

10-, 26-, and 48-Port Gigabit Managed Switches

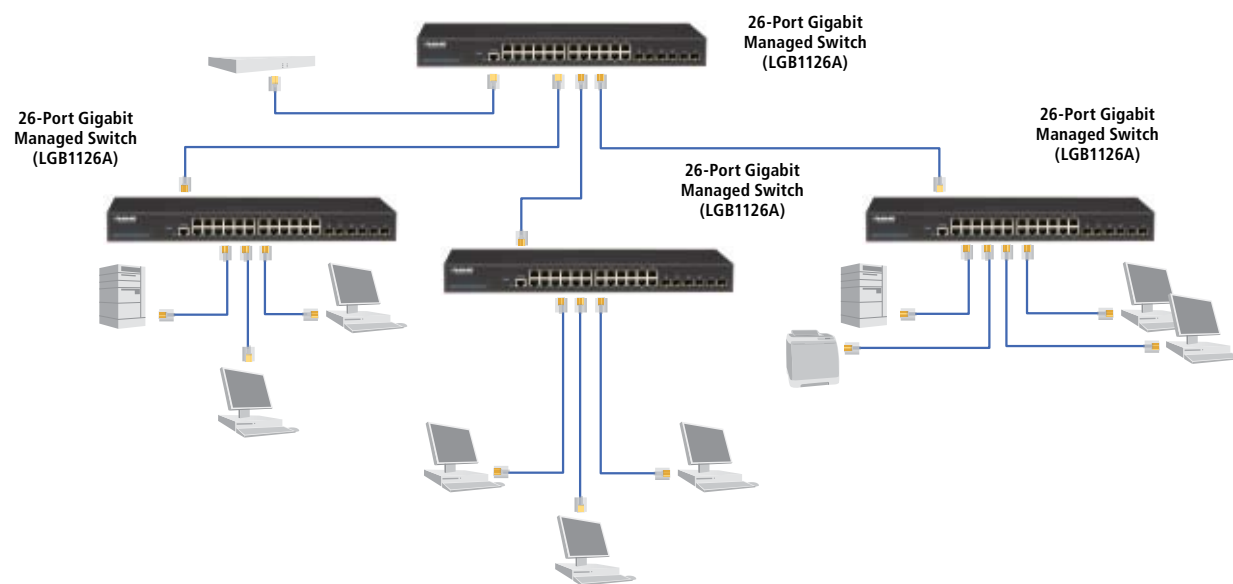
Set up versatile high-speed switching with Gigabit SFP uplinks using these Energy-Efficient L2+ switches.



## FEATURES

- » The 10-Port Gigabit Switch (LGB1108A) has (8) autosensing 10-/100-/1000-Mbps ports plus two dual-media ports that each can be used either as an additional UTP port or with a 100- or 1000-Mbps SFP.
- » The 26-Port Gigabit Switch (LGB1126A) provides (20) 10-/100-/1000-Mbps Gigabit UTP ports, plus (4) dual-media UTP/SFP and (2) SFP ports that support 100-/1000-Mbps Gigabit fiber speeds.
- » The 48-Port Gigabit Switch (LGB1148A) provides (44) 10/100/1000 Gigabit UTP ports, plus (4) dual-media UTP/SFP ports that support 100/1000 Gigabit fiber speeds.
- » All the switches use configurable QoS parameters for prioritizing traffic.
- » 802.3az Energy-Efficient Ethernet saves on power costs.
- » Switching capacity of 20, 52, or 96 Gbps.
- » Bundle ports using 802.3ad LACP aggregation.
- » IGMP for limiting bandwidth-heavy multicast traffic.
- » Ideal for video streaming, VoIP, and Wi-Fi client applications.
- » RADIUS-based 802.1x network access control plus port security.
- » Support up to 4K simultaneous VLANs.

## Network connection between remote site and central site



## OVERVIEW

Three Gigabit Managed Ethernet Switches (LGB1108A, LGB1126A, and LGB1148A) are discussed here. Depending on the model, they have (8), (20), and (44) fixed 10-/100-/1000-Mbps autonegotiating ports that you can connect to UTP devices or other switches. The switches have (2), (4), and (4) dual-media UTP/SFP ports, respectively, each of which consists of a 10-/100-/1000-Mbps RJ-45 port plus an SFP port. These (2) or (4) dual-media ports can be used either as a normal UTP Ethernet port or adapted to 100- or 1000-Mbps fiber through the use of an SFP. Plus, the LGB1126A switch also has (2) extra SFP-only ports.

The switch enables you to bundle ports using 802.3ad LACP aggregation. It uses IGMP for limiting bandwidth-heavy multicast traffic, and is ideal for video streaming, VoIP, and Wi-Fi client applications. Security features include RADIUS-based 802.1x network access control plus port security and TACACS+ authentication. The switch supports up to 4K simultaneous VLANs.

