REINING IN THE COST OF CONNECTIVITY

Policies for Better Broadband in 2014

BY NICK RUSSO, PATRICK LUCEY, DANIELLE KEHL, AND HIBAH HUSSAIN
JANUARY 2014

Americans in major cities such as New York, Los Angeles, and Washington DC, continue to pay higher prices for slower Internet service when compared to similar cities in other parts of the world. Clearly, the United States' collective broadband experience does not measure up to that of other countries. In this paper, we examine America's broadband challenges, analyzing a number of factors that impact speeds and prices. Our analysis is based on the data we collected for *The Cost of Connectivity 2013*, a survey of consumer broadband pricing data from 24 cities around the world. This paper identifies ways to promote more robust competition and provide consumers with better service at a more affordable price.

Acknowledging that no single solution or "magic bullet" can solve all of America's broadband challenges, we offer recommendations aimed at improving the status quo. We argue that it is crucial to create better conditions for providers to enter the market, to compete more effectively, and to innovate on existing and new services. In particular, policymakers should improve data collection practices around pricing information, work to remove barriers to the development of local networks, encourage cooperation in broadband build outs, support pro-consumer and pro-competitive policies, and enforce competitive protections in upcoming spectrum auctions.

Nick Russo and Patrick Lucey are policy program associates at the New America Foundation's Open Technology Institute (OTI). Danielle Kehl and Hibah Hussain are policy analysts at OTI. The authors would like to thank Sarah Morris, Senior Policy Counsel at OTI, for substantial editing assistance.

OPEN TECHNOLOGY INSTITUTE

TABLE OF CONTENTS

INTRODUCTION

2013 was a year of gigabit rhetoric: awareness of and demand for ultra high-speed Internet connectivity grew significantly.[1] A number of cities across the United States joined the ranks of speed leaders with new offerings, and more high-speed initiatives are underway in 2014. At the same time, most U.S. consumers still lag behind their global peers, paying more money for worse service. Steps must be taken to improve the American broadband market.

Last fall, the Open Technology Institute (OTI) released *The Cost of Connectivity 2013*, a best-effort survey of consumer broadband pricing data from 24 cities around the world. The central takeaway from that research is that customers in U.S. cities generally continue to pay higher prices for slower speeds when compared to customers in international cities.[2] In this report, we examine some of the factors that impact speeds and prices. We also identify areas for potential regulatory intervention to promote more robust competition and provide consumers with better service at a more affordable price.

Many of the problems with consumer broadband options in the United States today can be traced back to underlying policy challenges that have become more pronounced in the past decade. Key contributing factors include the lack of open access policies for broadband infrastructure, the difficulties of interconnection, and the ongoing consolidation of spectrum holdings between a few mobile competitors. The public, meanwhile, is often left with limited and difficult-to-find information from Internet service providers (ISPs) about broadband options. Nor is comprehensive data available that would help both consumers and researchers better understand the forces at play in the broadband ecosystem, particularly when it comes to price. Without better data and stronger policies to promote competition and protect consumers, Americans are

unlikely to see better prices or faster speeds in most major cities in the near future—let alone in rural or historically underserved areas.

Fortunately, there are policy solutions to many of these problems. It is important to remember that the Federal Communications Commission (FCC) has a multifaceted role: it aims to promote meaningful competition, but it also has a responsibility to protect consumers, especially in the areas where the competitive market falls short.[3] A new FCC Chairman at the helm in 2014 creates a critical window to advocate for positive change on a number of core broadband policy issues. At the same time, not all progress must be initiated at the federal level. Creating space for alternative broadband models—like municipal networks—and implementing local policies that facilitate new entrants in the broadband market are also important. The American cities that stood apart from the larger trends in our report tended to be those where innovative competitors participate in the market, such as Chattanooga's municipal fiber network or Kansas City's Google Fiber deployment.

Following the release of *The Cost of Connectivity 2013* data, this paper delves more deeply into the factors that may contribute to the United States' overall poor performance in our rankings. In the first section, we discuss the findings from that data set, including qualitative observations from our research. In the next section, we examine key challenges in American broadband policy. Finally, we discuss the implications for both federal and local policymakers. The report methodology, city information, 2013 rankings, and the full data set are available in the appendices.

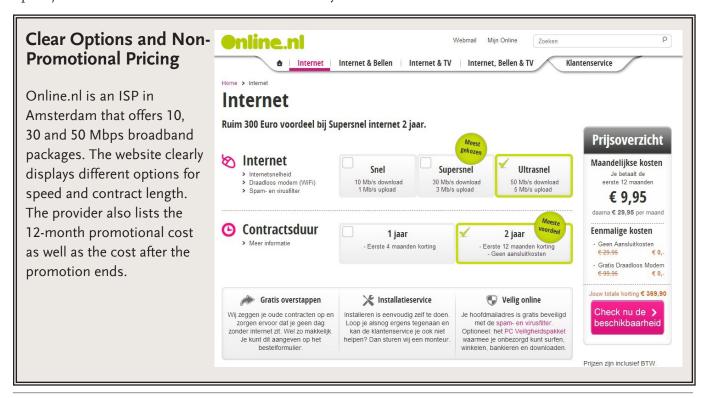## RESEARCH OBSERVATIONS AND FINDINGS

As we noted in *The Cost of Connectivity 2013*, U.S. wireline broadband customers largely pay

higher prices for slower speeds compared to their international peers.[4] Some providers debuted expensive new top speed tiers in 2013 and made other upgrades in certain markets, but these were limited and often accompanied by the introduction of new fees.[5] However, several more dramatic changes occurred in cities where there are alternative and innovative models. A particularly noteworthy finding is that EPB, the municipal provider in Chattanooga, lowered the cost of its gigabit service by over 75 percent.[6]

Additionally, on the wireless side, we found that U.S. customers pay higher prices for data-only plans and are more likely to face overage fees, while international customers tend to see lower prices and are more likely to see their speeds reduced when they exceed their data limits rather than the imposition of monetary fees. A study by the Consumer Federation of America (CFA), which incorporates part of our data set, found that the two dominant U.S. wireless providers (AT&T and Verizon) offer services that are much less consumer-friendly than those offered by the other two major wireless providers (T-Mobile and Sprint) who have lower market shares.[7] The study found that Sprint and T-Mobile packages are similar to European wireless providers who tend to throttle rather than charging for data overages.

When comparing the top wired speeds available in each city, we found that Chattanooga, TN, and Hong Kong continue to offer the same world-leading gigabit speeds they offered last year, while Seoul, Lafayette, LA, Kansas City, KS, and Kansas City, MO, also joined the top ranks. In our October data release, we also ranked providers' broadband-only plans priced near $35 and wireless USB-dongle plans priced near $40. Those comparisons show that wireless broadband is not presently an adequate substitute for wireline broadband, because mobile service is more expensive, comes with more restrictive data caps, and is less reliable than wireline services. Finally, our comparison of wireless USB-dongle plans near the 2GB data cap level found T-Mobile to be the most affordable provider, but its plans are still near the bottom of the pack when ranked against providers worldwide. (These charts, originally published in *The Cost of Connectivity 2013* data release, can be found in Appendix B.)

Clear Options and Non-Promotional Pricing

Online.nl is an ISP in Amsterdam that offers 10, 30 and 50 Mbps broadband packages. The website clearly displays different options for speed and contract length. The provider also lists the 12-month promotional cost as well as the cost after the promotion ends.

Research Observations

To compile our data set, we visited the websites of Internet service providers in each city surveyed. These websites vary widely in terms of price transparency and information accessibility. In many markets, particularly in the United States, websites are opaque and difficult to navigate, with certain pricing information or plan details hidden in footnotes, on separate pages, or not fully disclosed. However, a few ISPs stand out for being user-friendly and displaying relevant speed and pricing information in a clear and easy-to-understand way. For example, in cities like Riga and Amsterdam, most ISPs offer granular price information in clearer terms and more prominent sections of their websites.

Customers in relatively transparent markets like Riga and Amsterdam can easily obtain information about which speed tiers are available and how prices vary based on contract length. This sort of user-friendly design and transparency allows consumers to make informed broadband decisions. Users can also easily view information on data limits, pricing after promotional periods end, and equipment fees.

In the absence of such clearly available pricing information, potential customers may find it harder to make an informed decision. To obtain necessary information and to avoid unexpected fees and price changes, consumers in less transparent markets often have to read copious amounts of fine print to find prices after limited-time promotional pricing periods, or wait for available customer service representatives to respond to inquiries. Users in these markets may also be subject to hidden fees for equipment. The best examples of transparency occur where ISPs include modem and installation fees as part of the advertised monthly fee, or where they otherwise disclose those fees up-front, rather than hiding them as an add-on to a customer's monthly bill. This enables consumers to calculate and compare the full cost of various services.

Mobile Data Collection

Finding consistent information on speeds for USB-modem mobile data plans was particularly challenging. Residential wireline broadband packages are typically differentiated based on the maximum speeds offered, while mobile providers usually distinguish their

Digiweb, an ISP in Dublin, displays on its website the key components included in the services they offer. Potential users can see what is in each package and compare them to other plans.

Mobile Speeds, Prices and Other Terms Listed on a Single Page

In the Netherlands, mobile provider Vodafone lists "maximum" speeds, expected or "practical" speeds, data caps, and promotional price changes. This data is all available on a single page for the consumer.

Basis - 2,5 GB

Voor als je:
dagelijks internet, e-mailt en online eenvoudige games speelt

- Maximale snelheid: 14,4 Mbps
- Praktische snelheid: 2 - 4 Mbps
- 2,5 GB bundel
- Met modem voor je laptop
- Bij een 2-jarig abonnement
- € 28 per maand, nu 24 maanden

€ 16,80 p.mnd.

Bestel

- Bij een 1-jarig abonnement
- € 28 per maand, nu 6 maanden

€ 14 p.mnd.

Bestel

Extra - 7 GB

Voor als je:
iedere dag online wilt gamen, video's kijken en muziek luisteren

- Maximale snelheid: 50,0 Mbps
- Praktische snelheid: 10 - 15 Mbps
- 7 GB bundel
- Met modem voor je laptop
- € 48 per maand, nu 6 tot 12 maanden

€ 24 p.mnd.

Bestel

---

plans by the size of their data caps. When speeds are mentioned, mobile providers tend to use terms such as "4G" or "LTE" that do not give consumers a clear indication of actual connection speeds.[8]

In the United States, the carriers also tend to distinguish their services from one another using relative terms. AT&T claims to have the "fastest" 4G LTE network in the country,[9] while Verizon boasts that it has the "largest and most reliable" network.[10] T-Mobile calls its most advanced service "blazing fast."[11] While colorful, these descriptors do not actually give consumers any concrete information about service speeds.

Moreover, when download or upload speeds are displayed on websites, the figures typically reflect theoretical maximum speeds—the top speed possible under ideal conditions. These technical maximums, however, are not what most mobile consumers experience.[12] Actual speeds are often slower than advertised speeds for both wired and mobile broadband, but mobile speeds are also affected by numerous additional environmental factors like terrain, physical barriers, or the number of other subscribers in the area.

Promotional materials often do not explain these technical nuances. However, in our research we found a few examples of mobile providers willing to give more information to the public by disclosing estimates for "expected" download speeds. In the Netherlands, Vodafone displays a field for both "maximum" and "practical" speeds for mobile data plans. Additionally, Vodafone lists its speeds alongside the prices offered. In the U.S., Sprint lists peak speeds as a separate field from expected speeds. Unlike the Dutch example, however, prices and speeds are listed on separate pages.

The way that mobile data caps are implemented reflects another crucial difference across cities. In a majority of non-U.S. markets, providers throttle users who exceed their allocated amount of data, rather than charging for more data.[13] U.S. providers often charge steep overage fees, using data caps as an additional revenue source rather than a way to manage network traffic.[14] As a result, consumers in the U.S. often face steep overage fees if they use more than a few gigabytes each month.

