# LINKSYS®

## Does Your Business Need an Unmanaged Switch, a Smart Switch, or a Managed Switch?



Business Solutions

When it comes to your business network, switches are the backbone. While your mobile devices are capable of connecting to your network wirelessly, switches connect the multiple core components — desktop PCs, printers, routers, and other hardware — so you can send information and access shared resources much more efficiently. But as the number of connected components increases, the complexity of your network does as well. To address these growing needs, it might be necessary to deploy a new type of switch to better regulate your business network. But of the three major categories of switches — unmanaged, smart, and managed — which is best for your needs?

## Prioritizing Traffic

Data is the name of the game in business networking, but not all data is created equal, especially when it comes to how quickly it travels from one device to another.

On a small network, lack of prioritization is not as evident, since the amount of traffic present in a small office stays pretty minimal. Compare that to a larger network that has multiple devices pulling from available bandwidth simultaneously, and you're bound to notice a problem. Sure, you might not catch the slight delays when emailing attachments or managing the company's Twitter feed, but you won't be as forgiving with faulty video streaming or dropped web conferences. Traffic prioritization ensures that these types of time-sensitive data move as smoothly and quickly as possible, while less-bandwidth-heavy data waits its turn. It's an important consideration to make when deciding which switch to purchase.

## Unmanaged Switches

For the least expensive of the three contenders, unmanaged switches also win the award for the simplest setup. There are, quite literally, no options to configure before they're up and running. While these switches offer your network no prioritization of data, they are well-suited for scenarios in which there aren't advanced applications running and traffic is light — like small offices with 10 or fewer simultaneous users. In these situations, data congestion (and the need for data prioritization) is less of an issue. All that is required is a method of passing data from one device to another over your network.

For that type of scenario, unmanaged switches will fit the bill, typically featuring anywhere from five to 26 available ports, each of which share equal access to available network bandwidth. These switches are great for offices that lack extensive IT support, since they're essentially plug and play, offering near-instant functionality with little to no user interaction required.

## Smart Switches

As the number of devices increases, so does the need for data prioritization. For slightly larger business networks that don't require overly comprehensive control or fine-tuning, a smart switch makes an excellent transition from an unmanaged solution. While their configuration options are more limited in comparison to their managed counterparts, smart switches support some of the basic features at a much more accessible price point.

Further, they include some basic configuration features that small businesses can use to optimize the performance, reliability, and security of their network. With a smart switch, you can:

- Configure basic settings, like MAC address binding and rate limits (a simple interface makes it less intimidating for novice users).
- Assign higher priority to critical traffic (especially helpful in the case of business desktop phones, since better voice data quality means calls don't get dropped and conversations come through crystal clear).
- Divide your network into multiple virtual networks (or VLANs) for better traffic security, more consistent and reliable connectivity, and improved allocation of network bandwidth.
- Use Quality of Service (QoS) to prioritize certain devices — like the payment processing system or the boss's laptop — so that bandwidth is allocated the way that works best for your business.
- Group ports together to aggregate their available bandwidth.
- Authenticate devices wishing to connect to your network using port-based or radius authentication.

## Managed Switches

For large networks with a great deal of concurrent data-streaming needs, the ability to manage access becomes increasingly difficult. Multiple devices within multiple departments, all of which are pulling data simultaneously, can wreak havoc on the efficiency of the network. In these scenarios, managed switches are the best solution. While these types of switches lie at the premium end of the pricing spectrum, they offer the maximum punch of features. With upwards of 52 available ports, managed switches feature options and configurability you just can't get with the other two types of switches. In addition to the functionality you get with a smart switch, a managed switch also allows you to:

- Limit access to specific devices (like securing the accounting staff from other departments or blocking Internet access to the production floor).
- Use Layer 3 routing capability to link smaller networks into much larger business-wide networks.
- Take advantage of Power over Ethernet (PoE), a technology that uses the network's wired Ethernet connection to carry electrical currents to devices such as phones, security cameras, and Wi-Fi access points.
- Monitor the performance of the network remotely, and detect and repair network problems without having to physically inspect the switches and devices, or take the network out of service.

These switches are often also the most future-proof option, since they give your business plenty of room for growth, and they typically feature expansion ports, which can bridge the connection to a high-speed data backbone, like a 10 Gb or fiber connection.

## Which is the Switch for You?

When it comes to making the "switch-switch," one of the biggest differences among the types of switches available is the level of configuration and manageability. An unmanaged switch trades simplicity for control, offering no configurability but the most budget-friendly price. A managed switch offers significantly more advanced control features at a higher cost. A smart switch is an entry-level managed switch, providing the best of both worlds.

In general, a business network hosting less than 100 active users will do just fine with a smart switch. These devices have more than adequate functionality to support the business — for example, word processing, Internet access, IP-based desktop phones, and hot spots. Managed switches are much more common when it comes to larger businesses, although they also make a smart investment for small businesses interested in maintaining scalability for the future.