

## cyberM·I·N·D· DSL

The "Broadband Revolution" is changing the way people use the Internet. Unfortunately, broadband Internet access has not traditionally been available to small and midsize towns and cities. Residences and businesses located in small and midsize cities were left to languish with slow, ineffective dial-up Internet access. Until Now. cyberM·I·N·D· is bridging this Digital Divide, making high-speed DSL Internet access available in most areas Nationwide.

cyberM·I·N·D· understands that the Internet is an integral tool for success, and businesses without high-speed access are at a distinct disadvantage in today's competitive marketplace. With cyberM·I·N·D· DSL the Internet will become a more powerful tool for your business.

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## What is DSL?

DSL provides high-speed Internet access over existing copper telephone lines. No special wires are necessary; just the plain old phone lines that are already out there. DSL utilizes a bridge or router at the customer location, which connects to a Digital Subscriber Line Access Multiplexer (DSLAM) in the telephone company's Central Office (CO). The DSLAM is located in leased space in the CO to collocate the DSLAM. The copper phone lines that connect to the bridge/router at the customer location travel through the DSLAM in the CO; this is what enables high-speeds on the line. The DSLAM is connected to cyberM-I-N-D and we are connected to the Internet.

### Fast Access

cyberM-I-N-D DSL allows you to send and receive data at speeds up to 1.1 Mbps. That's 35 times faster than a 28.8 Kbps modem! Your business will operate more efficiently, saving you time and money. But DSL offers more than just fast downloads of e-mail, graphic files, web pages, and software. DSL also enables advanced functions like web hosting, video conferencing, video streaming, virtual private networking, and e-commerce. You will be able to establish a World Wide Web presence for your business, putting your message on center stage, reaching millions of new and existing customers.

### How fast is fast?

If you receive an E-mail with a 2 MB attachment (2 MB could be a financial spreadsheet, a graphic file, a presentation, or a large text document) it would take you 9.2 minutes to open that attachment with a 28.8 Kbps modem. With DSL, you could open the attachment in about 15 seconds.

Downloading Netscape Communicator 4.7 with a 28.8 Kbps modem would take you over an hour, but doing the same thing with DSL would take approximately 2 minutes.

### Constant Connectivity

In addition to providing the highest speeds possible over copper wires DSL provides you with a dedicated connection. This means your DSL connection is always on. There is no need to dial-up to connect to the Internet. Simply click on an icon and you're online. No dialing, no logging on, no more wasted time or frustration.

### Big-Business Bandwidth at Small-Business Prices

Until now, "always on", high-speed Internet connectivity has been affordable only to large corporations. With DSL cyberM-I-N-D can provide high-speed access for a fraction of the cost of expensive T-1 or Frame Relay services. Now any business can afford a full-time connection to the Internet, allowing you to increase your productivity and operate more efficiently.

### Complete Solution

You can even connect multiple computers to your DSL circuit, sharing the high-speed access among everyone in your office! Now, every employee in the office can stay in touch with customers and suppliers, research the competition, and connect to e-mail in seconds instead of minutes. No more waiting in line to use the Internet, and no more paying for multiple dial-up accounts.

## Types of DSL

cyberM·I·N·D· currently provides SDSL, ADSL, and IDSL. However, DSL has many additional flavors as well.

When discussing the different flavors of DSL it is important to understand the concepts of upstream and downstream. Downstream is like downloading. It means information is traveling from the Internet to your computer. Examples would be opening a web page on your computer screen, or opening e-mail messages.

Upstream, on the other hand, means you are sending information from your computer to the Internet. Examples of information traveling upstream are sending e-mail messages or hosting a web server. If you have ever tried to send e-mail with a large attachment, like pictures, large spreadsheets, or electronic presentations, you understand how a sluggish upstream connection can really slow down your business.

### **SDSL (Symmetrical Digital Subscriber Line)**

SDSL is a symmetrical service, which means that information travels upstream and downstream at the same rate. It was designed for applications requiring high speeds in both directions. SDSL speeds begin at 192 Kbps and go as high as 1.1 Mbps. SDSL is well suited for business applications because of its symmetrical nature.

### **ADSL (Asymmetrical Digital Subscriber Line)**

ADSL is an asymmetrical service, which means that information travels downstream at a different rate than it travels upstream. ADSL is faster downstream than upstream. Upstream speeds are 128 Kbps - 384 Kbps while downstream speeds can be as fast as 768 Mbps. ADSL is primarily used by residential power users who spend most of their time online downloading information.