KEY CHALLENGES

Some innovative providers have emerged in various parts of the country[15] and the incumbent providers have continued to modestly upgrade existing services,[16] but there was by no means a revolution in the provision of American Internet service in 2013. As high-speed Internet services become an increasingly critical part of daily life, however, the importance of affordable broadband service cannot be understated. For innovative services to flourish, we need better policies that ensure that outdated networks continue to be upgraded and that consumers have better choices in the broadband market.

Lack of Data

To collect the data for *The Cost of Connectivity 2013*, our researchers replicated the consumer experience, visiting the website of each provider and collecting as much data as possible.[17] This process yielded insights into the challenges that individual Americans face as broadband customers as well as the broader issue of what type of data is (and should be) collected and made publicly available by the FCC.

Consumer Broadband Labeling

As we note in our Research Observations, the websites of broadband providers can be difficult to interpret. In 2009, the Open Technology Institute called for the implementation of a "truth in broadband labeling" program to help customers better understand the products being offered.[18] Two recent reports confirm that the websites of U.S. broadband providers still need significant improvement.

In May 2013, the American Customer Satisfaction Index (ACSI) released a survey that included consumer opinions on broadband service. The results show that "[c]ustomer satisfaction with ISP websites is well below average" when compared to the ratings of other telecom industries (such as home phone service, mobile service, or cable television).[19] The FCC's Open Internet Advisory Committee (OIAC) also recognized that American broadband consumers would benefit greater clarity and uniformity from ISP websites. The OIAC recommended the following:

> The Transparency Working Group recommends that the FCC work with the industry to develop a voluntary labeling program, in which ISPs would disclose in a simple and consistent manner, relevant information about their broadband Internet access services.[20]

In a voluntary labeling program, an icon would appear on an ISP's website next to each broadband plan it offers and serve as a sort of broadband "nutrition label." The OIAC report recommends that the broadband label include the following details about the advertised broadband plan: download speed, upload speed, any limitations on data usage, and monthly price. The report goes on to state that the price displayed should not be a limited introductory offer. Instead, the price listed as part of the uniform broadband label should reflect the average monthly cost of the broadband service over a 36-month period, and would also include taxes and other fees associated with the plan averaged in.

FCC Data Collection

In addition to improving the quality of providers' individual websites, the FCC should develop a central repository that aggregates granular information about the types of broadband packages available across the country. Consumers, researchers, and the public would benefit if the FCC collected broadband pricing data from providers and released it on a regular basis and in open formats that can be easily reviewed and analyzed. The Communications Act of 1934 specifically mentions the affordability of services as part of the FCC's purpose.[21] Fulfilling that role requires the agency to have an in-depth understanding of what service costs across the country. In addition, more publicly available data about broadband pricing

would help researchers and other policymakers make recommendations in the public's interest.[22] Wide variation and higher prices for similar products in different areas, for example, could indicate a lack of adequate competition. In these cases, transparency can make it easier to determine whether providers are justified in charging significantly varied rates for different areas.

The FCC already imposes a range of annual reporting requirements on ISPs through the agency's Form 477, including information about network deployment, broadband availability, customer subscriptions, and speeds offered across the country.[23] Yet the Commission does not collect pricing data as part of this process, despite repeated requests from researchers and public interests groups.[24] As the Open Technology Institute has argued, the Form 477 "data are a unique and indispensable tool for identifying geographic areas for outreach efforts as well as understanding the factors that contribute to low adoption of broadband services."[25] It could be even more useful to researchers and policymakers if pricing data were included.

In June 2013, the FCC issued an order on reforming Form 477 data collection, expanding the agency's current data collection efforts and assuming responsibility for administering the National Broadband Map.[26] In the introduction to the Order, the Commission stressed the central importance of good data collection, stating: "Data about broadband and voice deployment and subscription are essential to the Commission's ability to fulfill its statutory obligations and play a vital public interest role for other state, local, and federal agencies, researchers, and consumers. To carry out our commitment, we need adequate and reliable data."[27] Yet despite this acknowledgement—and the fact that both the National Broadband Plan and the Department of Justice recommended that the FCC collect broadband pricing information to inform its analysis of competition[28]—the Order did not add prices to the

list of data providers are required to report, focusing instead on "reducing burdens" for the carriers.[29] This proceeding was a missed opportunity for the FCC to broaden and improve its data collection practices. Pricing information would also make the National Broadband Map a more relevant, useful, and engaging resource for the public.

Infrastructure and Open Access

Infrastructure challenges are often used to explain the shortage of competitive broadband options in the United States.[30] One way to address this challenge is through open access requirements, which stipulate that telecommunications providers make various parts of their network or service available to competitors at "fair" or regulated rates—in essence meaning that incumbents cannot deny new entrants access to their infrastructure or charge prohibitively expensive rates.[31] Specific open access policies vary in the details of what they allow competitors to do and how they provide access to either network infrastructure or services. The most common type is unbundled local loop (or "unbundling"), where the new provider actually leases the right to use the incumbent's copper loops and then provides its own electronics and switching.[32]

In the past two decades, studies have shown that unbundling played an important role in facilitating competitive entry in countries such as Japan, Denmark, the Netherlands, France, and the UK.[33] According to the Berkman Center for Internet and Society at Harvard University, there is "extensive evidence…that open access policies, where undertaken with serious regulatory engagement, contributed to broadband penetration, capacity, and affordability."[34] *The Economist* also suggests unbundling policies could be a key driver of renewed competition in the United States, and that open access could help resolve a number of the current challenges in the broadband market.[35]

Paris offers a prime example of how open access policies can spur competition and encourage infrastructure investment. In 2001, France had a relatively weak broadband market and less than one quarter of the Internet penetration rates in the United States.[36] Against the resistance of France Telecom, the former state-owned monopoly, the French telecommunications regulator instituted an unbundling policy in 2003. Because the incumbent was forced to open up access to its infrastructure, international carriers as well as new entrants like Iliad (now operating as Free) and Neuf Telecom were able to begin offering service in Paris and the surrounding areas shortly thereafter.[37] By 2009, Iliad and Neuf Telecom had captured about 46% of the French market.[38] For nearly a decade, Free has charged the same monthly price (€29.00, or roughly $35 adjusted for PPP) while continuing to upgrade and add new features to its services. Free already offers competitive DSL in Paris—advertising maximum speeds that range from 28 Mbps to 100 Mbps in different areas—and is laying its own fiber in the city so that it can offer gigabit speeds to a growing number of homes.[39] Free's package appears to set the standard for competitively priced broadband in the city, and similar deals are offered by Bouygues Telecom, SFR, and Orange (formerly France Telecom).

International comparisons highlight the impact of the French policy intervention as well. The Berkman Center examines the contrasting examples of France and Germany, two countries with similar GDP per capita and population concentration.[40] In the early 2000s, France instituted aggressive policies like unbundling in an effort to kickstart competition in the broadband market and promote adoption, while Germany delayed taking action to regulate Deutsche Telekom. The results speak for themselves. In 2002, France had roughly half of the Internet penetration levels of Germany; by 2009, it was slightly ahead, boasting substantial broadband offerings from a number of new competitors and at least three

companies beginning to pull fiber through Paris.[41] Our *Cost of Connectivity* study found that Paris outranked Berlin in speed offerings as well as in analysis of the best "bang for your buck" packages.[42]

Open access was once a hallmark of telecommunications policy in the United States as well. The 1996 Telecommunications Act stated that incumbent local exchange carriers had a

> duty to provide, to any requesting telecommunications carrier for the provision of a telecommunications service, nondiscriminatory access to network elements on an unbundled basis at any technically feasible point on rates, terms, and conditions that are just, reasonable, and nondiscriminatory.[43]

It forced companies like Verizon and SBC (now AT&T) to lease access to new entrants, leading to the proliferation of large and small ISPs across the country.[44]

Yet in the face of fierce opposition and litigation from incumbent providers, the FCC all but abandoned these policies about a decade ago when it decided not to apply the same unbundling requirements to cable companies offering broadband.[45] It also exempted any new broadband infrastructure built by incumbent telephone companies from the rule. Competitors could still access the existing local loop to the resident or business from the telephone company, but the telephone companies had no requirement to provide access to newer parts of the network that only supported broadband.

Interconnection

Open access policies determine whether or not competitive carriers have access to incumbent infrastructure. Interconnection rules, on the other hand, determine the scope of the contractual arrangements that companies enter into to share traffic across points where the networks interconnect. A number of the policies in the 1996

Telecommunications Act were intended to break open the local telephone company's monopoly between a home business and the more competitive long-distance sector. And as the Internet was rapidly transforming into the general purpose communication platform in the mid 1990s, it appeared to work, opening the doors for new entrants. AOL and Compuserve were the household names of the dial-up Internet era, but they were joined by local mom and pop ISPs and later by a number of national and investor-backed competitive local exchange carriers (CLECs) that offered traditional telephone service and eventually DSL broadband over the telephone network.[46]

After the dot com crash in the early 2000s, however, the marketplace began to rapidly change. Aspiring competitors faced significant challenges in dealing with the incumbent telephone companies. For example, in New York City, Verizon undercut would-be competitors by selling wholesale access to providers at higher prices than it was charging for retail service to the public.[47] Coupled with the lack of unbundling requirements on cable companies, these developments created significant hurdles for new, independent ISPs.

Even when an ISP is able to access the incumbent's network, it must have its work supervised and verified by the incumbent, a costly and time-consuming process. For example, Sonic.net, a local ISP based in Santa Rosa, CA, estimates that for every $80-$90 it spends on engineering and building, it spends around $200 to have the incumbent check and supervise its work.[48] The company notes that while it does not expect incumbents to subsidize its entry into the market, some oversight is needed to ensure that incumbents cannot demand unreasonable fees or take an inordinate amount of time to conduct checks.

Assessing Competition

There is consensus that competition can be a force for good, but the extent to which it is present and effective in the broadband marketplace is still unclear. A competitive market for broadband would be one in which consumers have a choice of comparable and appealing broadband products offered by different providers. In practice, however, the principle of competition is more nuanced. A number of factors in network markets affect competition, including high barriers to entry for new providers, switching costs for consumers, local availability, and whether alternative options are actually of comparable quality.

Measuring what constitutes meaningful competition for home broadband service is therefore complicated. The number of providers active in a given area is not always indicative of the competitive choices available to the individual consumer. Not all of the ISPs that we list for a city necessarily offer services to all neighborhoods, residences, or apartment complexes—a particularly relevant factor for U.S. consumers, since we generally found fewer overall options for wireline broadband providers in U.S. cities than in international ones.[49]

Surveys show the American public understands the current lack of competitive options for high-speed broadband service and is frustrated. ACSI included Internet service providers as a separate industry for the first time in the May 2013 survey, and Internet service providers ranked dead last in customer satisfaction—even below other maligned industries like airlines or health insurance providers.[50]

The survey report cites "high monthly costs" for home broadband services as a main reason for U.S. customer dissatisfaction with the industry. It notes:

> [the home broadband market] is even less competitive than subscription TV service (the satellite companies do not compete here) and there is little incentive to improve service. Dissatisfied customers have a difficult time leaving their provider for an alternative supplier.[51]

U.S. consumers clearly want better options.