The switch's SFP slots provide additional connectivity as well as the management and security you need for your SMB or entry-level enterprise network. Plus, you can switch packets efficiently for real-time applications.

Ideal for mixed-speed and legacy-integration environments, the switch enables you to connect twisted-pair Ethernet, Fast Ethernet, and Gigabit Ethernet segments to devices on other ports or to a fiber optic backbone plugged into the switches' SFP slots.

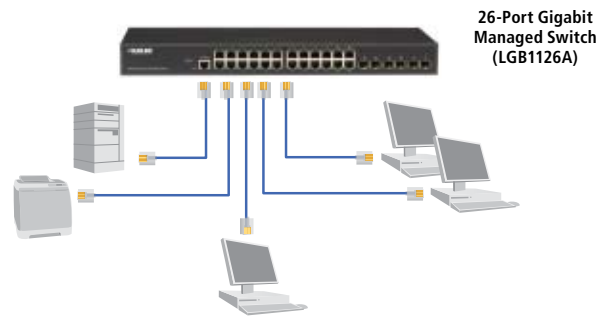
You can also bundle multiple ports to create a single high-bandwidth port using 802.3ad LACP aggregation. The LGB1108A switch supports up to 10 ports per group and up to 5 groups total. The LGB1126A switch supports up to 16 ports per group and up to 13 groups total. The LGB1148A switch supports up to 8 ports per group and 24 groups total. Combine Gigabit ports, for instance, to create a multilink trunk for load sharing. It's especially beneficial in switch-to-switch cascading applications where you require higher full-duplex speeds.

The switch supports 1024 multicast groups. Broadcast/multicast/unicast storm control enables you to restrict excess traffic on your network. Plus it has IGMP (v1/v2/v3) for limiting bandwidth-heavy multicast traffic.

What's more, it has IPv6 support for newer networking equipment (delivering IPv6 multicast packets only to the required receivers).

You can also control the rate limit for each switch port and set threshold values for the size of discarded packets. Jumbo frame support on the Gigabit interfaces helps to ensure reliable data transmission, too. With this, you can set the switches to forward packets up to 9K in size before discarding them.

## Peer-to-peer network connection



### Fully manageable

The switch is fully managed, supporting SNMP version 1, 2c, and 3. The embedded RMON software agents support RMON groups 1 (history), 2 (statistics), 3 (alarms), and 9 (events). For easy deployment, LLDP/LLDP-MED features aid the switch in discovering neighboring devices on a network.

The integral Web server enables Web-based management via Web browser. This GUI interface enables switch configuration, system dashboard, maintenance, and monitoring.

The wide range of management and support features also includes dual image, port mirroring, LLDP, sFlow®, UPnP®, IPv6, SSH, RADIUS, DHCP Client/DHCPv6 Client, SNTP, cable diagnostics, ping, syslog, and Telnet client with SSH security.

### Support for VLAN and QoS

The switch supports up to 4000 simultaneous VLANs for isolating guest traffic from your critical corporate network traffic. You can segment traffic with port-based, 802.1Q tag-based, or MAC-based VLANs.

Plus, you can also program higher-layer classification and prioritization for reliable Quality of Service (QoS). 802.1p Layer 2 QoS enables prioritization of time-sensitive applications, such as VoIP and video.

### Highly secure

You get enterprise-class security features, too. In addition to the switch's VLAN support, it boasts 802.1X port-based network access control for authenticating devices connecting to your network.

In addition, the switch supports SNMPv3 cryptographic security, SSH, and SSL for remote management via a connection that encrypts the packet content at each session. And by using its extensive ACLs (up to 256 entries total), you can keep guests or unauthorized users from accessing sensitive portions of your network.

### Green

All three Gigabit Ethernet Managed Switches feature IEEE 802.3az Energy-Efficient Ethernet, which scales down power consumption during periods of low data activity. This feature adds energy savings of up to 50%.

Plus, cable length detection adjusts signal strength to the cable length, reducing power consumption on shorter cable runs.

### 10-Port Gigabit Managed Switch (LGB1108A)

This capable Layer 2+ switch offers eight autosensing 10-/100-/1000-Mbps RJ-45 Ethernet ports and has a switching capacity of 20 Gbps. Additionally, it has two dual-media ports, each of which consists of a 10-/100-/1000-Mbps RJ-45 port plus an SFP port. These dual-media ports can be used either as a normal UTP Ethernet port or adapted to 100- or 1000-Mbps fiber through the use of an SFP.

