP DYNAMIC VLAN**

COMPATIBLE SFPS

COMPATIBLE SFP/SFP+ MODELS	
PRODUCT CODE	**DESCRIPTION**
LFP411	SFP, 1250-MBPS FIBER WITH EXTENDED DIAGNOSTICS, 850-NM MULTIMODE, 550 M LC
LFP412	SFP, 1250-MBPS FIBER WITH EXTENDED DIAGNOSTICS, 1310-NM MULTIMODE, 2 KM LC
LFP413	SFP, 1250-MBPS FIBER WITH EXTENDED DIAGNOSTICS, 1310-NM SINGLE-MODE, 10 KM LC
LFP414	SFP, 1250-MBPS FIBER WITH EXTENDED DIAGNOSTICS, 1310-NM SINGLE-MODE, 30 KM LC
LFP415	SFP WITH SERDES INTERFACE, 1250 MBPS, RJ45, 1000BASE-T, EXTENDED DIAGNOSTICS
LFP416	SFP WITH SGMII INTERFACE, 1250 MBPS, RJ45, 10/100/1000BASE-T, EXTENDED DIAGNOSTICS
LFP417	SFP WITH SERDES INTERFACE, 1250 MBPS, RJ45, 1000BASE-T, EXTENDED DIAGNOSTICS
LFP418	SFP, 1250-MBPS FIBER WITH EXTENDED DIAGNOSTICS, 1550-NM SINGLE-MODE, 80 KM, LC
LFP420	SFP, 1250-MBPS SIMPLEX FIBER WITH EXTENDED DIAGNOSTICS, 1550-NM TX, 1310-NM RX, SINGLE-MODE, 10 KM, LC
LFP421	SFP, 1250-MBPS SIMPLEX FIBER WITH EXTENDED DIAGNOSTICS, 1310-NM TX, 1550-NM RX, SINGLE-MODE, 10 KM, LC
LFP401	SFP, 155-MBPS FIBER WITH EXTENDED DIAGNOSTICS, 850-NM MULTIMODE, 2 KM, LC
LFP402	SFP, 155-MBPS FIBER WITH EXTENDED DIAGNOSTICS, 1310-NM MULTIMODE, 2 KM, LC
LFP403	SFP, 155-MBPS FIBER WITH EXTENDED DIAGNOSTICS, 1310-NM SINGLE-MODE, 30 KM, LC
LFP404	SFP, 155-MBPS FIBER WITH EXTENDED DIAGNOSTICS, 1310-NM SINGLE-MODE, 60 KM, LC

SPECIFICATIONS

GBE MANAGED SWITCH — 28-PORT (LGB5028A-R2)

FRONT VIEW   BACK VIEW

WHAT'S INCLUDED WITH THE 28-PORT SWITCH

- **(1) 28-PORT GIGABIT ETHERNET (GBE) MANAGED SWITCH**
- **(2) RACKMOUNT BRACKETS AND HARDWARE**
- **(1) AC POWER CORD**
- **(1) DB9 CONSOLE CABLE**
- **(4) ADHESIVE RUBBER FEET**
- **(1) INSTALLATION AND GETTING STARTED GUIDE**

GBE MANAGED SWITCH - 28-PORT (LGB5028A-R2)	
APPROVALS	FCC Part 15 Class A, CE, RoHS
HARDWARE PERFORMANCE	
FORWARDING CAPACITY	95.232 Mpps
SWITCHING CAPACITY	128 Gbps
MAC TABLE	32 K
JUMBO FRAMES	10056 bytes
MECHANICAL	
CONNECTORS	(28) 10/100/1000 RJ-45 ports, (4) 1G/10G SFP+ slots, (1) DB9 console port, (1) 3-prong power outlet
INDICATORS	(2) Mode LEDs, (1) System LED, (24) Port Status LEDs, (24) Link/Activity LEDs, (24) Speed LEDs, (4) FO Link/Activity LEDs, (4) FO Speed LEDs
USER CONTROLS	(1) Mode button
POWER	Voltage: 100–240 VAC: Frequency: 50–60 Hz
DIMENSIONS	1.73"H x 17.4"W x 8.3" D (4.4 x 44.2 x 21.1 cm)
WEIGHT	5.3 lb. (2.4 kg)
ENVIRONMENTAL	Operating Temperature: 32 to 104° F (0 to 40° C): Storage Temperature: -4 to +158° F (-20 to +70° C); Operating Humidity: 10 to 90% noncondensing; Altitude: <10000 ft. (<3000 m)
SOFTWARE FEATURES	
DHCP RELAY	• Relay of DHCP traffic to DHCP server in different VLAN • Works with DHCP Option 82
IGMP V1/V2/V3 SNOOPING	IGMP limits bandwidth-intensive multicast traffic to only the requesters. Supports 1024 multicast groups

SPECIFICATIONS

GBE MANAGED SWITCH — 28-PORT (LGB5028A-R2)