Some industry observers point to investments in new high-speed, fiber-optic networks from Verizon or Google as indications of a strong competition for broadband services.[52] Yet these projects provide additional competition in limited geographic areas, not the national market as a whole. Verizon FiOS passes just over 18 million premises as of the end of the third quarter for 2013.[53] Although FiOS continues to expand its facilities in local areas with existing franchise agreements, Verizon leadership has indicated it has no plans to expand FiOS to new markets.[54] FiOS will continue to remain an option to only 16 percent of all U.S. households.[55]

The Google Fiber project provides anecdotal evidence of the power of viable local competition. After Google Fiber was announced, Time Warner Cable debuted residential broadband speed increases in the Kansas City market,[56] and even sent company representatives door-to-door in certain neighborhoods to gauge customer satisfaction with their broadband products.[57] However, as with FiOS, it is important to keep in mind the limited scope of the Google Fiber projects in terms of their impact on the national broadband market. Deployments have currently been announced in the Kansas City area and its suburbs, as well as Austin, TX and Provo, UT. Once fully constructed, Google Fiber will be a new competitive option for broadband service to just 0.65 percent of all U.S. households.[58] And even in the cities where Google Fiber is available, it will not necessarily be rolled out to all neighborhoods as Google experiments with different deployment strategies—a practice that could leave low-income or underserved communities behind.[59]

Consumer advocate Mark Cooper provides additional perspective on competition in a recent paper.[60] Analyzing the dataset from the 2013 *Cost of Connectivity*, Cooper observes that although three competitors may not be enough, the addition of a fourth or fifth broadband provider offering services in a U.S. city is associated with a decline in per-megabit cost of broadband service. As we previously noted, the overall number of broadband providers operating in a city is not a perfect representation of competition available at each individual household. However, as Cooper suggests, the presence of more competitors in the vicinity, "is a competitive threat that should discipline pricing," even if "they may not be serving all consumers."[61]

Density as Destiny

Historically, areas with low population density have struggled to attract adequate private sector infrastructure investment. In the early twentieth century, private electrical utilities focused on providing services to urban areas. Locations that were less appealing to investors were largely ignored or left to develop their own solutions.[62] A similar trend has emerged in the broadband market in recent years. In cities with significant population density, we expect to see similarly high penetration of broadband services. By contrast, in rural areas where it is more challenging to see a return on infrastructure investment on a short timetable, penetration levels are often considerably lower and high-speed options more limited.[63] As a result, density often is a determining factor in how developed an Internet service provider's wireline network in a given area may be. However, our findings suggest that there are exceptions to the rule under the right conditions.

For example, some communities have invested in their own high-speed broadband infrastructure, building municipally-owned networks to meet local needs. Of the cities that we surveyed, Chattanooga, TN, Bristol, VA, and Lafayette, LA, offer some of the fastest high-speed residential products available in the country despite the fact that they have the lowest population densities. Clearly, these cities show that density challenges can be overcome through local projects and new models for deployment. As Cooper points out, this may occur "precisely because the incumbents had failed to upgrade their systems or to price attractive products of comparable quality."[64]

Comparing Mobile and Wireline

The USB-dongle data we collected in 2013 continues to suggest that mobile broadband is not a sufficient substitute for wireline broadband services. In addition to slower speeds and less reliable service, mobile broadband is generally more expensive and often is subject to more restrictive data caps. With the steady rise of mobile data usage in the U.S.,[65] the major carriers' focus has been almost exclusively on acquiring more spectrum. Many of those providers invested significantly in spectrum holdings over the past year through mergers and acquisitions,[66] stock infusions,[67] and outright purchases.[68] There are a number of upcoming opportunities for increased investment in the airwaves, including the FCC's H-Block auction slated for January 2014 and the FCC's planned TV-band incentive auction coming up in 2015.[69] Policymakers have also recommended that the FCC free up unused spectrum owned by various federal agencies.[70] However, without careful planning and regulatory intervention such as limits on the amount of spectrum any one firm can purchase in an auction, there is considerable potential for already dominant carriers to acquire significantly more spectrum, thereby distorting their market power to even larger proportions. Allowing one or two companies to acquire huge swaths of spectrum could prevent other mobile carriers from being able to compete as effectively.

Recent developments in the mobile marketplace demonstrate the importance of protecting competition.[71] T-Mobile, whose attempted acquisition by AT&T was blocked by the Department of Justice and the FCC, has been introducing a series of new policies and promotions to compete more aggressively with other wireless providers.[72] T-Mobile has also indicated its support of spectrum caps in the upcoming auction in public filings.[73] None of these developments would have occured had AT&T and T-Mobile successfully merged in 2011.

Continued investment in the mobile market is welcome, but increasing use of mobile internet devices does not mean that investments and upgrades to wireline services should halt or slow down. In fact, as more and more mobile providers are encouraging their users to offload to WiFi in order to relieve the strain on their congested networks, investments in wireline infrastructure must continue.[74] Maintaining and increasing access to unlicensed spectrum is particularly important as well, since WiFi and other wireless services rely on unlicensed spectrum bands. Unlicensed spectrum enables experimentation and innovation and generates economic value, with considerable consumer benefits as well significant cost-savings for wireless service providers.[75]

POLICY IMPLICATIONS

There is no single solution or "magic bullet" that can address all of America's broadband challenges. In this section we examine a series of strategies that would create better conditions for providers to enter the market, compete more effectively, and innovate on existing and new services. In order to do this we also need better data for consumers, researchers, and policymakers to understand both the broadband market as a whole and what packages are available at the local level.

FCC Chairman Tom Wheeler's early statements indicate that he intends to focus on protecting consumers and enabling competition, and we look forward to seeing the details of these plans in 2014. Leaving the majority of the American public with a choice between the local telephone provider and local cable provider, however, is hardly the same as promoting the 'robust' competition that will ultimately benefit customers. There will be a number of opportunities under Chairman Wheeler's leadership to implement policies that encourage more affordable prices and better service for American broadband consumers.

The FCC also has a duty to protect the public interest, which includes situations where competition alone does not adequately protect consumers. As Chairman Wheeler remarked in December 2013, "It is important to remember, however, that competition does not and will not produce adequate outcomes in the circumstance of significant, persisting market power or of significant negative externalities. Where those occur, the Communications Act and the interests of our society—the public interest—compel us to act and we will."[76] The FCC therefore has a multifaceted role in ensuring the availability of affordable broadband across the country: to take steps to improve competition and to intervene where competition does not occur or is insufficient to achieve these aims.

Understanding the Broadband Market: Better Data Collection

Collect pricing information. Improving the FCC's data collection practices is a critical first step to increase transparency and enable the public to be better informed about the options, speeds, and prices available from the ISPs. In 2014, the FCC will assume control of the National Broadband Map and continue to require annual reporting from providers through Form 477. Yet these sources can be improved in a number of ways, particularly by adding pricing data to the list of information collected and made available, and by increasing the granularity of the data already collected. Beyond the benefits to consumers, more data could help researchers better understand the competitive forces at play and identify areas for improvement if the market is not acting as a competitive market should.

This reform would be consistent with statements that Chairman Wheeler made during his Senate nomination hearings in June 2013.[77] When asked by Senator Blumenthal about including pricing information in data collected by the FCC, he indicated his support. He has also emphasized that the FCC's

administrative process should be one that is "fact-based, data driven."[78] The FCC has an important data-gathering tool at its disposal in the Form 477 process.

Encourage disclosure to consumers. The Commission should take steps to encourage providers to disclose pricing and other relevant information to consumers in a more unified way, along the lines of broadband "nutrition label" recommendations made by both OTI and the FCC's OIAC.

Preserving Opportunities for New Entrants into the Market

REGULATORY CONSIDERATIONS

The FCC should also promote and preserve opportunities for new market entrants. First and foremost, the agency should take steps to ensure that regional and local broadband networks are not blocked or banned. New and local providers should also be on equal footing with incumbents, which means being able to fully participate in and apply for funding under federal support programs like the Universal Service Fund (USF).

Remove barriers to local networks. In this report we include three cities that built their own high-speed networks in the past decade. 2013 saw a growing number of additional cities initiating discussions about local broadband. Los Angeles made headlines when the city council announced it would release a comprehensive Request for Proposals for an open-access fiber-to-the-home network. New York City has also discussed the possibility of building a municipal network to address inadequate broadband service in many parts of the city. The office of Manhattan Borough President Scott Stringer released a report in late 2012 calling on "New York [to] explore the creation of a municipal fiber network by using City-owned assets – including transportation and utility infrastructure – as conduits for sparking competition among ISPs and improving Internet connectivity."[79]

The idea that communities should be able to determine what works best for them without predetermined restrictions on certain models is an important part of these discussions. The National Broadband Plan states that "Congress should make clear that Tribal, state, regional and local governments can build broadband networks."[80] Yet, no progress has been made to implement this recommendation since 2010. In fact, 19 states currently have laws in place that ban or restrict the ability of local communities to implement municipal broadband projects.[81]

FCC Commissioner Mignon Clyburn and former FCC Chairman Julius Genachowski have both noted their support for municipal broadband networks and their opposition to persistent efforts at the state-level to restrict them.[82] FCC leadership should continue to speak out in favor of the right of communities to make their own decisions about investments in local broadband infrastructure. The FCC should also work with Congress and other stakeholders to implement the National Broadband Plan's recommendation to remove existing state-level barriers to local self-determination for municipal networks.

Ensure that local and municipal networks receive equal treatment. The FCC and any state-level authority or support programs should make certain that community-owned infrastructure and municipal networks are not at a disadvantage when it comes to participating in existing infrastructure support programs.

Currently, the treatment of alternative network models is inconsistent under federal programs like the Universal Service Fund. Service provided by community-owned networks, for example, is eligible for support under the E-rate program, which subsidizes connectivity to schools and libraries. E-rate does not limit eligibility for Internet services to local incumbent telecommunications providers (known as Eligible Telecommunications Carriers), and in 2010 the FCC specifically stated that municipal networks

could receive funding through the program.[83] However, other USF programs such as Lifeline and the Connect America Fund are considerably more restricted in the types of networks and service providers that they can support.[84] To facilitate broadband buildout to underserved communities, policymakers should make sure that local networks are not at a disadvantage.[85]

ADDITIONAL PRACTICAL CONSIDERATIONS

There are practical steps that communities can take to encourage competition and improve broadband infrastructure. Rather than making sweeping one-size-fits-all recommendations for local governments, we highlight practices that have been successful in certain regions.

Encourage "dig once" policies. Implementing local "dig once" policies, where additional telecommunication conduit infrastructure is installed in coordination with other construction projects, can help reduce the costs of future broadband construction projects. Broadband experts such as Susan Crawford have advocated "that every time New York opens up a street, workers should leave behind a channel for installing fiber and other broadband access."[86] In June 2012, President Obama directed the Federal Highway Administration (FHWA) to review dig once policies, and the FHWA's October 2013 report confirmed the effectiveness of these measures.[87] A publicly-owned conduit system, open and available to all competitors, would reduce the burden of building new broadband lines to both residences and businesses.

Encourage local and regional strategies. Local and regional governments can support broadband infrastructure by facilitating open and interconnected networks. The Santa Monica City Net, a city-owned 10 Gbps fiber optic network that is open to competitive third parties, exemplifies the benefits of such systems.[88] Aimed at spurring economic growth

and business development, Santa Monica's network serves local businesses exclusively.[89] In addition to connecting businesses to high speed Internet for much lower costs, the city's network has benefitted residential consumers by allowing residential service providers to connect to its infrastructure.

An added bonus of these types of deployments is the potential for increased community engagement in the buildout process. As OTI has noted, "[a] community-driven process fosters collaboration and leverages community-wide investment. Moreover, participants in a community-driven network ultimately become engaged stakeholders who have an interest in the way the network is built and used."[90] This engagement allows the network to be built in a way that responds to actual community needs, rather than in a way that is based solely on profit-oriented determinations. As more and more local, state, and regional entities begin to provision their own networks, they should endeavor to include as many community stakeholders as is feasible, including state and local governments, local businesses, residents, and community institutions.