### **IDSL (ISDN DSL)**

IDSL is essentially used to provide DSL service to customers who do not qualify for SDSL or ADSL. IDSL is capable of reaching customers who are up to 36,000 feet away from the telephone company Central Office. IDSL operates at a symmetrical speed of 128 Kbps.

### **HDSL (High bit rate Digital Subscriber Line)**

HDSL was developed as a faster cousin to ISDN, and it enabled telephone companies to offer T-1 (1.544Mbps) speeds over regular copper phone wire without the use of repeaters. However, HDSL requires two pairs of wires, making it more expensive to provision than newer DSL flavors that operate on one copper pair. HDSL is the oldest and most heavily deployed version of DSL, but HDSL is not available from cyberM·I·N·D· due to higher subscription price compared to SDSL.

## DSL History

When DSL was first developed in 1989 it was designed primarily for video. ADSL was the flavor of choice because it provides the high downstream rates needed for streaming video. Video on Demand (VOD) was viewed as the next generation service supporting the next generation network from telephone companies around the world. Video on Demand was expected to be the telephone company's way of competing with cable television providers, and ADSL was the technology to make it possible. However, with few exceptions, VOD has not proven to be as popular as was once predicted. Instead, the market for DSL has emerged much differently than was once expected. As it turns out, personal computer users need high-speed access to the Internet and corporate networks from residences and remote offices. Now, this PC user market has captured the attention of both cable TV providers and telephone companies, as both are furiously working to meet their needs.

## How Does DSL Compare to Other Internet Services?

SDSL provides you with upstream and downstream speeds as fast as 1.1 Mbps, which is approximately 35 times faster than a 28.8 Kbps dial-up modem.

**cyberM-I-N-D· BizDSL™ / cyberM-I-N-D· HomeDSL™ vs.**

### Dial-up

- DSL is up to 35 times **faster** than 28.8 modem
- "Always-On" DSL means **no busy signals** or dropped calls
- **Save money** when multiple computers can share one DSL line

### Cable

- **Dedicated and secure** DSL network is not shared
- DSL speed will not degrade at peak usage periods
- Save money when **multiple computers** can share one DSL line

### T-1

- DSL is much **less expensive**
- **Speed can be upgraded** without changes to equipment

### ISDN

- DSL is much **less expensive**
- **Speed can be upgraded** without changes to equipment

### Satellite

- DSL is much **less expensive**
- DSL is **easier to install**
- **One connection** provides upstream and downstream service

## Which DSL Service is Right For Me?

Whether at home or at work, cyberM-I-N-D· has a DSL solution tailored to meet your needs.

Our BizDSL™ suite of DSL products provides you with a true business class high-speed Internet solution. A network performance guarantee and enhanced security functionality highlight a product line that is ideal for business applications that would otherwise require an expensive T1.

Our HomeDSL™ suite of DSL products is ideal for single users with high-speed data needs. Email attachments, web pages, large files and graphics all download in a flash. Once you experience the adrenaline rush of DSL, slowing down will not be an option.

### **BizDSL™**

Symmetrical Digital Subscriber Line (SDSL)

SDSL provides you with upstream and downstream speeds as fast as 1.1 Mbps, which is approximately 35 times faster than a 28.8 Kbps dial-up modem.

SDSL is ideal for:

- Businesses using an Intranet or Extranet for communication between employees, customers or suppliers.
- Businesses using the Internet to transfer files.
- Businesses/Individuals using the Web for e-business applications.
- Business/Individuals using the Internet to deliver content.
- Businesses/Individuals hosting or developing their own or others web sites.
- Telecommuters needing access to the corporate Local Area Network (LAN), Wide Area Network (WAN), Extranet, or Intranet.
- Businesses/Individuals that have existing ISDN connections that are looking for more speed and a flat rate service
- Technical staff needing access from home to corporate WAN, LAN, Intranet, or Extranet.

ISDN Digital Subscriber Line (IDSL) IDSL's strongest asset is its reach, and cyberM-I-N-D· is able to deliver speeds up to 128 Kbps up to 36,000 feet (almost seven miles) from the central office.

- Telecommuters needing access to the corporate LAN, WAN, Extranet, or Intranet.
- Businesses/Individuals that have existing ISDN connections.
- Individuals located beyond 18,000 feet from the Central Office.
- Individuals with existing Dial-Up connections that use the web for research, shopping and entertainment.

## **HomeDSL™**

Asymmetric Digital Subscriber Line (ADSL)

ADSL provides you with faster upstream speeds making the service ideal for demanding home Web surfers, single end users and home-office end users.

