



THE DEFINITIVE BUYER'S GUIDE FOR BUSINESS INTERNET CONNECTIONS

FROM DSL TO DEDICATED FIBER OPTICS



JUST HOW IMPORTANT IS CHOOSING THE RIGHT BUSINESS INTERNET?

Imagine if your productivity relied on nothing but pen and paper, a switchboard and faxing. The internet has replaced them all to a large degree. So, while having the internet a must, having the best type of internet connection for your business is **essential**.

The number of options (along with their speeds) have grown over the years.

Knowing more about these options can help you make the best decision for your business to handle the demands of today and position it for the challenges of tomorrow.

By reading this guide, you will be able to:

- Evaluate the factors to consider when choosing your connection type
- Understand the different types of business internet
- Know the pros and cons of each
- Easily compare specs by service
- Choose the connection that makes the most sense for your goals

DECIDING FACTORS

A confluence of considerations go into any purchase for your business, whether it's what to stock in the break room or if your conference room needs new chairs.

But the factors that go into deciding something as important as the internet your business depends on every second are more involved.

And they go beyond download and upload speeds.

You also need to consider specifics like:

- How many employees you have
- How many devices your employees use
- If you plan to grow or expand
- What you use your internet for now (light web browsing or heavy cloud-based software)
- If the type of data you need will change in the future (probably yes)
- The distance between your office and your provider's equipment (it makes a difference)

Understanding these factors can provide some much-needed insight as part of your decision-making process.





TYPES OF INTERNET CONNECTIONS

"Internet" can be a catch-all word. But there is a major distinction between the "internet" proper and "internet connections".

The internet is what we visit and surf. It's the online ecosystem.

Internet connections are what we use to get online. These connections come in many different types and should be top-of-mind when deciding what makes most sense for your business.

DSL is short for Digital Subscriber Line. This is one of the most popular—but also one of the oldest—connection types. Data transmits along phone lines. A convenient, widely-available service for sure. But signals can degrade the farther your business is from the source.

Cable uses coaxial cable. Electrical signals are conducted through a solid copper or copper-plated steel wire to send information (data). While capable of delivering faster speeds than DSL, there are faster options available. Additionally, cable connections have bandwidth limitations that may not meet the needs of companies that constantly send or receive large amounts of data.

A Passive Optic Network (PON) transmits data through thin glass strands. Instead of conducting electricity, data is transmitted through pulses of light over a shared fiber connection. A major benefit of this connection is your ability to download and upload data with symmetrical speeds up to 5 Gbps.

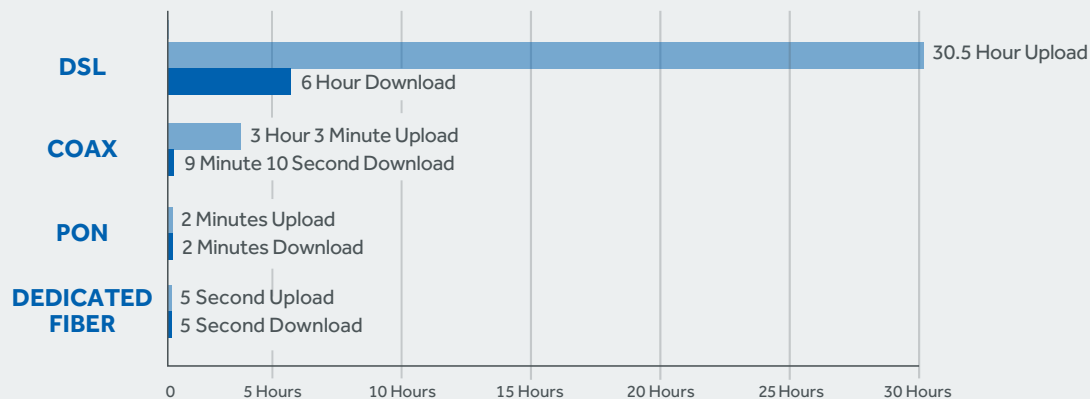
Dedicated Fiber also sends data through thin glass strands. However, these connections are private, i.e. not shared, meaning your business can send even more data at faster speeds that reach 100 Gbps—download and upload.

A QUICK COMPARISON

These charts show the most common types of internet connections available, key specifications as well as how productive you can expect to be with each.