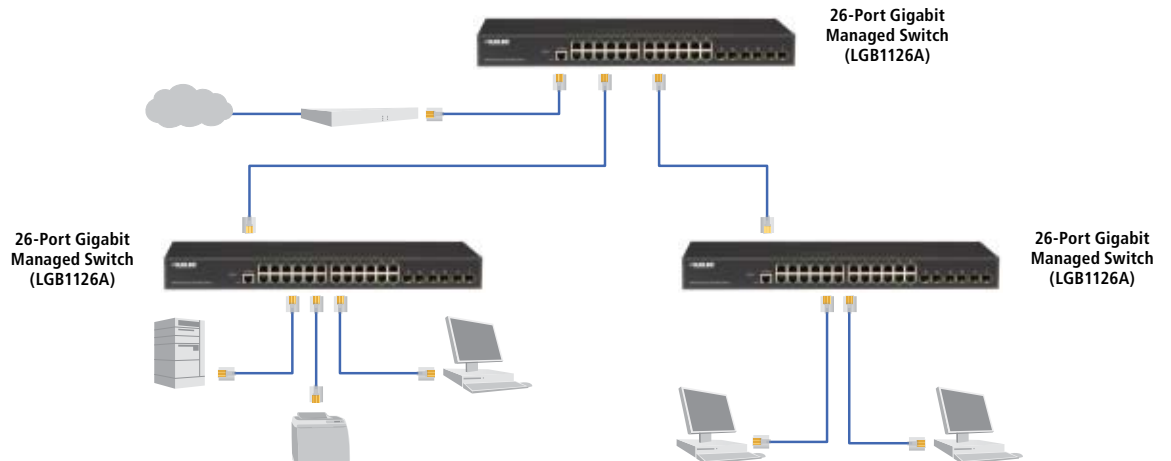
### 26-Port Gigabit Managed Switch (LGB1126A)

This Layer 2+ switch offers (20) autonegotiating 10-/100-/1000-Mbps RJ-45 Ethernet ports and has a switching capacity of 52 Gbps. Additionally, it has four dual-media ports, each of which consists of a 10-/100-/1000-Mbps RJ-45 port plus an SFP port. These dual-media ports can be used either as a normal UTP Ethernet port or adapted to 100- or 1000-Mbps fiber through the use of an SFP. The LGB1126A switch also has (2) extra SFP-only ports that support 1000-Mbps or 1-Gbps uplinks through the use of SFP transceivers.

### 48-Port Gigabit Managed Switch (LGB1148A)

This Layer 2+ switch offers (44) autosensing 10-/100-/1000-Mbps RJ-45 Ethernet ports and has a switching capacity of 96 Gbps. Additionally, it has two dual-media ports, each of which consists of a 10-/100-/1000-Mbps RJ-45 port plus an SFP port. These dual-media ports can be used either as a normal UTP Ethernet port or adapted to 100- or 1000-Mbps fiber through the use of an SFP.

## Office network connection



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### Technically Speaking

#### Energy-Efficient Ethernet.

The IEEE 802.3az Ethernet standard, ratified in 2010, provides a standardized way for some Ethernet devices to reduce power consumption. Energy-Efficient Ethernet devices have a low-power idle (LPI) mode that can cut power use by 50% or more during periods of low data activity. Because energy-efficient Ethernet devices scale down power consumption when the load is lower, they save both the energy used to power processors and the energy used to cool them.

These energy savings are currently available for 100BASE-TX, 1000BASE-T, and 10GBASE-T Ethernet as well as some backplane Ethernet. 802.3az can be found on most types of network equipment, including NICs, switches, routers, and media converters. Because these devices are totally backwards compatible with other Ethernet devices, all you need to do to reap energy savings is to swap out devices.

## TECH SPECS

**Buffer Architecture** — 1392 KB on-chip frame buffer

**Network Interface** — LGB1108A: Ports 1-8: RJ-45 connector, Auto MDI-X; Ports 9-10: RJ-45 connector/(100/1000M) SFP; 10BASE-T: RJ-45 (100-ohm, UTP cable; Category 3 or better); 100BASE-TX: RJ-45 (100-ohm, UTP cable; Category 5 or better); 1000BASE-T: RJ-45 (100-ohm, UTP or STP cable; Category 5, 5e or 6); LGB1126A: Ports 1-20: RJ-45 connector, Auto MDI-X; Ports 21-24: RJ-45 connector/(100/1000M) SFP; Ports 25-26: 100/1000M SFP, 10BASE-T: RJ-45 (100-ohm, UTP cable; Category 3 or better); 100BASE-TX: RJ-45 (100-ohm, UTP cable; Category 5 or better); 1000BASE-T: RJ-45 (100-ohm, UTP or STP cable; Category 5, 5e, or 6); LGB1148A: Ports 1-44: RJ-45 connector, Auto MDI-X; Ports 45-48: RJ-45 connector/(100/1000M) SFP; 10BASE-T: RJ-45 (100-ohm, UTP cable; Category 3 or better); 100BASE-TX: RJ-45 (100-ohm, UTP cable; Category 5 or better); 1000BASE-T: RJ-45 (100-ohm, UTP or STP cable; Category 5, 5e, or 6)