ADSL is ideal for:

- Individuals with existing Dial-Up connections that use the web for research, shopping, and entertainment

## **cyberM-I-N-D- DSL is Guaranteed**

We realize how important your Internet connection is, that's why we guarantee it!

At cyberM-I-N-D- we stand behind our DSL service by offering Service Level Agreements that guarantee a specified level of high performance. If cyberM-I-N-D- doesn't perform at the agreed-upon level, we are subject to financial penalties.

cyberM-I-N-D- understands that network performance is extremely important to business customers, that speed is paramount, and that interrupted access to the Internet and e-mail means lost revenue. That's why we hold service level agreements with our customers, guaranteeing that our users' connections perform optimally. In the event that our service falls below standard, we assume financial penalties.

Local phone companies do not offer SDSL, or service level agreements on their ADSL services. Furthermore, they tend to overload their networks with too many subscribers, causing network congestion and slower performance speeds.

## DSL Pricing

BizSDSL™	192/192 Kbps	\$139.95 per month
BizSDSL™	384/384 Kbps	\$189.95 per month
BizSDSL™	768/768 Kbps	\$289.95 per month
BizSDSL™	1.1/1.1 Mbps	\$329.95 per month
BizIDSL™	128/128 Kbps	\$119.95 per month
HomeADSL™	384/128 Kbps	\$59.95 per month
HomeADSL™	768/384 Kbps	\$89.95 per month
Installation (one-time)		\$199
Equipment		\$299-\$499

Note: To ensure that you can receive the available speeds, have your address qualified by a cyberM-I-N-D. DSL technician. Price subject to change and availability.

## Availability

DSL is available in certain areas. DSL service availability is determined by the distance between you and the Central Office. The closer you are to the CO, the higher the speeds available to you.

As strength of the DSL signal lessens the farther away from the central Office

Please use our online web form to qualify your address. You will find this form located at:

[http://www.cyberM-I-N-D--usa.net/services/dsl/dsl\\_availability.html](http://www.cyberM-I-N-D--usa.net/services/dsl/dsl_availability.html)

Alternatively you can contact a cyberM-I-N-D· DSL technician at 877.373.6680 to qualify your address over the telephone.

## FAQs

### What is DSL?

DSL stands for Digital Subscriber Line. DSL is a high-speed Internet access product for homes and businesses that uses existing copper telephone lines.

### What are the benefits of DSL?

*Fast Access* - DSL allows you to access the Internet up to 35 times faster than a 28.8k dial-up modem. This means web sites will appear much faster, especially those with large graphics. Your e-mail will arrive and be sent much quicker, and advanced business applications are possible, like web hosting and e-commerce.

*Always On* - DSL is a dedicated service, meaning it is always on, so there is no need to dial up to connect to the Internet. No more busy signals, and no more waiting to connect. Simply click a desktop icon and you're online.

*Inexpensive* - DSL offers high-speed Internet access at a fraction of the cost of other dedicated services, such as a T-1 line. T-1 lines can cost over \$1,000 per month, while DSL is priced so that small and medium-sized businesses can afford to buy it.

### What speeds does cyberMIND offer?

The following details cyberMIND service offerings. It is important to note that the speeds listed can vary by +/- 20% depending on the line quality of the copper loop to the end-user's location. All speeds will not be available to all customers based on the quality and length of local phone lines from the Central Office. Distances are approximate.

Speed	Delivery	Maximum
128 kbps	IDSL	36,000 Ft
192 kbps	SDSL	17,700 Ft
384 kbps	SDSL	16,000 Ft
768 kbps	SDSL	13,500 Ft
1.1 Mbps	SDSL	12,000 Ft
384 Kbps / 128 Kbps	ADSL	12,000 Ft
768 Kbps / 384 Kbps	ADSL	12,000 Ft

### What is meant by upstream and downstream?

Downstream means downloading information from the Internet to your computer. Information travels downstream when a web page is loading on your computer screen, or you open e-mail messages that someone sent you.

Upstream means sending information from your computer to the Internet. Information travels upstream when sending e-mail messages, hosting a web server, providing video streaming, or holding a video conference. If you have ever tried to send an e-mail with a large attachment, like pictures, large spreadsheets, or electronic presentations you understand how a sluggish upstream connection can really slow down your business.

### **Why should I use cyberMIND instead of my phone company?**

There are many advantages to using cyberMIND over your phone company.

- In addition to residential ADSL service cyberMIND offers a true business class SDSL service. Most local phone companies focus only on ADSL service for residential users.
- cyberMIND monitors their network 24x7, which means our customers benefit from high-quality service. In fact, cyberMIND offers stringent service level agreements which guarantee high quality DSL service.
- Many of the local phone companies have focused their DSL services in large cities, while cyberMIND is taking DSL to smaller and midsize communities.
- End-users can count on cyberMIND DSL to work when they need it, without worrying about network downtime or poor quality service.