GBE MANAGED SWITCH - 28-PORT (LGB5028A-R2) SOFTWARE FEATURES	
LAYER 2 SWITCHING	
SPANNING TREE PROTOCOL	Standard Spanning Tree 802.1d; Rapid Spanning Tree (RSTP) 802.1w; Multiple Spanning Tree (MSTP) 802.1s
TRUNKING	Link Aggregation Control Protocol (LACP) IEEE 802.3ad; • Up to 14 groups; • Up to 8 ports per group
VLAN	Supports up to 4K VLANs simultaneously (out of 4096 VLAN IDs) • Port-based VLAN • 802.1Q tag-based VLAN • MAC-based VLAN • Management VLAN • Private VLAN Edge (PVE) • Q-in-Q (double tag) VLAN • Voice VLAN • GARP VLAN Registration Protocol (GVRP)
IGMP QUERIER	IGMP querier is used to support a Layer 2 multicast domain of snooping switches in the absence of a multicast router
IGMP PROXY	IGMP snooping with proxy reporting or report suppression actively filters IGMP packets in order to reduce load on the multicast router
MLD V1/V2 SNOOPING	Delivers IPv6 multicast packets only to the required receivers
DEVICE MANAGEMENT SYSTEM (DMS)	
GRAPHICAL MONITORING	• Topology view: Support intuitive way to configure and manage switches and devices with visual relations • Floor view: It's easy to drag and drop PoE devices and help you to build smart workforces • Map view: Enhance efficiency to drag and drop devices and monitor surroundings on google map
FIND MY SWITCH	Search your real switches quickly and manage directly
TRAFFIC MONITORING	Display visual chart of network traffic of all devices and monitor every port at any time from switches
TROUBLESHOOTING	• Network diagnostic between master switch and devices • Support protection mechanism, such as rate-limiting to protect your devices from brute-force downloading
LAYER 3 SWITCHING	
IPV4 STATIC ROUTING	IPv4 Unicast: Static routing
IPV6 STATIC ROUTING	IPv6 Unicast: Static routing
SECURITY	
SECURE SHELL (SSH)	SSH secures Telnet traffic in or out of the switch, SSH v1 and v2 are supported
SECURE SOCKETS LAYER (SSL)	SSL encrypts the http traffic, allowing advanced secure access to the browser-based management GUI in the switch
IEEE 802.1X	• IEEE802.1X: RADIUS authentication, authorization and accounting, MD5 hash, guest VLAN, single/multiple host mode and single/multiple sessions • Supports IGMP-RADIUS based 802.1X • Dynamic VLAN assignment
LAYER 2 ISOLATION PRIVATE VLAN EDGE	PVE (also known as protected ports) provides L2 isolation between clients in the same VLAN. Supports multiple uplinks
PORT SECURITY	Prevents illegal IP address from accessing to specific port in the switch
IP SOURCE GUARD	±1 kV
RADIUS/ TACACS+	Supports RADIUS and TACACS+ authentication. Switch as a client
STORM CONTROL	Prevents traffic on a LAN from being disrupted by a broadcast, multicast, or unicast storm on a port
DHCP SNOOPING	A feature acts as a firewall between untrusted hosts and trusted DHCP servers
ACLS	Supports up to 512 entries. Drop or rate limitation based on: • Source and destination MAC, VLAN ID or IP address, protocol, port, • Differentiated services code point (DSCP) / IP precedence • TCP/ UDP source and destination ports • 802.1p priority • Ethernet type • Internet Control Message Protocol (ICMP) packets • TCP flag

SPECIFICATIONS

GBE MANAGED SWITCH — 28-PORT (LGB5028A-R2)

GBE MANAGED SWITCH - 28-PORT (LGB5028A-R2) SOFTWARE FEATURES	
QUALITY OF SERVICE	
HARDWARE QUEUE	Supports 8 hardware queues
SCHEDULING	• Strict priority and weighted round-robin (WRR) • Queue assignment based on DSCP and class of service
CLASSIFICATION	• Port based • 802.1p VLAN priority based • IPv4/IPv6 precedence / DSCP based • Differentiated Services (DiffServ) • Classification and re-marking ACLs
RATE LIMITING	• Ingress policer • Egress shaping and rate control • Per port
MANAGEMENT	
DHCP SERVER	Support DHCP server to assign IP to DHCP clients
ZERO TOUCH UPGRADE	Upgrade single switch automatically when you get notification
REMOTE MONITORING (RMON)	Embedded RMON agent supports RMON groups 1,2,3,9 (history, statistics, alarms, and events) for enhanced traffic management, monitoring and analysis
PORT MIRRORING	Traffic on a port can be mirrored to another port for analysis with a network analyzer or RMON probe. Up to N-1 (N is Switch's Ports) ports can be mirrored to single destination port. A single session is supported.
UPNP	The Universal Plug and Play Forum, an industry group of companies working to enable device-to-device interoperability by promoting Universal Plug and Play
S-FLOW	The industry standard for monitoring high speed switched networks. It gives complete visibility into the use of networks enabling performance optimization, accounting/billing for usage, and defense against security threats
IEEE 802.1AB (LLDP)	• Used by network devices for advertising their identities, capabilities, and neighbors on an IEEE 802ab local area network • Support LLDP-MED extensions
WEB GUI INTERFACE	Built-in switch configuration utility for browser-based device configuration
CLI	For users to configure/manage switches in command line modes
DUAL IMAGE	Independent primary and secondary images for backup while upgrading
SNMP	SNMP version1, 2c and 3 with support for traps, and SNMP version 3 user-based security model (USM)
FIRMWARE UPGRADE	• Web browser upgrade (HTTP/ HTTPs) and TFTP • Upgrade through console port as well
NTP	Network Time Protocol (NTP) is a networking protocol for clock synchronization between computer systems over packet-switched
OTHER MANAGEMENT	• HTTP/HTTPs; SSH • DHCP Client/ DHCPv6 Client • Cable Diagnostics • Ping • Syslog • Telnet Client • IPv6 Management