Policymakers, including city leaders, can also intervene if incumbents are unfairly preventing new entrants from accessing underground conduit or pole real-estate holdings. In Connecticut, for example, incumbents cannot prevent competitors from attaching to the bottom of their poles.[91] With this policy in place, Connecticut makes it easier for new entrants to compete. Regardless of who owns existing infrastructure, steps should be taken to ensure that these interconnection processes are as clear, expedient, and fairly priced as possible.

Promoting Policies That Enhance Competition and Create a More Level Playing Field

Support pro-competitive and pro-consumer policies. Chairman Wheeler has emphasized that "[t]he role of the FCC is to both protect and stimulate competition in order to provide consumers access to world class networks on reasonable terms… Where markets fail or are threatened, the FCC has the responsibility to provide redress."[92] Our research suggests that competition currently does not fully address the market challenges, so the FCC should consider how it can intervene in ways that would promote more competitive access. For wireline broadband, this could be achieved through pro-competitive policies like open access and interconnection, which lower the barriers for more competitive entrants. In Paris, as we highlighted earlier, unbundling policies made it possible for several new companies to enter the market in the past decade. Some of these ISPs are now building and operating their own infrastructure in the city.

The FCC can also implement solutions aimed more directly at the consumers themselves. The agency cannot fix the population density challenges associated with broadband infrastructure investment, but it can continue to promote policies that ensure that consumers are getting good service at an affordable price. A key component will be ensuring that the Universal Service Fund is updated and modernized at a pace that matches the development of new communications tools and technologies. Changes have been made to the Lifeline program, for example, to provide support for prepaid wireless plans as well as bundled telecommunications and broadband service.[93] In the future, the FCC may consider expanding on its broadband pilot program and transitioning the entire Lifeline program to fund standalone broadband service (as opposed to bundled telephone and Internet) as well.[94]

Enforce competitive protections in upcoming spectrum auctions. As it conducts future spectrum auctions, the FCC also has considerable power to ensure that the mobile marketplace remains as competitive as possible. Upcoming auctions include the H-Block auction, the AWS-3 auction, and the TV-band incentive auction. Each of these auctions would free up valuable spectrum for use by mobile carriers

and other entities wishing to enter into the wireless marketplace. In each auction, the FCC must ensure that a diversity of bidders can participate and should implement appropriate pro-competitive restrictions on spectrum acquisition, such as caps or aggregation limits on firms like AT&T and Verizon—who already own a disproportionate amount of spectrum.[95]

The antitrust division of the Department of Justice has already made similar suggestions, citing concerns about potential anticompetitive conditions if AT&T and Verizon are allowed to obtain similarly large amounts of low-band spectrum as they did in 2008 during the 700 MHz auction.[96] It is additionally important for the FCC to maintain and increase access to unlicensed spectrum for use by innovative services such as WiFi and software-defined radio. One of the primary motivations for spectrum auctions is a desire to increase revenue for the federal government. However, as a protector of the public interest, it is the FCC's responsibility to make sure that consumer interests are also protected in these auctions. The maintenance of a competitive wireless market is as essential a consideration for the FCC as maximizing revenue for the federal government.

CONCLUSION

It is abundantly clear that the United States' collective broadband experience does not measure up to that of other countries. Americans often face higher prices, slower speeds, and a frequently frustrating consumer experience overall. A number of these problems persist because of failures to act by policymakers at all levels. Therefore, policymakers should improve data collection practices around pricing information, work to remove barriers to the development of local networks, encourage cooperation in broadband build outs, support pro-consumer and pro-competitive policies, and enforce competitive protections in upcoming spectrum auctions. The FCC, with the new Chairman Tom Wheeler at the helm, should ensure that Commission policies are implemented to reflect these goals.

REFERENCES

1. "FCC Chairman Genachowski Issues Gigabit City Challenge," Federal Communications Commission, January 18, 2013, https://www.fcc.gov/document/fcc-chairman-genachowski-issues-gigabit-city-challenge (accessed January 13, 2014); Joan Engebretsen, "2013: The Year We Stopped Scoffing at Gigabit Networks," http://www.telecompetitor.com/2013-year-stopped-scoffing-gigabit-networks/ (accessed January 13, 2014).

2. Hibah Hussain, Danielle Kehl, Patrick Lucey, and Nick Russo, "The Cost of Connectivity 2013: Data Release - A Comparison of High-Speed Internet Prices in 24 Cities Around the World," New America Foundation, October 2013, http://newamerica.net/publications/policy/the_cost_of_connectivity_2013, (accessed January 13, 2014).

3. Federal Communications Commission, "Enforcement Bureau," http://transition.fcc.gov/eb/ (accessed January 14, 2014).

4. Hussain et al., "The Cost of Connectivity 2013: Data Release."

5. Jon Brodkin, "Time Warner gobbles up more cash from customers by raising modem fees," *ArsTechnica*, July 30, 2013, http://arstechnica.com/business/2013/07/time-warner-gobbles-up-more-cash-from-customers-by-raising-modem-fees/ (accessed January 14, 2014).

6. Chattanooga EPB, "Happy Birthday, Gig City!" Press Release, September 17, 2013 https://www.epb.net/news/news-archive/happy-birthday-gig-city/ (accessed January 13, 2014).

7. Mark Cooper, "Comparing Apples to Apples: How Competitive Provider Services Outpace the Baby Bell Duopoly," Consumer Federation of America, October 2013, http://www.consumerfed.org/pdfs/comparing-apples-to-apples-11-2013.pdf (accessed January 13, 2014).

8. Sascha Segan, "3G vs. 4G; What is the difference?" *PCmag.com*, December 6, 2013, http://www.pcmag.com/article2/0,2817,2399984,00.asp (accessed January 13, 2014).

9. "Mobile Hotspots and USB Modems," AT&T, https://www.wireless.att.com/businesscenter/solutions/wireless-laptop/mobile-hotspots-usb-modems.jsp (accessed January 13, 2014).

10. "America's Largest, Most Reliable 4G LTE Network," Verizon Wireless, http://www.verizonwireless.com/wcms/consumer/explore/why-verizon.html#our-network-coverage (accessed January 13, 2014).

11. "T-Mobile's 4G Network," T-Mobile, http://www.t-mobile.com/coverage.html (accessed January 13, 2014).

12. Mark Sullivan, "TechHive's Wireless Week: Testing America's Networks," *TechHive*, May 20, 2013, http://www.techhive.com/article/2039053/techhives-wireless-week-testing-americas-networks.html (accessed January 13, 2014).

13. 31 of the 57 non-US wireless providers in the survey throttled service when users hit the data cap and did not charge fees. 15 non-US providers charged overage fees and three both throttled speeds and imposed a financial penalty. In the United States, AT&T, Verizon, and Sprint charge overage fees while T-Mobile throttles users who exceed their monthly limits.

14. For more on this trend, see Hibah Hussain, Danielle Kehl, Benjamin Lennett, and Patrick Lucey, "Capping the Nation's Broadband Future?" New America Foundation, December 17, 2012, http://www.newamerica.net/publications/policy/capping_the_nation_s_broadband_future (accessed January 13, 2014).

15. The Google Fiber project, for example, is now being deployed in Kansas City, KC, and Kansas City, MO, and has announced that it will expand to Provo, UT, and Austin, TX, in 2014. "Google Fiber: Cities and Plans," Google, https://fiber.google.com/cities/ (accessed January 13, 2014).

16. Sean Buckley, "AT&T's $14B Project VIP: breaking out the business service, U-verse numbers", *FierceTelecom*, http://www.fiercetelecom.com/special-reports/atts-14b-project-vip-breaking-out-business-service-u-verse-numbers (accessed January 13, 2014).

17. The details of this research is explained fully in Appendix A: Methodology.

18. Ben Lennett et al., "Broadband Truth-in-Labeling," New America Foundation, September 2009, http://oti.newamerica.net/publications/policy/broadband_truth_in_labeling (accessed January 13, 2014).

19. "ACSI Telecommunications and Information Report 2013," American Customer Satisfaction Index, May 2013, http://www.theacsi.org/news-and-resources/customer-satisfaction-reports/customer-satisfaction-reports-2013/acsi-telecommunications-and-information-report-2013 (accessed January 13, 2014).

20. "FCC Encyclopedia: Open Internet Advisory Committee," Federal Communications Commission, https://www.fcc.gov/encyclopedia/open-internet-advisory-committee (accessed January 13, 2014); also see "Open Internet Label Study," Open Internet Advisory Committee, Federal Communications Commission, August 20, 2013, http://transition.fcc.gov/cgb/oiac/Transparency-Label-Study.pdf (accessed January 13, 2014).

21. Section 1 notes that the FCC was created "to make available ... to all the people of the United States ... a rapid, efficient, Nation-wide, and world-wide wire and radio communication service with adequate facilities at reasonable charges." http://transition.fcc.gov/Reports/1934new.pdf (accessed January 13, 2014).

22. The Sunlight Foundation, "Open Data Policy Guidelines," http://sunlightfoundation.com/opendataguidelines (accessed January 13, 2014).

23. "Instructions for Local Telephone Competition and Broadband Reporting (FCC Form 477), Federal Communications Commission, http://transition.fcc.gov/Forms/Form477/477inst.pdf (accessed January 13, 2014).

24. Letter from National Hispanic Media Coalition, New America Foundation's Open Technology Institute, and Center for Media Justice, to Ms. Marlene Dortch, Secretary, Federal Communications Commission, WC Docket No. 11-10, et al., at 1-2 (Filed June 19, 2013), http://apps.fcc.gov/ecfs/document/view?id=7520923327. Notice of

Ex Parte, Free Press, WC Docket No. 11-10, et al., at 1-3 (Filed June 19, 2013), http://apps.fcc.gov/ecfs/document/view?id=7520923478.

25. Letter from New America Foundation's Open Technology Institute to Marlene Dortch, Secretary, Federal Communications Commission, WC Docket No. 11-10, et al., at 2 (Filed June 19, 2013). http://apps.fcc.gov/ecfs/document/view?id=7520923365

26. Modernizing the FCC Form 477 Data Program, WC Docket No. 11-10, Report and Order, Federal Communications Commission, FCC 13-87, June 27, 2013, http://www.fcc.gov/document/modernizing-fcc-form-477-data-program.

27. Modernizing the FCC Form 477 Data Program, 1.

28. See Recommendation 4.2 of the National Broadband Plan, which states, "The FCC and the U.S. Bureau of Labor Statistics (BLS) should collect more detailed and accurate data on actual availability, penetration, prices, churn and bundles offered by broadband service providers to consumers and businesses, and should publish analyses of these data." http://www.broadband.gov/plan/4-broadband-competition-and-innovation-policy/#r4-2. See also Notice of Ex Parte, United States Department of Justice, GN Docket No. 09-51, (Filed January 4, 2010), http://apps.fcc.gov/ecfs/comment/view?id=6015504395

29. There were 85 mentions of variations on the word "burden" [burden, burdens, burdensome, burdening], including a combined 15 mentions of the phrases "reducing the burden" and "reduce burdens," in the order, compared to only four mentions of the word "price" and three for the word "affordability." Patrick Lucey, "Word Count Shows FCC Priorities in Data Collection," New America Foundation, July 12, 2013, http://oti.newamerica.net/blogposts/2013/word_count_shows_fcc_priorities_in_data_collection-87682 (accessed January 13, 2014).

30. Richard Bennett, "No Country for Slow Broadband," New York Times, June 15, 2013, http://www.nytimes.com/2013/06/16/opinion/sunday/no-country-for-slow-broadband.html?_r=3& (accessed January 13, 2014). Bennett describes the United States as "a nation where low urban population density imposes higher actual costs on network upgrades than in most of the world."

31. "Next Generation Connectivity: A Review of Broadband Internet Transitions and Policy From Around the World," The Berkman Center for Internet and Society, February 2010, 85, http://cyber.law.harvard.edu/sites/cyber.law.harvard.edu/files/Berkman_Center_Broadband_Final_Report_15Feb2010.pdf (accessed January 13, 2014).