### **Can a DSL line be shared among multiple users?**

Yes, multiple computers can use the same DSL line. Using a DSL router will allow you to connect virtually limitless numbers of computers to one DSL connection. This is perfect for businesses that need to connect an entire office to one DSL connection.

### **Do I need to upgrade my computer to use DSL?**

A Network Interface Card (NIC, or Ethernet card) must be installed in your computer. A simple 10BaseT Ethernet NIC will work. Once the NIC is installed it provides a jack on the back of the computer allowing you to connect your new DSL modem or router to the computer.

### **Does DSL require special equipment?**

Yes. DSL requires that the customer use a special DSL bridge or router. Also, cyberMIND must have a similar modem located in the Central Office. Together, these two pieces of equipment increase the capacity of the copper phone line between them so it is capable of moving data at extremely high speeds. cyberMIND sells the DSL bridge or router you need to get connected to DSL. There are different options available based on the type of service you purchase.

### **Who installs this equipment?**

A cyberMIND authorized installer will install the inside wiring and equipment for end-users who purchase authorized bridges and/or routers. The installer will complete standard inside wiring and connect the DSL equipment to the wiring, making certain that the connection is live and functioning properly. However, the installer will not connect the equipment to a computer. End-users are responsible for connecting the equipment to the computer, and must consult cyberMIND if they need assistance.

### **Does my wiring need to change to support DSL service?**

A new line will be installed at your location, and additional wiring is needed. cyberMIND installs inside wiring during your DSL service activation.

### **Can I buy my own equipment and install it myself?**

No. The only equipment that will work is supplied by cyberMIND.

**Will the phone company charge me extra for receiving this service from cyberMIND?**

No. All fees associated with your new DSL service will come from cyberMIND.

**What if I want to upgrade my DSL connection to a faster speed?**

Normally, you will be able to upgrade to a higher speed service without needing to upgrade your equipment. For example, the equipment used for 192 Kbps SDSL is the same equipment used for 1.1 Mbps SDSL. However, IDSL, ADSL, and SDSL equipment is not cross functional (an ADSL router would not work on an SDSL line).

**Can DSL help telecommuters?**

With VPN software DSL will make your home an extension of the office LAN. You will experience high-speed access from home as though you were sitting at your desk in the office.

**What is the distance limit for DSL service?**

The distances are measured in cable length, not as the crow flies. Generally the cable connecting a customer to a Central Office does not run in a straight line. Instead, the cable twists and turns underground so the distance measured in cable feet is always longer than the distance measured as the crow flies. The limitations are different for the different flavors of DSL. Customers who are located further from the Central Office than the distances listed below will not qualify for that particular DSL service. All distances are approximate.

SDSL      approx. 18,000 cable feet      (about 3.5 miles)

ADSL      approx. 12,000 cable feet      (about 2.2 miles)

IDSL      approx. 36,000 cable feet      (about 6.5 miles)

**How does DSL compare to 56 Kbps analog modems?**

DSL is significantly faster than a 56 Kbps modem. Also, DSL is always on so there is no need to dial up to connect to the Internet. And because the connection is dedicated you will be able to host a web server whereas this is not feasible with a dial-up connection. DSL also makes it easy to connect multiple computers to one high-speed line to share the speed on that line among an entire office.

**How does DSL compare to Cable modems?**

Although cable can be appealing because of its price, there are some inherent drawbacks to cable modem service. First, the cable network is shared, which means as the number of cable users increases the speed on each individual's line decreases. Second, a shared network is inherently less secure than a dedicated service like DSL, as neighboring cable customers can more easily intercept data or hack into another user's computer. Third, the upstream speed on a cable modem is generally no higher than 128 Kbps. Thus, cable modems are unable to provide acceptable levels of speed or security for business purposes.

**How does DSL compare to a T-1 line?**

T-1 lines provide access speeds of 1.544 Mbps. The decision between DSL and T-1 access when DSL is readily available is a straightforward one due to pricing. Normally, for the same high bandwidth access, a business will pay significantly more every month for a T-1 line than it would for DSL. Additionally, installation of a T-1 line is generally far more expensive than installation and setup of DSL services.

**How does DSL compare to ISDN?**

DSL will be the cause of ISDN's demise for several reasons:

- ISDN is only available in two speeds: 64 Kbps and 128 Kbps, both of which are significantly slower than most DSL connections.
- ISDN sometimes offers dedicated, always-on access but not always. Often, ISDN is subject to additional per-minute fees. Monthly ISDN fees can easily be in the hundreds of dollars.
- DSL is easier and less expensive to install than ISDN.