SPECIFICATIONS

GBE MANAGED SWITCH — 52-PORT (LGB5052A-R2)

FRONT VIEW

BACK VIEW

WHAT'S INCLUDED WITH THE 52-PORT SWITCH

- **(1) 52-PORT GIGABIT ETHERNET (GBE) MANAGED SWITCH**
- **(2) RACKMOUNT BRACKETS AND HARDWARE**
- **(1) AC POWER CORD**
- **(1) RJ-45 CONSOLE CABLE**
- **(4) ADHESIVE RUBBER FEET**
- **(1) INSTALLATION AND GETTING STARTED GUIDE**

GBE MANAGED SWITCH - 52-PORT (LGB5052A-R2)	
APPROVALS	FCC Part 15 Class A, CE, RoHS
HARDWARE PERFORMANCE	
FORWARDING CAPACITY	130.95 Mpps
SWITCHING CAPACITY	176 Gbps
MAC TABLE	32 K
JUMBO FRAMES	10056 bytes
MECHANICAL	
CONNECTORS	(48) 10/100/1000 RJ-45 ports, (4) 1G/10G SFP+ slots, (1) RJ-45 console port, (1) 3-prong power outlet
INDICATORS	(2) Mode LEDs, (1) System LED, (48) Port Status LEDs, (48) Link/Activity LEDs, (48) Speed LEDs, (4) FO Link/Activity LEDs, (4) FO Speed LEDs
USER CONTROLS	(1) Mode button
POWER	Voltage: 100–240 VAC: Frequency: 50–60 Hz
DIMENSIONS	1.73"H x 17.4"W x 11.81" D (4.4 x 44.2 x 30 cm)
WEIGHT	9.3 lb. (4.2 kg)
ENVIRONMENTAL	Operating Temperature: 32 to 104° F (0 to 40° C): Storage Temperature: -4 to +158° F (-20 to +70° C); Operating Humidity: 10 to 90% noncondensing; Altitude: <10000 ft. (<3000 m)
SOFTWARE FEATURES	
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SPECIFICATIONS

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GBE MANAGED SWITCH - 52-PORT (LGB5052A-R2) SOFTWARE FEATURES	
LAYER 2 SWITCHING	
SPANNING TREE PROTOCOL	Standard Spanning Tree 802.1d; Rapid Spanning Tree (RSTP) 802.1w; Multiple Spanning Tree (MSTP) 802.1s
TRUNKING	Link Aggregation Control Protocol (LACP) IEEE 802.3ad; • Up to 26 groups; • Up to 4 ports per group
VLAN	Supports up to 4K VLANs simultaneously (out of 4096 VLAN IDs) • Port-based VLAN • 802.1Q tag-based VLAN • MAC-based VLAN • Management VLAN • Private VLAN Edge (PVE) • Q-in-Q (double tag) VLAN • Voice VLAN • GARP VLAN Registration Protocol (GVRP)
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ORDERING INFORMATION

ITEM	CODE
GbE Managed Switch	
28-Port	**LGB5028A-R2**
52-Port	**LGB5052A-R2**

DISCLAIMER

Black Box Corporation shall not be liable for damages of any kind, including, but not limited to, punitive, consequential or cost of cover damages, resulting from any errors in the product information or specifications set forth in this document and Black Box Corporation may revise this document at any time without notice.

ABOUT BLACK BOX

Black Box is a world leading technology solutions provider specializing in complete high-performance KVM, professional A/V signal distribution and extension and switching solutions for mission-critical applications. Black Box is dedicated to delivering superior project engineering, technical support, and 24/7 customer service you can rely on for your most critical operations.

Every day, our customers trust us to design, integrate, and maintain reliable control room solutions for broadcasting, post-production, stadiums & arenas, medical, air traffic control, oil & gas, government & military, and utility industries. Leave the tech to us and our comprehensive technology solutions will deliver secure connections, fast-response times, real-time collaboration and more.

NOTES