32. "Next Generation Connectivity," 85.

33. See Table 4.2 of Berkman report, which contains a review of 15 studies from government or international organizations, academic institutes or think tanks, and industry-sponsored groups on "unbundling and broadband penetration," nine of which show a positive impact on penetration. We also note that all three industry-supported studies do not show a positive impact. ("Next Generation Connectivity," 97-98.)

34. "Next Generation Connectivity," 82.

35. "A Tangled Web: America's new Internet rules are mostly sensible—but the country's real web problem is far more basic," The Economist, December 29, 2010, http://www.economist.com/node/17800141 (accessed January 13, 2014). See also "The Web's New Walls: How the threats to the internet's openness can be averted," The Economist, September 2, 2010, http://www.economist.com/node/16943579?story_id=16943579 (accessed January 13, 2014).

36. "Next Generation Connectivity," 151.

37. Jennifer Schenker, "Vive la High-Speed Internet!," Bloomberg Businessweek, July 18, 2007, http://www.businessweek.com/stories/2007-07-18/vive-la-high-speed-internet-businessweek-business-news-stock-market-and-financial-advice (accessed January 13, 2014).

38. "Next Generation Connectivity," 86.

39. "Free: ADSL et Fibre Optique," Free, n.d., http://www.free.fr/adsl/internet.html (accessed January 13, 2014).

40. According to the World Bank, the GDP per capita in France was $39,772 for for 2012, as compared to $41,863 for Germany. The population density for Germany is actually higher than France (235 people per square kilometer compared to 119 in 2012). See "GDP Per Capita (Current US$)," The World Bank, http://data.worldbank.org/indicator/NY.GDP.PCAP.CD and "Population Density (people per sq. km of land area," The World Bank, http://data.worldbank.org/indicator/EN.POP.DNST (accessed January 13, 2014).

41. "Next Generation Connectivity," 151-156.

42. Hussain et al., "Cost of Connectivity 2013."

43. Telecommunications Act of 1996, http://transition.fcc.gov/Reports/tcom1996.pdf (accessed January 13, 2014).

44. "In the United States, the number of ISPs grew from 5,775 in 1999 to 7,785 in 2000 representing a growth rate of 36 percent." See "Internet Access Technologies: Internet Service Providers," Office of Technology and Electronic Commerce, April 11, 2003, http://web.ita.doc.gov/ITI/itiHome.nsf/5713559d82a954b085256cc40075a766/6b84a7ae56cbf46585256cc40077edf3?OpenDocument (accessed January 13, 2014).

45. Scott J. Wallsten and Stephanie Hausladen, "Net Neutrality, Unbundling, and Their Effects on International Investment in Next Generation Networks," Technology Policy Institute, March 2009, 91-2, http://www.techpolicyinstitute.org/files/wallsten_unbundling_march_2009.pdf (accessed January 13, 2014).

46. Annabel Z. Dodd. The Essential Guide to Telecommunications, Upper Saddle River, NJ: Prentice Hall, 2002.

47. Joe Plotkin, ASA Networks. Personal Interview, November 5, 2013.

48. Dane Jasper, Sonic.net. Personal Interview, November 4, 2013.

49. In the Cost of Connectivity dataset, U.S. cities typically have between 3 or 4 wireline ISPs listed, while international cities have 5 to 6.

50. "ACSI Telecommunications and Information Report 2013: First Quarter 2013 Update on U.S. Overall Customer Satisfaction," American Consumer Satisfaction Index, May

21, 2013, http://www.theacsi.org/news-and-resources/customer-satisfaction-reports/customer-satisfaction-reports-2013/acsi-telecommunications-and-information-report-2013 (accessed January 13, 2014).

51. "ACSI Telecommunications and Information Report 2013."

52. Joan Engebretson, "Moffett: FiOS Will be an Ongoing Cable Threat," *Telecompetitor*, August 13, 2013, http://www.telecompetitor.com/moffett-cablecos-should-impose-usage-based-pricing-but-can-they/ (accessed January 13, 2014).

53. "Verizon Posts Double Digit Earnings Growth and Continued Strong Operating Performance in Q3," Verizon Press Release, October 17, 2013, http://newscenter.verizon.com/corporate/news-articles/2013/10-17-verizon-reports-2013-3q-earnings/ (accessed January 13, 2014).

54. Phillip Dampier, "No Verizon FiOS Expansion for Next Several Years; Company to Focus on Improving Profits," *Stopthecap.com*, September 25, 2013, http://stopthecap.com/2013/09/25/no-verizon-fios-expansion-for-next-several-years-company-to-focus-on-improving-profits (accessed January 13, 2014).

55. This figure is based on using reports that FiOS passed 18.3 million homes and 2010 U.S. Census of total reporting 114 million households nationwide.

56. Alyson Raletz, "Google helps Time Warner feel the need for speed," *Kansas City Business Journal*, December 14, 2012, http://www.bizjournals.com/kansascity/news/2012/12/14/google-helps-time-warner-feel-the-need.html.

57. Karl Bode, "BTIG: Google Fiber is Awesome and Time Warner is Worried," *DSL Reports*, available at http://www.dslreports.com/shownews/BTIG-Google-Fiber-is-Awesome-and-Time-Warner-is-Worried-122187, accessed December 10, 2013.

58. This figure is based on summing the 2010 U.S. Census household figures for the announced Google Fiber cities and towns and 2010 U.S. Census of total reporting 114 million households nationwide.

59. John McQuaid, "Will Poor People Get Google Fiber?" *Forbes*, April 13, 2013, http://www.forbes.com/sites/johnmcquaid/2013/04/13/will-poor-people-get-google-fiber/.

60. Mark Cooper, "Comparing Apples to Apples: How Competitive Provider Services Outpace the Baby Bell Duopoly," 4, http://www.consumerfed.org/pdfs/comparing-apples-to-apples-11-2013.pdf (accessed December 10, 2013).

61. Cooper, "Comparing Apples to Apples," 4.

62. Leah Glaser, *Electrifying the Rural American West: Stories of Power, People, and Place*. Lincoln, NE: University of Nebraska Press, 2009.

63. Gregory Rose, "Wireless Broadband and the Redlining of Rural America," New America Foundation, April 2010, http://newamerica.net/sites/newamerica.net/files/policydocs/Wireless%20Broadband%20and%20the%20Redlining%20of%20Rural%20America.pdf (accessed January 13, 2014).

64. Cooper, "Comparing Apples to Apples," 4.

65. Frank N. Magid Associates, Inc., "The Heartbeat of Connected Culture," http://magid.com/magid-mobile-study (accessed January 13, 2014).

66. Zacks Equity Research, "AT&T Completes Alltel Acquisition," http://www.zacks.com/stock/news/109940/ATampT-Completes-Alltel-Acquisition (accessed January 13, 2014).

67. Phil Goldstein, "Sprint CFO: SoftBank deal lets us take Clearwire spectrum nationwide," *FierceWireless*, July 30, 2013, http://www.fiercewireless.com/story/sprint-cfo-softbank-deal-lets-us-take-clearwire-spectrum-nationwide/2013-07-30 (accessed January 14, 2014).

68. Sinead Carew & Neha Alawadhi, "T-Mobile to buy Verizon spectrum for $3.3 billion, eyes more purchases," *Reuters*, January 6, 2014, http://www.reuters.com/article/2014/01/06/us-tmobile-verizon-idUSBREA050FM20140106 (accessed January 14, 2014).

69. Neal Gompa, "FCC approves rules for AWS-2 spectrum, prepares for auction," *ExtremeTech*, July 1, 2013, http://www.extremetech.com/electronics/160038-fcc-approves-rules-for-aws-2-spectrum-prepares-for-auction (accessed January 13, 2014).

70. Phil Goldstein, "Federal Spectrum Incentive Act would incentivize government agencies to give up spectrum," *FierceWireless*, December 10, 2013, http://www.fiercewireless.com/story/federal-spectrum-incentive-act-would-incentivize-government-agencies-give-s/2013-12-10 (accessed January 13, 2014).

71. Brian Fung, "This week proves we're better off with four wireless carriers," *The Washington Post: The Switch*, January 8, 2014, http://www.washingtonpost.com/blogs/the-switch/wp/2014/01/08/this-week-proves-were-better-off-with-four-wireless-carriers/ (accessed January 13, 2014).

72. Brian Solomon, "T-Mobile Will Cover Switching Fees to Steal More Customers from AT&T, Sprint, and Verizon," *Forbes*, January 8, 2014, http://www.forbes.com/sites/briansolomon/2014/01/08/t-mobile-will-cover-switching-fees-to-steal-more-customers-from-att-sprint-and-verizon (accessed January 13, 2014).

73. Notice of Ex Parte, T-Mobile USA, Inc, GN Docket No. 12-268, WT Docket No. 12-269 (Filed September 26, 2013), http://apps.fcc.gov/ecfs/comment/view?id=6017468712

74. Michael Calabrese, "Solving the 'Spectrum Crunch:' Unlicensed Spectrum on a High-Fiber Diet," New America Foundation, October 23, 2013, http://wirelessfuture.newamerica.net/publications/policy/solving_the_spectrum_crunch_unlicensed_spectrum_on_a_high_fiber_diet (accessed January 13, 2014).

75. Mark Cooper, "Efficiency Gains and Consumer Benefits of Unlicensed Access to the Public Airwaves," January 2012, http://www.markcooperresearch.com/SharedSpectrumAnalysis.pdf, 22-24 (accessed January 13, 2014).

76. "Remarks of FCC Chairman Tom Wheeler at the Ohio State University," Federal Communications Commission, December 2, 2013, https://www.fcc.gov/document/remarks-fcc-chairman-tom-wheeler-ohio-state-university (accessed January 13, 2014).

77. U.S. Senate Committee on Commerce, Science

and Transportation, Nomination Hearing, June 18, 2013 http://www.commerce.senate.gov/public/index.cfm?p=Hearings&ContentRecord_id=8c403dca-5d8e-4b47-9195-05fddaab3bfd&ContentType_id=14f995b9-dfa5-407a-9d35-56cc7152a7ed&Group_id=b06c39af-e033-4cba-9221-de668ca1978a& (accessed January 13, 2014).

78. Tom Wheeler, *Net Effects: The Past, Present, and Future Impact of Our Networks*, November 2013, 30, http://www.fcc.gov/page/net-effects-past-present-and-future-impact-our-networks. (accessed January 13, 2014).

79. "Start-Up City: Growing New York City's Entrepreneurial Ecosystem for All," Office of Manhattan Borough President Scott M. Stringer, December 2012, http://startupcitynyc.org/ (accessed January 13, 2014). See also "New York City's Digital Deficit: An Investigation of Slow Internet Speeds in Public Schools and Libraries," Office of Manhattan Borough President Scott M. Stringer, August 2013, http://www.scribd.com/doc/161686382/Scott-Stringer-Digital-Deficit-Report (accessed January 13, 2014).

80. National Broadband Plan, p. 153 (Recommendation 8.19).

81. "Community Network Map," Community Broadband Networks, http://www.muninetworks.org/communitymap (accessed January 13, 2014).

82. "Statement from FCC Chairman Julius Genachowski on Proposed Municipal Broadband Legislation," Federal Communications Commission, February 15, 2013, https://www.fcc.gov/document/genachowski-stmt-proposed-state-legislation-restricting-broadband (accessed January 13, 2014). See also "Statement by FCC Commissioner Mignon Clyburn on Proposed Anti-Municipal Broadband Legislation," Federal Communications Commission, April 4, 2011, http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-305530A1.pdf (accessed January 13, 2014).

