

Comparison of Internet Connection Services

	Availability	Estimated Installation/ Monthly Cost ¹	Available Speeds (kilobytes per second)	Time to Download a 10 MB File (minutes) ²	Infrastructure Requirements	Suitability			U.S. Household Penetration (Source: IDC) ³
						Home	High-Demand User	Office	
T1 (Always connected)	Available nationwide mostly in metropolitan areas and major suburbs	Varies by distance—typically from \$500 to \$2,500 per month	Download = 1,536 Upload = 1,536	0.9	Router, data service unit (DSU)	Poor	Poor	Excellent	1999 = Less than 1% 2004 = Less than 1%
Cable Modem (Always connected)	Nationwide by large cable providers with updated infrastructure Limited access in commercial areas	Up to \$175/ \$39–\$49 per month	Download = 384 (min) to 4,096 (max) Upload = 128 (min) to 2,560 (max)	1.4	Access to cable TV service, cable modem Must be within 30 miles of cable provider—up to 2,000 miles with amplifiers	Good	Satisfactory	Satisfactory	1999 = 3.4% 2004 = 14.8%
DSL (Always connected)	Rapid national deployment in areas with modern telephone switches	Up to \$200/ \$40–\$840 per month	Download = 144 (min) to 7,270 (max) Upload = 90 (min) to 1,536 (max)	1.8	Standard telephone line, DSL modem or router Must be within about 3 miles of a central office	Good	Good	Good	1999 = 0.9% 2004 = 23.4%
Fixed Point Wireless (Always connected)	Limited areas—mostly metropolitan areas and major suburbs	Installation varies/\$50–\$100 per month	Download = 128 (min) to 1,536 (max) Upload = varies	2.7	Wireless router/modem, either microwave, RP or infrared	Satisfactory	Good	Good	1999 = Less than 1% 2004 = 2%
Satellite (Connect on demand)	Nationwide	\$300–\$800/ \$20 per month for 25 hours (Each additional hour \$1–\$2)	Download = 400 Upload = 33.6	3.4	Unobstructed line of sight south, satellite dish, standard telephone line, modem	Satisfactory	Poor	Poor	1999 = Less than 1% 2004 = Less than 1%
ISDN (Always connected)	Available in selected areas	\$50–\$200/ \$20 per month	Download = 128 Upload = 128	10.7	Standard existing telephone line, ISDN terminal adapter Must be within about 3 miles of a central office	Satisfactory	Poor	Satisfactory	1999 = 0.3% 2004 = 1.6%
56 Kb Modem (Connected on dial-up)	Everywhere	Up to \$25/ \$20 per month for ISP	Download = 48 Upload = 33.6	28.4	Standard telephone line, modem	Satisfactory	Poor	Poor	1999 = 95% 2004 = 55.1%

¹ Includes cost of Internet service provider. Does not include cost of installing a phone line.

² Assumes 1-mbps cable, 768-kps DSL, and 48-kps dial-up modem.

³ 2004 figures projected.