**Switching Capacity** — LGB1108A: Up to 20 Gbps; LGB1126A: Up to 52 Gbps; LGB1148A: Up to 96 Gbps

**Switching Database** — 8K MAC address entries

**Connectors** — LGB1108A: (8) 10/100/1000 Mbps TP; (2) 100/1000 Mbps SFP Fiber/(10/100/1000 Mbps) TP dual-media ports, (1) RJ-45 console port; LGB1126A: (20) 10/100/1000 Mbps TP, (4) 100/1000 Mbps SFP Fiber/(10/100/1000 Mbps) TP dual-media ports, (2) 10/1000M SFP ports, (1) RJ-45 console port; LGB1148A: (44) 10/100/1000 Mbps TP, (4) 100/1000 Mbps SFP Fiber/(10/100/1000 Mbps) TP dual media ports, (1) DB9 console port

**Indicators** — LEDs: System: Power; TP Port: status (LINK/ACT), 10/100/1000M; SFP Port: status (LINK/ACT/SPD), 100/1000M

**Temperature Tolerance** — Operating: 32 to 104° F (0 to 40° C)

**Humidity Tolerance** — Operating: 5% to 90% (non-condensing)

**Power** — Input: 100-240 VAC, 50-60 Hz internal power supply, autosensing; Consumption: 20 Watts maximum

**Size** — LGB1108A: 1.7" H x 11" W x 6.5" D (4.4 x 28 x 16.6 cm); LGB1126A: 1.75" (1U) H x 17.4"W x 8.3"D (4.4 x 44.2 x 21.1 cm); LGB1148A: 1.75" (1U) H x 17.4"W x 11.8"D (4.4 x 44.2 x 30 cm)

**Weight** — LGB1108: 2.97 lb. (1.35 kg); LGB1126A: 5.3 lb. (2.4 kg); LGB1148A: 9 lb. (4.1 kg)



LGB1108A



LGB1126A



LGB1148A

## What's included

- ◆ 10-, 26-, or 48-Port Gigabit Managed Switch (LGB1108A, LGB1126A, or LGB1148A)
- ◆ (1) AC power cord
- ◆ (1) 19" rackmount kit
- ◆ (1) DB9 to RJ-45 console cable
- ◆ (1) URL direction sheet for quick start guide, user manual, and CLI guide

Table 1. Available documentation

Document	File Location
User's Manual	<a href="ftp://ftp.blackbox.com/anonymous/manuals/L/LGB1108A_MANUAL_Rev_1.pdf">ftp://ftp.blackbox.com/anonymous/manuals/L/LGB1108A_MANUAL_Rev_1.pdf</a>
Quick Start Guide	<a href="ftp://ftp.blackbox.com/anonymous/manuals/L/LGB1108A_QSG_Rev_1.pdf">ftp://ftp.blackbox.com/anonymous/manuals/L/LGB1108A_QSG_Rev_1.pdf</a>
CLI Guide	<a href="ftp://ftp.blackbox.com/anonymous/manuals/L/LGB1108A_CLI_guide.pdf">ftp://ftp.blackbox.com/anonymous/manuals/L/LGB1108A_CLI_guide.pdf</a>

*NOTE: The documentation described in Table 1 (above) is available for the Gigabit Managed Switches. These manuals contain information for all three switch models: LGB1108A, LGB1126A, and LGB1148A.*

Item	Code
Gigabit Managed Switches	
10-Port	<b>LGB1108A</b>
26-Port	<b>LGB1126A</b>
48-Port	<b>LGB1148A</b>
<b>You may also need...</b>	
SFP Modules	
155-Mbps Fiber with Extended Diagnostics	
850-nm Multimode, LC, 2 km	<b>LPF401</b>
1310-nm Multimode, LC, 2 km	<b>LPF402</b>
1310-nm Single-Mode, LC, 30 km	<b>LPF403</b>
1310-nm Single-Mode Plus, LC, 60 km	<b>LPF404</b>
1250-Mbps Fiber with Extended Diagnostics	
850-nm Multimode, LC, 550	<b>LPF411</b>
1310-nm Multimode, LC, 2 km	<b>LPF412</b>
1310-nm Single-Mode LC, 10 km	<b>LPF413</b>
1310-nm Single-Mode LC, 30 km	<b>LPF414</b>