83. "Eligible Services Framework," Universal Service Administration Company, http://www.universalservice.org/_res/documents/about/pdf/fcc-orders/2010-fcc-orders/FCC-10-175.pdf (accessed January 13, 2014); See also, Schools and Libraries Universal Service Support Mechanism, CC Docket 02-6, GN Docket 09-51, Report and order, Federal Communications Commission, FCC 10-175, September 23, 2010, 17.

84. To be eligible for support under the Lifeline or Connect America Fund, providers must be certified as Eligible Telecommunications Carriers (ETCs) by the state commission or in some cases the FCC. "Step 2: Eligibility - Lifeline," Universal Service Administrative Company, http://www.usac.org/li/telecom-carriers/step02/default.aspx (accessed January 13, 2014). "Eligibility: High Cost Program," Universal Service Administrative Company, http://www.usac.org/hc/legacy/incumbent-carriers/step02/default.aspx (accessed January 13, 2014).

85. The Open Technology Institute has argued before that eligibility requirements for Lifeline and Connect America Fund support should be expanded to explicitly include community networks. See Comments of the New America Foundation, Federal Communications Commission, WC Docket No. 11-42, CC Docket 96-45, WC Docket No. 03-109, (Filed May 25, 2011) p. 2-3, http://apps.fcc.gov/ecfs/document/view?id=7021655646 (accessed January

13, 2014). See also Comments of the New America Foundation, Consumers Union, and Media Access Project, Federal Communications Commission, WC Docket No. 10-90, (Filed April 11, 2011) p. 5-9, http://apps.fcc.gov/ecfs/document/view?id=7021239938 (accessed January 13, 2014).

86. Brady Dale, "Wolfe fiber provider expands to BK; here's why your internet still isn't faster," *Technically Brooklyn*, November 4, 2013, http://technical.ly/brooklyn/2013/11/04/fiber-brooklyn-wolfe/ (accessed January 13, 2014).

87. Office of Transportation Policy Studies, "Minimizing Excavation Through Coordination," Federal Highway Administration, October 2013, http://www.fhwa.dot.gov/policy/otps/policy_brief_dig_once.pdf (accessed January 13, 2014).

88. "Santa Monica City Net," last updated 2014, http://www.smgov.net/departments/isd/smcitynet.aspx (accessed January 13, 2014).

89. Christopher Mitchell, "More Details from the Incredible Santa Monica City Net," Community Broadband Networks, August 25, 2011, http://muninetworks.org/content/more-details-incredible-santa-monica-city-net (accessed January 13, 2014).

90. Benjamin Lennett, Sarah J. Morris, and Greta Byrum, "Universities as Hubs for Next-Generation Networks," New America Foundation, April 2012, http://newamerica.net/sites/newamerica.net/files/policydocs/Universities%20as%20Hubs%20for%20Next-Generation%20Networks_3.pdf (accessed January 13, 2014).

91. Dane Jasper, Sonic.net, Personal Interview, November 4, 2013.

92. Wheeler, Net Effects, 27.

93. "Lifeline Program for Low-Income Consumers," Federal Communications Commission, https://www.fcc.gov/lifeline (accessed January 13, 2014).

94. See Comments of the New America Foundation, Federal Communications Commission, WC Docket No. 11-42, CC Docket 96-45, WC Docket No. 03-109, (Filed May 25, 2011) at 3, http://apps.fcc.gov/ecfs/document/view?id=7021655646. See also Comments of the Benton Foundation, The Open Technology Initiative at New America Foundation, Public Knowledge, United Church of Christ, OC, Inc., The Center for Rural Strategies, Access Humboldt, and Deep Tech, Federal Communications Commission, WC Docket No. 11-42, CC Docket 96-45, WC Docket No. 03-109, (Filed August 24, 2011) http://apps.fcc.gov/ecfs/comment/view?id=6016839381 (accessed January 13, 2014).

95. Marguerite Reardon, "AT&T: You Can Never Have Enough Wireless Spectrum," *CNet*, February 16, 2013, http://news.cnet.com/8301-1035_3-57571380-94/at-t-you-can-never-have-enough-wireless-spectrum/ (accessed January 13, 2014).

96. Notice of Ex Parte, United States Department of Justice, WT Docket No. 12-269, (Filed April 13, 2013), http://apps.fcc.gov/ecfs/document/view?id=7022269624 (accessed January 13, 2014).

CITIES INCLUDED

We chose cities in nations that usually rank highly in the quarterly Akamai reports[1] as well as other major international cities, seeking to select cities with relatively similar population sizes and densities. While certain cities like Hong Kong, Seoul and Paris are outliers for population density, the major U.S. cities included in the research have population densities that are similar or slightly lower than many European counterparts.

We also chose to include three smaller U.S. cities which have municipal broadband networks: Bristol, VA, Chattanooga, TN, and Lafayette, LA. These cities currently offer some of the fastest broadband connections in the U.S. because the local communities have invested in and built their own fiber infrastructure.

We surveyed the same cities from 2012 for the 2013 report. By using the same set of cities, we can create a longitudinal data set and compare local broadband access trends over time. In 2013, we added two additional cities: Kansas City, KS and Kansas City, MO. Both are separate municipalities in different states but comprise one metropolitan area. Jointly they are the site of the initial deployment of the Google Fiber project. We included both cities to account for Google Fiber and include its product offerings in our comparisons.

DATA COLLECTION

For each of the selected cities, we performed best effort research to identify broadband providers offering home broadband and mobile data services utilizing USB dongle modems. We then visited the primary websites of these providers and searched for plans listed publicly, as a consumer would. We recorded plans offered for new customers.

In certain cases, researchers used foreign language fluency to assist in the process of searching international websites for pricing information. Where none of our researchers had language proficiency, we relied on browser-based translation services for foreign websites. We recorded the plans we could find that fit within the parameters of our methodology (which are explained in greater detail below). In some cases, information about a specific plan or a provider's general terms of service is not complete because such information was not readily available on a service provider's website. In limited cases where non-promotional pricing information was not easily accessible on a provider's website, we contacted customer service representatives in an attempt to confirm some details and recorded those findings in our research.

Some provider websites require zip codes or local addresses to display available plans. In these cases we searched for and used local addresses as a means to establish availability. In all instances we relied upon the accuracy of Internet service provider websites and other public statements.

We also acknowledge that some home broadband plans we list have limited availability within a city. High-speed plans may not be available in all locations in a city. Certain broadband providers only offer service in specific neighborhoods.

Home Broadband Plans

For home broadband services, we focused our research primarily on broadband providers utilizing DSL, cable, or fiber-optic technology. Due to our focus on urban regions, we did not include satellite-

based broadband services. Satellite-based services do not provide access comparable to wireline broadband infrastructure and, as such, are primarily regarded only as a last resort option in rural or isolated areas.

We record service plans in three categories: broadband only plans, "double play" plans either of broadband and television or broadband and telephone, and "triple play" bundles of broadband, telephone and video services.

Some service providers do not offer standalone broadband services, but require that customers purchase a service bundle that also include phone or video service. In these instances, we record these plans as double play bundles of "Broadband + Telephone" or "Broadband + TV," where the costs of the additional service are reflected in the monthly price we list.

Given the rise of mobile phone subscriptions and the decline of landline phone service, we sought to record the most basic telephone plan advertised. We acknowledge that there is some variance in this process as some service providers offer plans with monthly minute limits while others offer only a single unlimited calling option.

We included triple play offerings in our research because they have been a common incentive for subscriptions offered by U.S providers. We also sought to record basic television service offerings. As with telephone service, there is variation between television product packages offered by service providers. Some providers offer larger bundles of video channels than others, particularly in the U.S. This complicates comparisons to a certain degree as not all bundles are alike.

Mobile Broadband Plans

For mobile broadband plans we focused our research specifically on data-only mobile plans that utilize a USB "dongle" modem (to connect a laptop to the Internet, for example). We did not include mobile data services that are part of a combined voice and data subscription plan for service on a smartphone.

The cost of data-only plans is much more straightforward than smartphone plans. Smartphone plans usually include voice and text messaging allotments in addition to the mobile data options. The type of smartphone purchased or used in coordination with a plan also impacts the total cost to the consumer. In data-only USB dongle plans, the monthly fee depends primarily on the size of the data cap imposed by the carrier, although it can also be affected by the network speed offered and on any purchase or rental fees associated with the USB dongle.

Qualifying Plans and Data Points

In 2010 the Federal Communications Commission defined broadband Internet service as that which has a minimum speed of 4 megabits per second (Mbps) download and 1 Mbps upload. We used the download metric as a threshold for our research and did not record any home or mobile broadband plans where advertised download speeds were slower than 4 Mbps.

For each plan, we collected data on the following metrics:

- Download and upload speeds
- Monthly costs
- Data caps & penalties (overage fees or slowed speeds)
- Activation and installation fees
- Modem and equipment rental or purchase fees
- Contract lengths

Network Technology

If the network technology of the service provider could be easily determined, we recorded that information. For home broadband services, this is predominantly recorded as DSL, Cable, or Fiber. For mobile broadband providers, we recorded the terminology displayed on websites. We acknowledge that at times similar marketing terminology, like the term 4G, can actually refer to differing network technologies.

Download and Upload Speeds

All broadband speeds in the report are based on advertised speeds and listed in megabits per second (Mbps).

Monthly Costs

Price data reflects our best effort to identify non-promotional prices for subscriptions. In instances where a multi-year contract includes an increase in price from one year to the next, the price listed reflects an average of the yearly subscription costs for the contract. In our research, we did not specifically capture whether the monthly subscription prices included sales taxes.

Data Caps and Penalties

Data caps are recorded in gigabytes (GB). Where the penalty for exceeding a data cap is an overage fee, we note the monetary amount and the data increment (e.g. $10 per GB or 5 cents per MB). Where the penalty for exceeding a data cap is that a user's connection speed is slowed until the next billing cycle, we note this as "Throttle." If disclosed, we record the slower throttled speed in the "Notes" field.

NOTE: In the mobile data section, we record plans that have limits of less than 1 GB as a decimal point fraction thereof. For example, a plan with a cap of 500 Megabytes (MB) is recorded as "0.5" in the data column. We acknowledge that technically 1 GB = 1024 MB, so 500 MB represents 0.488 of a 1 GB. However, we chose to present the data in the manner we do for the sake of simplicity.

Activation and Installation Fees

In this field, we recorded any fees or costs associated with creating an account for a new customer.

Modem and Equipment Rental or Purchase Fees

Here we recorded any fees or costs associated with renting a modem or other service equipment required for service. If providers allow the option to either rent the equipment for a monthly price or to purchase it for a one-time fee, both options and prices are recorded in the entry. To be clear, new customers are only responsible for either the one-time, up-front cost or the recurring monthly fee.

Contract Lengths

Contract lengths are recorded in months. In instances where changes in the contract length notably impacted the monthly subscription costs, we sought to record the different length plans as separate entries.

Additional Notes about the Data Set

The term "Not Applicable" (N/A) is used to indicate when it could be confirmed that certain data fields did not apply to a researched service plan. For example, "N/A" is used in the data caps field to indicate when a plan did not have a data limit. "N/A" in the contract length field indicates a plan that is without a long term contract and only month to month.

The null void period (".") is used to indicate when no information for a data field could be found.

Additional details or information about a specific plan can be found in the "notes" column of the data set.

Research was conducted between July and September of 2013.

PRICE CONVERSION

All foreign currencies have been adjusted to U.S. dollars using the World Bank's purchasing power parity (PPP) metric. Unlike direct exchange rates, which are often volatile and do not account for global income disparities, PPP conversion rates adjust for differences in costs of living, price levels, and other factors that affect a consumer's purchasing power. This allows us to make more effective comparisons between the surveyed cities.[2]

REFERENCES

1. Akamai's "The State of the Internet" report from 4th Quarter, 2011 was the document used in selecting some of the cities in the original 2012 "Cost of Connectivity" report.