**What type of backbone equipment are you using to provide DSL service?**

cyberMIND uses an ATM (Asynchronous Transfer Mode) backbone and a DSLAM (Digital Subscriber Line Access Multiplexer) to deliver your service. This equipment is located in telephone company Central Offices where cyberMIND leases space to collocate their network equipment. The DSLAM is manufactured by Newbridge.

**Does cyberMIND DSL work with Windows and Macintosh?**

Yes.

**Does DSL require a special Internet browser?**

No. You can use whatever browser you choose.

**Is a custom domain name included with my DSL account?**

No. A domain name must be licensed separately. We currently offer domain name registration at \$27.50 per year.

**Can I host a web server or e-mail server?**

Yes, and with SDSL, a web site is included with the service

**I keep hearing about ADSL, SDSL, and IDSL. I didn't know there were three types of DSL service. What is the difference among them?**

Please see the section "Types of DSL" on page four of this document.

**I heard it can take up to four to six weeks (sometimes longer) to get DSL service installed once I have placed my order. Why does it take so long to have it installed?**

After you have placed your order, your local phone company is responsible for laying out a line for your DSL service to use. This requires the phone company to literally map out the route the line must be placed between your home/business and the central office. During this process, the phone company determines if there is any obstacles or other situations with the line in question, and then begins carrying out the necessary actions to prepare that particular line for your DSL service. Once the line is prepared, our technicians will make the final installation on site at your home/business. We will contact you periodically with updates on the status of your order, as well as schedule a date and time to make final installation procedures on site when the time arises.

**Can I use my own DSL router/bridge if I already have one when I place my order?**

No. The only equipment that will work is supplied by cyberMIND.

**Why do I have to sign up for a specific contract when I place my order?**

When you place a DSL order, a specific line must be provisioned for you to provide that service. Unlike a 56K dial-up service, this service cannot simply be turned on and off. There are more physical materials, equipment, and procedures involved in the installation and maintenance of the DSL service, therefore, cyberMIND has to guarantee that this line will continue to be used for DSL for at least one year (or for however long of a contract you select).

**Can I sign up for a contract that is less than one year?**

No. The only contract terms available are one, two, or three years. Contract renewals will be available at the end of your respective contract.

**What happens if I want to cancel my DSL service before the end of my contract?**

Upon placing your order, you will have approximately five business days to change your mind. Beyond that time, you will be responsible for a \$400 cancellation should you ever decide to cancel your service. There are no exceptions to this policy. When DSL service is canceled, we have to break our service guarantee to the provisioning company, which places a cancellation penalty on us. Since you are responsible for the cancellation, we need to charge this fee in order to cover the cost of the penalty. If for whatever reason you do not pass final qualification for DSL service and are forced to cancel your order, you will not be charged this fee.

**Can I have my DSL service relocated to a new address if I want to move?**

Yes. This is provided that the new address that you wish to relocate to also qualifies for DSL service. You will also be responsible for new installation charges when you relocate the DSL service. If your new address does not qualify for DSL service, and wish to cancel service, you will still be responsible for the \$400 cancellation fee.

**If I have DSL service, is there any way I can get Internet access when I travel?**

Unfortunately, no. Due to the dedicated nature of DSL service, it is not possible to mobilize the Internet connection. However, cyberMIND does offer high-quality dial-up services starting as low as \$15.95 per month. With local dial-up numbers nationwide and internationally, they work conveniently in lap-tops for people on the go!

**Is there any additional equipment that I need?**

Yes. You will also need a 10/100 Ethernet network interface card installed on your computer. These are sold separately, and you can order one from cyberMIND or purchase one from your local computer retailer.

**Can I network my DSL service with other computers that I have at my home/business?**

Yes. DSL routers come with network capability. For DSL bridges, you will need an operating system that has Internet sharing capability or proxy server software. You will also need to install a second 10/100 Ethernet NIC into the computer that has the DSL connected to it. You can then use this second network card to connect a hub or another computer.

## **Sign Me Up!**

Ready to get into the fast lane with cyberM-I-N-D DSL?

You can order your service right now by pointing your browser to:  
[http://www.cyberM-I-N-D-usa.net/services/dsl/order\\_dsl.html](http://www.cyberM-I-N-D-usa.net/services/dsl/order_dsl.html)

If you prefer to speak with a cyberM-I-N-D DSL Technician you can telephone  
877.373.6680