	DSL	COAX	PON	DEDICATED FIBER
Max Download Speed	25 Mbps	1 Gbps	5 Gbps	100 GBPS
Max Upload Speed	5 Mbps	50 Mbps	5 Gbps	100 GBPS
Shared Connection?	Yes	Yes	Yes	NO
Does Speed Degrade Over Distance?	Yes	Sometimes	No	NO
Guaranteed Bandwidth?	No	No	No	YES
Suitable for Heavy Bandwidth Uses like Web Conferences and Hosted Voice?	No	Yes	Yes	YES
Unlimited Data Included?	Sometimes	Yes	Yes	YES
Does the Connection Jitter (experience delays in sending data packets over the network connection)?	Yes	Sometimes	No	NO
Does the Connection Have High Latency (take a long time for signal to travel to its destination and back)?	Yes	Sometimes	No	NO
Service Level Agreements (SLAs)?	No	Sometimes	Sometimes	YES

Time It Takes to Transfer Entire Laptop Storage (64 GB)



IT'S NOT JUST ABOUT SPEED

It's understandable—even desirable—for speed to play the dominant role when choosing your business internet connection. But there are other factors that can tip the scale towards a certain service:

Reliability

Most common internet solutions such as DSL from the phone company promise higher bandwidth and fast speeds. But those promises mean little if the network is down. The technology responsible for connectivity heavily influences network uptime. For example, copper connections are prone to weather outages. Dedicated fiber is immune to electrical interference from lightning, which is one reason why it has 99.99% uptime.

Equipment Maintenance and Expenses

Since certain connections are affected by environmental conditions and natural disasters, they require extra costs for upkeep and paying repair technicians. These costs, while necessary, are often passed on to the customer.

Bandwidth Competition

DSL, coax and even certain kinds of fiber connections are shared. This means businesses are not only competing for customers—they're competing against each another for bandwidth. This explains why service can be sluggish during peak usage times.

Guarantees

DSL and cable use "best effort" internet connections. That best effort can work fine for some companies, but large organizations and enterprises typically need something more. Dedicated Fiber service often comes with Service License Agreements (SLAs) that bind providers to provide a certain level of performance. This includes making any service issue a top priority to be fixed. If the SLA falls short, customers are entitled to compensation in the form of billing credits or refunds among others.

Network Age

Some networks are old. Some are newer. And some are being built even as you read this. Ultimately, the age of the network—and how well it's been maintained—determines a great deal about how well your internet connection will work.

Price

This is obviously a biggie. Compared to Dedicated Fiber Internet, other options present a cost-effective alternative, especially for smaller businesses. But as new innovations arise with frequency, fiber is becoming easier (and more cost efficient) to deploy every day. In fact, it can provide the best bang per megabit for your budget.

Ease of Scaling

In the not too distant future, speeds will reach even faster than 100 Gbps. While some connections won't be capable of those speeds (DSL for example), fiber optics are already future-proof. It's simple to install new equipment over the original fiber connection. Additionally, optical fibers can be laid now in preparation for growth decades down the road and wavelengths can be turned on or off instantly so growing businesses can scale easily.

Security

Some shared connections (**not PON**) run the risk of allowing other subscribers to "listen" in on the data being transmitted. Fiber optics don't radiate signals, making any eavesdropping impossible. And with dedicated fiber connections, you're able to keep hardware in one location instead scattering it over multiple places, which makes maintenance much simpler. Breaches are also easy to identify as soon as they occur, as any physical break in the system will cause a total system failure.

SO, DOES A DEDICATED FIBER INTERNET CONNECTION MAKE SENSE FOR YOUR BUSINESS?

Maybe it does. Maybe it doesn't. After all, some large businesses are light data users while a mom and pop shop might use all the bandwidth they can get (and then some).

Here are some basic questions to ask yourself.

Do you rely on the internet to serve external customers and internal employees?

- Yes, doesn't every business?
- No, we operate manually

Do you ever notice any network congestion or slower speeds?

- Yes, and it can be frustrating
- No, everything is always perfect

Do you handle large file sizes (50 MB or more) or use cloud-based software and apps?

- Yes, and our files can take more than a minute to send or receive
- No, just small and simple files

Do you have at least 15 users in a single location sharing the same internet connection?

- Yes, and we want them to be as efficient as possible
- No, we have a smaller team

If you answered "Yes" twice or more, you probably owe it to your organization to at least explore a faster, more reliable internet connection like the kind Dedicated Fiber provides.

STILL CAN'T DECIDE?

The experts at Sparklight Business can provide a helpful perspective based on your most important criteria.

Together, we'll make sure your internet connection does what it needs to: connect you to more opportunities at a price that makes sense for your budget.

Here's Why 76,000 Businesses Trust Sparklight Business



Award Winning Internet



Scalable Speeds up to 100 Gbps



Always-improving, State-of-the-art Nationwide Fiber Network



Unlimited Data at No Extra Charge



Flexible Agreements and Competitive Pricing



Service Level Agreements that Promise up to 99.99% Uptime



24/7/365 White-glove Local Support



Difference-making solutions like Hosted Voice, Managed Services and Ethernet Private Line (EPL)