2. For the PPP conversion tables used in this report, see the 2012 data at "PPP conversion factor, GDP (LCU per international $)," World Bank, http://data.worldbank.org/indicator/PA.NUS.PPP [accessed January 3, 2013].

This appendix features charts and rankings we included in The Cost of Connectivity 2013 *data release.*

Worldwide Speed Leaders (Table 1)

The speed of your Internet connection determines your ability to view web pages, download and upload content, and use applications and services like voice over IP and two-way videoconferencing. As network technology has improved over the years, the general trend has been an increase in broadband connection speeds. At the same time, however, the amount of bandwidth required by the average consumer increases as streaming video and sharing user-generated content becomes commonplace. Speed, therefore, remains an important metric for consumers when evaluating their broadband options and considering how they plan to use the Internet.

In Table 1 we compare "speed leaders" and rank offerings in each city based on the fastest advertised Internet speeds we found. The 2013 results show a significant increase in the high speeds available in many cities. The lowest-ranking high speed available in a surveyed city jumped from 40 Mbps to 100 Mbps, and the majority of cities have speeds of 200 Mbps or higher. Eight cities now offer speeds of 1000 Mbps, in contrast with two cities offering those speeds in 2012. Two of the gigabit cities, Kansas City, KS, and Kansas City, MO, were not included in the 2012 report.

Table 1: Wired Speed Leaders

Rank	City	ISP	Network Technology	Download Speed	Upload Speed	Price (USD/PPP)	Data Cap (GB)
1(t)	Seoul	HelloVision	Fiber	1000	1000	$31.47	N/A
1(t)	Tokyo	KDDI	Fiber	1000	1000	$33.69	N/A
1(t)	Hong Kong	Hong Kong Broadband Network Limited	Fiber	1000	1000	$48.82	N/A
1(t)	Chattanooga, TN	EPB	Fiber	1000	1000	$69.99	N/A
1(t)	Kansas City, MO	Google Fiber	Fiber	1000	1000	$70.00	N/A
1(t)	Kansas City, KS	Google Fiber	Fiber	1000	1000	$70.00	N/A
1(t)	Lafayette, LA	LUS	Fiber	1000	1000	$999.95	10000
8	Bristol, VA	BVU	Fiber	1000	50	$319.95	N/A
9(t)	Riga	Baltcom	Fiber	500	500	$97.22	N/A
9(t)	Amsterdam	KPN*	Fiber	500	500	$86.14	.
11	New York, NY	Verizon	Fiber	500	100	$299.99	N/A
12	Paris	SFR*	Fiber	300	.	$26.73	N/A
13(t)	Washington, DC	Verizon	Fiber	300	65	$209.99	N/A
13(t)	Los Angeles, CA	Verizon	Fiber	300	65	$214.99	N/A
15	Toronto	Rogers	Fiber	250	250	$183.73	500
16	Mexico City	Totalplay (Iusacell)	Fiber	200	66	$254.11	.
17	Berlin	Deutsche Telekom*	Fiber	200	.	$69.56	Throttle
18	Copenhagen	Stofa*	Cable	150	15	$77.99	2500
19	Zurich	UPC	Cable	150	10	$77.27	N/A
20	Bucharest	UPC	Fiber	150	6	$29.94	.
21	Prague	UPC	Cable	120	10	$45.62	N/A
22	San Francisco, CA	Comcast	Cable	105	20	$114.95	.
23	London	Virgin	Fiber	100	.	$47.35	N/A
24	Dublin	Magnet*	Fiber	100	.	$60.98	N/A

"." indicates that data could not be found.
*Offers included additional bundled services.

Table 2: The Best Bang for Your Buck for $35 (Wired)

Rank	City	ISP	Price (USD/PPP)	Download Speed	Upload Speed	Network Technology
1	Seoul	HelloVision*	$36.31	1000	1000	Fiber
2	Tokyo	NTT East	$30.47	100	100	Fiber
3	Hong Kong	Hong Kong Broadband Network Limited	$30.60	100	100	Fiber
4	San Francisco, CA	Webpass	$37.50	100	100	Fiber
5	Paris	Orange*	$39.42	100	50	Fiber
6	Riga	Balti-Com	$27.25	100	20	Cable
7	Bucharest	Madnet	$32.05	80	.	Fiber
8	Dublin	Vodafone Ireland	$36.59	70	.	Fiber
9	Prague	UPC	$38.32	60	6	Cable
10	New York, NY	RCN	$34.99	50	6	Fiber
11	Washington, DC	RCN	$39.99	50	6	Cable
12	Amsterdam	Telfort	$31.33	50	5	.
13	Copenhagen	YouSee	$38.63	50	5	Cable
14	Berlin	O2*	$37.95	50	.	DSL
15	Toronto	Acanac	$35.73	35	3	Cable
16(t)	Bristol, VA	Charter	$37.49	30	4	Cable
16(t)	Los Angeles, CA	Charter	$37.49	30	4	Cable
18	Chattanooga, TN	Comcast	$39.99	25	5	Cable
19	London	PlusNet*	$31.05	17	.	DSL
20	Lafayette, LA	LUS	$34.95	15	15	Fiber
21	Kansas City, KS	Time Warner Cable	$34.99	15	1	Cable
22	Zürich	VTX*	$33.81	12	.	DSL
23	Kansas City, MO	Earthlink	$35.95	7	.	Cable
24	Mexico City	Totalplay (Iusacell)	$44.20	5	1	Fiber

"." indicates data could not be found.
*Offers included additional bundled services

The Best Bang for Your Buck (Table 2 and Table 3)

In *The Cost of Connectivity 2012,* we presented a ranking of the best wireline broadband plans that were available for approximately $35 in each city. We present an updated ranking of those plans in 2013 along with a new ranking of mobile broadband plans that are available for the equivalent of $40. Table 2 ranks home broadband offerings in terms of the highest speed available around the $35 price point. Table 3 ranks mobile data-only offerings delivered by a USB dongle in terms of the largest data cap available around the $40 price point. For more on the rationale behind these rankings, please see the "Ranking and Comparison Table Methodology" at the end of this section.

These charts offer an interesting comparison between wireline and wireless broadband plans. First, wireless speeds are definitely lower than wired speeds and caps on data are considerably more restrictive in the wireless market. Generally speaking, since even the best deals across our dataset were found near the $40 mark, subscribers to these plans pay much more for much less capability.

Table 3: The Best Bang for Your Buck for $40 (Mobile USB Dongles)

Rank	City	ISP	Price (USD/PPP)	Download Speed	Upload Speed	Data Cap (GB)	Data Cap Penalty
1	Seoul*	SK Telecom	$24.21	10	3	N/A	N/A
2	Tokyo	J:COM	$33.97	40	15.4	N/A	N/A
3	Zürich	Swisscom	$35.25	21	2	N/A	N/A
4	Riga	LMT	$33.08	4	.	N/A	N/A
5	Copenhagen	CBB	$38.63	35	24	200	3.75 for 1 GB; 8.91 for 5 GB; 16.67 for 10 GB
6	Dublin	Three	$42.67	21	5.76	60	$5.08/MB
7	Toronto*	Mobilicity	$16.26	21	6	20	Throttle
8	Bucharest	Orange	$42.73	43.2	5.76	10	Throttle
9	Prague	T-Mobile	$36.42	42	5.76	10	.
10	Berlin	1&1	$37.96	21.6	.	10	Throttle
11	Amsterdam	T-Mobile	$42.17	14.4	.	10	Throttle
12	Paris*	Bouygues Telecom	$46.40	42	.	10	Throttle
13	London	EE	$39.38	100	50	8	.
14(t)	Bristol, VA	Verizon	$40.00	.	.	6	$15/GB
14(t)	Chattanooga, TN	Verizon	$40.00	.	.	6	$15/GB
14(t)	Kansas City, KS	Verizon	$40.00	.	.	6	$15/GB
14(t)	Kansas City, MO	Verizon	$40.00	.	.	6	$15/GB
14(t)	Lafayette, LA	Verizon	$40.00	.	.	6	$15/GB
14(t)	Los Angeles, CA	Verizon	$40.00	.	.	6	$15/GB
14(t)	New York, NY	Verizon	$40.00	.	.	6	$15/GB
14(t)	San Francisco, CA	Verizon	$40.00	.	.	6	$15/GB
14(t)	Washington, DC	Verizon	$40.00	.	.	6	$15/GB
23	Hong Kong	SmarTone	$40.07	150	50	5	Throttle
24	Mexico City	Telcel	$38.98	21	.	3	Throttle

"." indicates that data could not be found.
*Other plans closer to $40 available; this is the best plan that is closest.

Triple Play Rankings by Price (Table 4)

The term "triple play" generally refers to a bundle of services that includes high-speed Internet, telephone and television for a single monthly rate. Although it varies by country, consumers usually get discounts on their total monthly cost by subscribing to bundled services rather than paying individually for all three.

In Table 4 we rank triple play packages across the cities we surveyed by price. When a provider offers multiple triple play packages, we selected the cheapest bundle available. This chart lists the top 15 triple play offers we found, and then indicates where U.S. carriers that offer triple play services fall in the list.

Table 4: Triple Play Rankings by Price

Rank	City	ISP	Price (USD/PPP)	Download Speed	Upload Speed	Network Technology	Data Cap (GB)
1	Seoul	C&M	$14.52	10	.	Cable	N/A
2	Seoul	HelloVision	$15.73	8	.	Fiber	N/A
3	Riga	Balti-Com	$21.75	20	5	Cable	N/A
4	Zurich	VTX	$29.96	10	.	DSL	.
5	Zurich	Sunrise	$32.37	5	0.5	DSL	.
6	Berlin	TeleColumbus	$33.52	16	1	Cable	N/A
7(t)	Paris	Free	$34.87	28	1	ADSL	.
7(t)	Paris	SFR	$34.87	25	.	ADSL	N/A
9	Bucharest	Romtelcom	$34.93	4 to 6	1	ADSL	N/A
10	Seoul	LG Uplus	$34.98	100	100	Fiber	N/A
11	Seoul	SK broadband	$36.31	100	100	Fiber	N/A
12	Berlin	Kabel Deutschland	$36.46	32	2	Cable	N/A
13(t)	Paris	Bouygues Telecom	$37.09	20	16	ADSL	.
13(t)	Paris	Darty	$37.09	20	1	ADSL	.
15	London	Sky	$38.26	16	1.3	DSL	N/A
33	Bristol, VA	BVU	$54.79	6	1	Fiber	N/A
44	Lafayette, LA	LUS	$65.39	15	15	Fiber	400
45	Washington, DC	RCN	$68.30	25	2	Cable	N/A
47(t)	Los Angeles, CA	Verizon	$69.99	15	5	Fiber	N/A
47(t)	New York, NY	Verizon	$69.99	15	5	Fiber	N/A
51	New York, NY	Time Warner Cable	$74.97	15	1	Cable	N/A
54	Lafayette, LA	AT&T	$79.00	6	.	DSL	250
55	Los Angeles, CA	Time Warner Cable	$79.96	15	1	Cable	N/A
56	Washington, DC	Verizon	$79.99	15	5	Fiber	N/A
57	Chattanooga, TN	EPB	$81.82	100	100	Fiber	N/A
60	New York, NY	RCN	$89.99	25	2	Fiber	.
61	San Francisco, CA	Comcast	$99.00	25	.	Cable	.
62	Bristol, VA	Charter	$99.97	30	4	Cable	N/A
63	Kansas City, KS	Time Warner Cable	$99.99	15	1	Cable	N/A
66	Los Angeles, CA	AT&T U-Verse	$109.00	18	1	DSL	250
67	Kansas City, MO	Time Warner Cable	$112.49	10	1	Cable	N/A
68	Washington, DC	Comcast	$112.50	20	.	Cable	300
70	Lafayette, LA	Cox	$121.22	5	1	Cable	100
71	Chattanooga, TN	AT&T	$133.00	6	6	DSL	250
72	San Francisco, CA	Astound	$134.00	15	2	Fiber	300
73	Chattanooga, TN	Comcast	$150.85	20	5	Cable	250

"." indicates that data could not be found.

