

What is Broadband or High Speed Internet?



The “speed” you experience while using the Internet depends on the “space” your Internet service provider (ISP) affords for your data to travel across the Internet. Photos, e-mails, work files, videos and music are commonly measured in Mbps. The larger the Mbps, the more “space” that is required to move your information quickly across the Internet. ISP providers measure the availability of their systems to move information in Mbps too. In basic terms, the larger the Mbps offered by the ISP, the more information (pictures, e-mails, video, work files) you can move over the Internet in a shorter period of time.

An example is water flowing through a hose to fill a swimming pool. A small garden hose (small Mbps) restricts the flow of water compared to a larger fire hose (higher Mbps). The larger hose would fill the swimming pool in a shorter period of time compared to the small hose. In this example, the photos, e-mails and work files are the water, while the ISP provider is the hose.

Do all ISP providers offer the same technology? No, there are five common systems used by ISP providers. Dial-up, the first Internet system most are used to, is not considered high speed Internet and has a low Mbps rate. High speed Internet is most commonly referred to as DSL and Cable Internet systems. In addition, satellite and wireless systems can offer high speed Mbps rates.

DSL, Digital Subscriber Line, uses the same copper wires as a regular telephone. DSL uses the line’s extra capacity to transmit data across the wires. Typically, existing phone lines are used with a DSL modem to provide service. By pairing the data and voice frequencies, DSL allows users to transmit data and talk on the phone at the same time. A limitation of DSL is distance. Data transmitted over a DSL line diminishes with distance traveled (18,000 feet max). This distance requirement limits the availability of DSL service.

Cable Internet systems use the same coaxial cables as a television. The system uses the cable’s extra capacity to transmit data across the cable or fiber optic line. Existing cables are used with a cable modem to provide service. Cable allows the user to transmit data and watch the television at the same time. Data over a cable system is not as severely limited by distance traveled, as in DSL. However, only 50% of U.S. households can receive cable service.

Wireless Internet systems work best with 3G technology. Wireless systems require a mobile broadband card or modem, which is used to connect your computer to the wireless providers network. Wireless systems use the same frequencies to transmit data as cell phones.

Satellite Internet does not use telephone lines or cable systems, but instead uses a satellite dish for two-way (upload and download) data communications. Two-way satellite Internet consists of approximately a two-foot by three-foot dish, two modems (uplink and downlink) and coaxial cables between the dish and modem. The key installation planning requirement is a clear view to the south. Like satellite TV, trees and heavy rains can affect reception of the Internet signal.

What types of service provider options are available?

Below is a list of service provider options and the average Mbps per service.

[Averages are national averages by service type and can vary by service provider, location and time of day.]

Dial Up (Mbps between .28 and .56)

Is not considered Broadband or High Speed Internet. Connection requires a standard phone line with a modem (standard on most PCs or laptops).

Satellite (Mbps between .56 and 1.5)

Has Broadband or High Speed Internet capacity. Connection requires a satellite dish with an unobstructed view of southern skies and a satellite receiver (obtained from service provider).

Wireless - Cellular (Mbps between .56 and 1.4)

Has Broadband or High Speed Internet capacity. Connection requires a broadband card (obtained from cellular service provider) and a cellular contract.







DSL (Mbps between 1 and 10)

Typically referred to as Broadband or High Speed Internet. Connection requires a standard phone line, DSL modem (obtained from service provider) and location within 18,000 feet (3.4 miles) of the service provider’s location.

Cable (Mbps between 1.5 and 22)

Typically referred to as Broadband or High Speed Internet. Connection requires a coaxial cable line and a cable modem (obtained from service provider).

The table below lists average download times, by type of service, for common files.

Download Times		Cable (5 Mbps)	DSL (1.5 Mbps)	Wireless (1 Mbps)	Satellite (.86 Mbps)	Dial-up (.56 Mbps)
Picture (1.5 Mb)		2 seconds	7 seconds	12 seconds	2 minutes 20 seconds	3 minutes 34 seconds
e-mail w/attachment (3 Mb)		4 seconds	15 seconds	24 seconds	4 minutes 39 seconds	7 minutes 8 seconds
Music (5 Mb)		8 seconds	25 seconds	40 seconds	7 minutes 46 seconds	11 minutes 54 seconds
Video (30 second clip) (10Mb)		16 seconds	51 seconds	1 minute 20 seconds	15 minutes 33 seconds	23 minutes 48 seconds
Software (30Mb)		48 seconds	2 minutes 35 seconds	4 minutes 9 seconds	48 minutes 24 seconds	1 hour 11 minutes 25 seconds

What service is right for my needs?

Below are six “typical” Internet users, which can be used to help you determine what type of Internet service would match your lifestyle.



