DATA SHEET

LGB5124A-R2, LGB5128A-R2

SFP GIGABIT MANAGED SWITCH ECO

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





SPECIFICATION COMPARISON CHART			
LGB5124A-R2 LGB5128A-R2			
SFP PORTS (100M/1G)	20	20	
SFP+ PORTS (1G/10G)	-	4	
RJ-45/SFP COMBO PORTS (100/1G)	4	4	
CONSOLE PORT	(1) DB9	(1) DB9	
MANAGED	YES	YES	



OVERVIEW

SFP GIGABIT MANAGED SWITCH ECO DATA SHEET

INTRODUCTION

The LGB5124A-R2 or LGB5128A-R2 switch is an affordable managed switch that provides a reliable infrastructure for your business network. These switches deliver intelligent features that improve the availability of your critical business applications, protect your sensitive information, and optimize your network bandwidth to deliver information and applications more effectively. Each switch provides the ideal combination of affordability and capabilities for entry level networking, including small business or enterprise applications, and helps you create a more efficient, better-connected workforce.

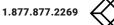
LGB5124A-R2 or LGB5128A-R2 Web Managed Switches provide 24 or 28 ports in a single device.

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 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	

COMPATIBLE SFPS





SPECIFICATIONS

SFP GIGABIT MANAGED SWITCH ECO - 24-PORT (LGB5124A-R2)



WHAT'S INCLUDED WITH THE 24-PORT SWITCH

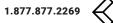
- (1) 24-PORT SFP GIGABIT MANAGED SWITCH ECO
- (1) AC POWER CORD
- (1) TERMINAL BLOCK
- (4) ADHESIVE RUBBER FEET
- (1) QUICK INSTALLATION GUIDE

	NITCH ECO- 24-PORT (LGB5124A-R2)
APPROVALS	FCC Part 15 Class A, CE, RoHS
HARDWARE PERFORMANCE	
FORWARDING CAPACITY	35.712 Mpps
SWITCHING CAPACITY	48 Gbps
MAC TABLE	16 K
JUMBO FRAMES	Up to 9 KB on Gigabit interfaces
MECHANICAL	
CONNECTORS	(20) SFP cages, (4) RJ-45/SFP combo ports, (1) DB9 console port, (1) 3-prong power outlet
INDICATORS	(2) Mode LEDs, (1) System LED, (24) TP Port Status LEDs, (24) TP Port Link/Activity LEDs, (24) TP Port Speed LEDs, (4) SFP Port Status LEDs , (4) FO Link/Activity LEDs, (4) FO Speed LEDs
USER CONTROLS	(1) Reset button
POWER	AC Power: 100 to 240 VAC, 50–60 Hz; DC Power: -36 to -48 VDC; Consumption: 854 watts maximum
DIMENSIONS	1.73"H x 17.4"W x 8.3" D (4.4 x 44.2 x 21.1 cm)
WEIGHT	6.83 lb. (3.1 kg)
ENVIRONMENTAL	Operating Temperature: 32 to 140° F (0 to 60° C): Storage Temperature: -40 to +185° F (-40 to +85° 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

SFP GIGABIT MANAGED SWITCH ECO – 24-PORT (LGB5124A-R2)

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 12 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)	
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	



SFP GIGABIT MANAGED SWITCH ECO – 24-PORT (LGB5124A-R2)

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

SFP GIGABIT MANAGED SWITCH ECO - 28-PORT (LGB5128A-R2)

FRONT VIEW

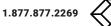
BACK VIEW



WHAT'S INCLUDED WITH THE 28-PORT SWITCH

- (1) 28-PORT SFP GIGABIT MANAGED SWITCH ECO
- (1) AC POWER CORD
- (1) TERMINAL BLOCK
- (4) ADHESIVE RUBBER FEET
- (1) QUICK INSTALLATION GUIDE

SFP GIGABIT MANAGED SW	/ITCH ECO - 28-PORT (LGB5128A-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	(20) 100M/1G SFP ports, (4) 1G/10G SFP+ slots, (4) RJ-45/SFP combo ports, (1) DB9 console port, (1) 3-prong power outlet
INDICATORS	(1) AC Power LED, (1) DC Power LED, (1) Alarm LED, (1) System LED, (4) RJ-45 Port Status LEDs, (4) RJ-45 Link/Activity LEDs, (4) RJ-45 Port Speed LEDs, (20) SFP Port Status LEDS, (20) STATUS LEDS, (20) SFP Port Status LEDS, (20) SFP Port
USER CONTROLS	(1) Reset button
POWER	(1) 100–240 VAC, 50–60 Hz power input: (1) 24–72 VDC power input
DIMENSIONS	1.73"H x 17.4"W x 8.31" D (4.4 x 44.2 x 21.1 cm)
WEIGHT	6.8 lb. (3.1 kg)
ENVIRONMENTAL	Operating Temperature: 32 to 140° F (0 to 60° C): Storage Temperature: -40 to +185° F (-40 to +85° 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