Lori - (DSL)

- Sends e-mails to family & friends
- Shares and receives photos
- Looks at web pages and shops online

Dan - (Cable or DSL)

- Sends e-mails to family & friends
- Shares and receives photos
- Web surfs and shops online regularly
- Watches video clips
- Downloads music



Greg - (Wireless)

- Travels frequently
- Uses laptop to check e-mail away from home
- Keeps sports statistics at games for real time updates

Stan - (Satellite or Wireless)

- Can not get DSL or Cable service
- Sends e-mails to family & friends
- Shares and receives photos
- Looks at web pages and shops online



Chad - (Cable or DSL)



- Downloads music
- Plays games online
- Instant Messages (IM)
- Watches video clips

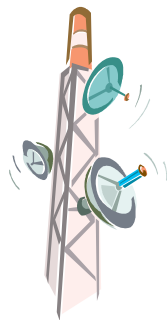
Anna - (Business Cable or Business DSL)

- Runs a small or home business
- Updates website



What providers offer service in Urbandale?

(No single provider covers the entire City of Urbandale. Listed below are service providers who offer service in the majority or limited coverage areas of Urbandale.)



Wireless Service Providers in Urbandale:

Cingular -	1-888-333-6651 .07 Mbps - .14 Mbps	www.cingular.com \$199.99 pc card + \$109.99 - \$139.99 / per month
Sprint -	1-800-777-4681 .06 Mbps - 1.4 Mbps	www.sprint.com \$199.99 pc card + 39.99 - \$59.99 / per month
T-Mobile -	1-800-866-2453 .06 Mbps - .4 Mbps	www.t-mobile.com \$199.99 pc card + \$39.99 - \$49.99 / per month
Verizon Wireless -	1-800-256-4646 .6 Mbps - 1.4 Mbps	www.verizonwireless.com \$99.99 pc card + \$39.99 - \$59.99 / per month



Satellite Service Providers in Urbandale:

Hughes Net -	1-888-667-5537 .7 Mbps - 1.5 Mbps	www.hughesnet.com \$399.99 Equipment + \$59.99 - 99.99 / per month
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Cable Service Providers in Urbandale:

Mediacom -	1-866-755-2225 .8 Mbps - 15 Mbps	www.mediacomcc.com \$25.95 - \$59.95 / per month
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Residential DSL Service Providers in Urbandale:

Internet Solver -	(515) 224-9229 1.5 Mbps - 24 Mbps	www.internetsolver.com \$48 - \$100 / per month
Iowa Network Services -	1-800-677-7606 .6 Mbps - 5 Mbps	www.iowanetworkservices.com \$46.95 - \$70 / per month
MCLeod USA - (A PAETEC Company)	1-800-500-3453 .6 Mbps - 1.5 Mbps	www.paetec.com Call for a service quote
Nexgen Communications -	(515) 369-9000 1.5 Mbps - 22 Mbps	www.nexgencom.com Call for a service quote
OpenCom -	1-866-447-8638 .6 Mbps - 2 Mbps	www.isunet.net \$31.95 - \$36.95 / per month
Qwest Communications -	1-800-244-1111 1.5 Mbps - 7 Mbps	www.qwest.com \$44.99 - \$54.99 / per month



Business DSL Service Providers in Urbandale:

Internet Solver -	(515) 224-9229 1.5 Mbps - 24 MbPS	www.internetsolver.com \$74 - \$110 / per month
Iowa Network Services -	1-800-677-7606 1 Mbps - 7 Mbps	www.iowanetworkservices.com \$100 - \$400 / per month
McLeod USA - (A PAETEC Company)	1-800-593-1177 1.5 Mbps - 1 GbPS	www.paetec.com Call for a service quote
OpenCom -	1-866-447-8638 2 Mbps	www.isunet.net \$36.95 - 49.90 / per month
Qwest Communications -	1-800-244-1111 1.5 Mbps - 7 Mbps	www.qwest.com \$50.50 - 81.25 / per month
SparkPlug by Prairie I-net -	1-800-894-3868 1.5 Mbps	www.prairieinet.net \$149.95 / per month



BROADBAND INFORMATIONAL BROCHURE

CITY OF URBANDALE

3600 86th Street
Urbandale, IA 50322



Updated April 2008

Broadband Service in Urbandale

The Urbandale Mayor and City Council understand that technology shapes the way our residents interact at work, with their families and within their community. The 2006 Citizen Survey found that 98% of Urbandale residents have a computer in their home. Additionally, the 2006 results were the first year that Broadband (high speed Internet) became the most widely used connectivity system, with 62% of all Internet subscribers. The May 2006 Broadband Strategic Review, conducted for the City by the Public Technology Institute, recommended a citizen and business awareness campaign. The campaign will inform residents and business about broadband services offered in Urbandale. Urbandale offers this as a service to you and is ready to help you with your broadband questions.

How large (in Mb) are common files?



Pictures
(1.5 Mb)



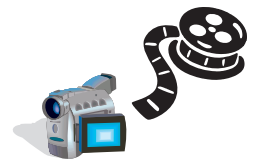
e-mail (with Attachment)
(3 Mb)



Software
(30 Mb)



Music
(5 Mb)



Video Clip (30 seconds)
(10 Mb)

In this brochure, download speeds are not guaranteed and may vary. Service may not be available in all areas. All rates and services are subject to all taxes, levies and fees. Rates are for informational purposes only and are not guaranteed and may vary. Please contact the service provider for up to date information and fees.

City of Urbandale Broadband Informational Brochure.
For more information contact Urbandale at (515) 278-3900 or www.urbandale.org

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