SFP GIGABIT MANAGED SWITCH ECO – 28-PORT (LGB5128A-R2)

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)	
DHCP RELAY	Relay of DHCP traffic to DHCP server in different VLAN. Works with DHCP Option 82	
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 rout	
IGMP V1/V2/V3 SNOOPING	IGMP limits bandwidth-intensive multicast traffic to only the requesters. Supports 1024 multicast groups	
MLD V1/V2 SNOOPING	Delivers IPv6 multicast packets only to the required receivers	
DEVICE MANAGEMENT SYSTEM	A (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	

SFP GIGABIT MANAGED SWITCH ECO – 28-PORT (LGB5128A-R2)

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 Syslog Telnet Client IPv6 Management



COMPATIBLE 10G ACTIVE OPTICAL CABLES (AOCS) FOR NETWORKING

Black Box® SFP+ Active Optical Cables provide premium, error-free performance for data, storage, and high-performance computing (HPC) interconnectivity. 100% compatible to Cisco® SFP-10G-AOCxM= Active Optical Cables, these cables connect your Cisco switches, routers, and servers. Constructed for full compliance with the SFP+ Multi-Source Agreement (MSA) and SFF-8431 industry standards, you can also make connections among your non-Cisco, 10G compatible networking equipment. Programmed, tested and serialized to ensure compliance and functionality, Black Box Active Optical Cables are the ideal solution for 10G Ethernet, Infiniband (QDR, SDR, DDR), Fiber Channel applications and more.

COMPATIBLE 10G ACTIVE OPTICAL CABLES FOR NETWORKIN	IG

LENGTH	PRODUCT CODE
1-m	SFP-10G-AOC1M-BB
2-m	SFP-10G-AOC2M-BB
3-m	SFP-10G-AOC3M-BB
5-m	SFP-10G-AOC5M-BB
7-m	SFP-10G-AOC7M-BB
10-m	SFP-10G-AOC10M-BB

COMPATIBLE 10G DIRECT ATTACH CABLES (DACS) FOR NETWORKING

Black Box® 10G Direct Attach Cables provide premium, errorfree performance for data, storage, and high-performance computing (HPC) interconnectivity. 100% compatible to Cisco® SFP-H10GB-CUxM= Direct Attach Cables, these cables connect your Cisco switches, routers, and servers. Constructed for full compliance with the SFP+ Multi-Source Agreement (MSA) and SFF-8431 industry standards, you can also make connections among your non-Cisco, 10G compatible networking equipment. Programmed, tested and serialized to ensure compliance and functionality, Black Box Direct Attach Cables are the ideal solution for 10G Ethernet and Fiber Channel applications and more.

COMPATIBLE 10G DIRECT ATTACH CABLES FOR NETWORKING	
LENGTH	PRODUCT CODE
50-cm	SFP-H10GB-CU50CM-BB
1-m	SFP-H10GB-CU1M-BB
1.5-m	SFP-H10GB-CU1M5-BB
2-m	SFP-H10GB-CU2M-BB
3-m	SFP-H10GB-CU3M-BB
5-m	SFP-H10GB-CU5M-BB

ІТЕМ	CODE
SFP Gigabit Managed Switch Eco	
24-Port	LGB5124A-R2
28-Port	LGB5128A-R2

DISCLAIMER

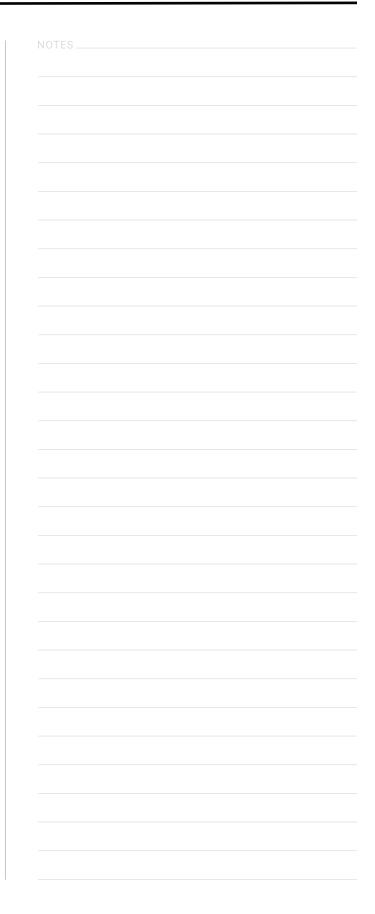
Black Box Corporation shall not be liable for damages of any kind, including, but not limited to, punitive, consequential or cost of cover damages, resulting from any errors in the product information or specifications set forth in this document and Black Box Corporation may revise this document at any 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.

FILENAME: LGB5124A-R2_LGB5128A-R2_DS_REV3.PDF © COPYRIGHT 2020. BLACK BOX CORPORATION. ALL RIGHTS RESERVED.



10