This table ranks the top 15 triple play offers we found, and then indicates where the U.S. carriers that offer triple play services fall in the list.

What Does 2 GB of Mobile Data Cost? (Table 5)

In Table 5, we present the best deal that a consumer can get for a 2 GB mobile data subscription for a USB dongle in each city. T-Mobile offer the best deal among the U.S. providers, but it still places 12th in our rankings, falling behind all of the European cities surveyed. China, Japan, Mexico, and South Korea fall lower than the U.S. cities, although it must be noted that the Japanese provider offers an unlimited plan, while the lowest available data cap in Seoul is 5 GB. Moreover, the providers in Asian cities offer base packages with much faster speeds—100 Mbps download in Hong Kong and Seoul—than any of the other providers included in this ranking.

Table 5: What Does 2GB of Mobile Data Cost? (USB Dongles)

Rank	City	ISP	Price (USD/PPP)	Data Cap (GB)	Data Cap Penalty	Download Speed	Upload Speed
1	Copenhagen	CBB	$4.30	2	Throttle	7	1
2	Bucharest	RCS & RDS	$8.98	5	Throttle	7.2	3.6
3	Riga	Bite	$12.50	2	$0.08/MB	21.6	.
4	Zürich	Orange	$13.67	1	Throttle	21.1	5.76
5	London	TMobile	$15.15	2	$4.55/day	21.6	5.76
6	Dublin	Three	$15.84	2	$6.20/MB	21	5.76
7	Paris	SFR	$17.43	3	.	42	.
8	Toronto	WIND Mobile	$20.33	3	$0.01/MB	21	6
9	Prague	T-Mobile	$21.82	3	.	42	5.76
10	Hong Kong	China Mobile Hong Kong	$23.68	2	Throttle	100	.
11	Amsterdam	T-Mobile	$25.30	2.5	Throttle	14.4	.
12	Berlin	E-plus	$25.32	2	Throttle	7.2	1.4
13(t)	Bristol, VA	T-Mobile	$30.00	2.5	Throttle	.	.
13(t)	Chattanooga, TN	T-Mobile	$30.00	2.5	Throttle	.	.
13(t)	Kansas City, KS	T-Mobile	$30.00	2.5	Throttle	.	.
13(t)	Kansas City, MO	T-Mobile	$30.00	2.5	Throttle	.	.
13(t)	Lafayette, LA	T-Mobile	$30.00	2.5	Throttle	.	.
13(t)	Los Angeles, CA	T-Mobile	$30.00	2.5	Throttle	.	.
13(t)	New York, NY	T-Mobile	$30.00	2.5	Throttle	.	.
13(t)	San Francisco, CA	T-Mobile	$30.00	2.5	Throttle	.	.
13(t)	Washington, DC	T-Mobile	$30.00	2.5	Throttle	.	.
22	Tokyo	J:COM	$33.97	N/A	N/A	40	15.4
23	Mexico City	Iusacell	$38.98	2	Throttle (or can upgrade)	21.6	.
24	Seoul	LG Uplus	$39.94	5	$0.04/MB	100	50

"." indicates data could not be found.

RANKING & COMPARISON TABLE METHODOLOGY

Table 1: Wired Speed Leaders

In this section, we compare "speed leaders" and rank offerings in each city based on the fastest advertised Internet speeds found in our research. We chose basic Internet packages, without bundled services, unless the Internet service provider only offered bundled services. The offerings are ranked by download speeds, with higher upload speeds used to differentiate between plans that are tied. Advertised download speeds continue to be a major selling point for consumer Internet service and often are substantially higher than upload speeds. However, upload speeds are rising in importance as users create and share more content and data. Higher upload speeds allow for more effective use of online video conferencing and the transfer of files to cloud-based storage options. While more ISPs are offering symmetrical service, where the download and upload speeds are equal, most providers continue the standard practice of engineering their networks to maximize download speeds, a practice which is largely based on prior network designs.[2]

Tables 2 and 3: The Best Bang for Your Buck

This section ranks wireline broadband offerings that are equivalent to about $35 USD and mobile broadband offerings equivalent to about $40 USD. For the wireline findings, we display standalone Internet packages unless providers only offer Internet bundled with other services. The results are ranked in descending order of speed.

In the wireless table, we found that a range between $35 and $50 (with a focus on plans available nearest to $40) was an appropriate filter through which to compare mobile broadband plans since it included at least one plan from each country and encompasses the largest number of plans with broadband speeds that met our minimum definition. For some countries, however, their prices are too low to be included in the range, so the best plan that is closest to $40 was chosen. In our ranking, we included any contract length since many providers require two year contracts for their services. It is also worth noting that while the advertised speeds listed here are certainly attainable, mobile broadband providers often list the maximum speed attainable by the device associated with the plan, rather than a speed promised to the consumer. Since mobile broadband speeds vary greatly depending on factors like USB dongle models and since most carriers offer plans based on data usage rather than speed, the plans are ranked in descending order based on the size of the data cap.

Table 4: Triple Play Rankings By Price

Although there are a variety of premium channels and Voice over IP add-on services available, we have highlighted the conventional triple play packages for the purpose of direct comparisons. The plans listed in Table 4 will get a consumer a standard cable subscription with high-definition (HD) programming, basic phone service and the lowest tier Internet speed available. The table ranks triple play offerings available with the above criteria in each city.

Table 5: What Does 2 GB of Mobile Data Cost?

For each city we present the best deal that a consumer can get for a 2 GB mobile data subscription, regardless of contract length. Where a provider offers a 2 GB package that was the best deal in the city, we chose the standard plan with the lowest speed that meets our minimum speeds of 4 Mbps download and 1 Mbps upload. In some cases, however, the provider with the best deal does not offer a 2 GB plan. In these cases, we applied the following rules to determine

the appropriate plan and price to use in the rankings:

- If a provider offers a plan that is within 0.5 GB of 2 GB (e.g. 2.5 GB) we chose that plan.
- If a provider offers a plan with a data cap that is less than 2 GB, we used overage fees to determine the monthly cost for 2 GB of data on that plan.
    - If a provider offers a 1 GB plan and throttles the connection speed after the user exceeded the data cap, we displayed the regular price and chose that plan if it was the best deal.
    - If a provider offers a 1 GB plan and charges overage fees for excess data, we calculated the cost of 2 GB of data by adding the base price for the plan and the overage fees. However, if this number is higher than the cost of the next data tier available from that provider (e.g. 3 GB), we chose the next data tier.
    - If a provider offers a 1 GB plan but does not provide information about throttling or overage fees, we could not determine the cost of 2 GB of data and therefore did not use that plan. Where appropriate, we used the next data tier available from that provider (e.g. 3 GB).
- If the provider's smallest data cap is higher than 2 GB, we chose the least expensive available plan (i.e. the plan with the smallest data cap).

City Information

Country	City	Total Population	Population Density (square miles)	Population Density (square kilometers)	National GDP per capita, ($PPP)	Purchasing Power Parity
Canada	Toronto	2,615,060	10,746	4,149	42,533	1.23
China	Hong Kong	7,156,500	17,146	6,620	51,946	5.49
Czech Republic	Prague	1,257,158	6,566	2,535	26,590	13.7
Denmark	Copenhagen	562,379	18,907	7,300	42,086	7.74
France	Paris	2,243,833	55,139	21,289	36,104	0.86
Germany	Berlin	3,292,365	9,583	3,700	40,901	0.79
Ireland	Dublin	527,612	11,883	4,588	37,852	0.82
Japan	Tokyo	13,189,000	15,615	6,029	35,178	105.97
Latvia	Riga	706,413	6,037	2,331	20,969	0.36
Mexico	Mexico City	8,851,080	15,540	6,000	16,731	7.67
Netherlands	Amsterdam	805,166	9,231	3,564	43,198	0.83
Romania	Bucharest	1,883,425	21,393	8,260	16,518	1.67
South Korea	Seoul	10,442,426	44,030	17,000	30,801	826.19
Switzerland	Zurich	379,915	11,194	4,322	53,367	1.39
UK	London	8,308,369	13,688	5,285	36,901	0.66
USA	Bristol, VA	17,835	1,370.60	529	49,965	1
USA	Chattanooga, TN	167,674	1,222.50	472	49,965	1
USA	Kansas City, KS	145,786	1,168.10	451	49,965	1
USA	Kansas City, MO	459,787	1,459.90	564	49,965	1
USA	Lafayette, LA	120,623	2,450.10	946	49,965	1
USA	Los Angeles, CA	3,792,621	8,092.30	3,124	49,965	1
USA	New York, NY	8,175,133	27,012.50	10,430	49,965	1
USA	San Francisco, CA	805,235	17,179.20	6,633	49,965	1
USA	Washington, DC	601,723	9,856.50	3,806	49,965	1

Notes on City Information

Data on population size and density include, when possible, the cities themselves and not the greater metro areas. For New York City, data reflects New York County only, which is conterminous with the island of Manhattan, because pricing data in this report reflects only offers available in Manhattan.

Information on population size and density of U.S. cities was gathered from the 2010 U.S. Census Bureau statistics, available at http://www.census.gov. Information on population size and density of international cities was gathered from the most recently available information provided by each government's Census Bureau, Bureau of Statistics or local municipal information websites.

Purchasing Power Parity conversion factors and GDP per capita figures are from the World Bank.

In this appendix, we present all of the home broadband packages we found in our 2013 Cost of Connectivity report. The full data set, including additional fields containing activation fees, modem purchase or rental fees, and other notes, is available for download at http://oti.newamerica.net/publications/policy/reining_in_the_cost_of_connectivity. Note that in certain cases we present a range of prices where the exact cost may be affected by factors that are not conveyed in this table.

Home Broadband Pricing Data for Toronto, Canada

ISP	Network Technology	Bundled Services	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Overage Penalty ($PPP)	Contract length (months)
Acanac	DSL	Broadband + Phone	11	1	35.73	N/A	N/A	1
Acanac	DSL	Broadband + Phone	11	1	34.11	N/A	N/A	3
Acanac	DSL	Broadband + Phone	11	1	32.48	N/A	N/A	6
Acanac	DSL	Broadband + Phone	11	1	30.85	N/A	N/A	12
Acanac	DSL	Broadband + Phone + TV	11	1	68.21	N/A	N/A	1
Acanac	DSL	Broadband + Phone + TV	11	1	66.59	N/A	N/A	3
Acanac	DSL	Broadband + Phone + TV	11	1	64.96	N/A	N/A	6
Acanac	DSL	Broadband + Phone + TV	11	1	63.33	N/A	N/A	12
Acanac	DSL	Broadband + Phone	15	1	40.61	N/A	N/A	1
Acanac	DSL	Broadband + Phone	15	1	38.98	N/A	N/A	3
Acanac	DSL	Broadband + Phone	15	1	37.36	N/A	N/A	6
Acanac	DSL	Broadband + Phone	15	1	35.73	N/A	N/A	12
Acanac	DSL	Broadband + Phone + TV	15	1	73.09	N/A	N/A	1
Acanac	DSL	Broadband + Phone + TV	15	1	71.46	N/A	N/A	3
Acanac	DSL	Broadband + Phone + TV	15	1	69.84	N/A	N/A	6
Acanac	DSL	Broadband + Phone + TV	15	1	68.21	N/A	N/A	12
Acanac	VDSL	Broadband + Phone	25	10	43.86	N/A	N/A	1
Acanac	VDSL	Broadband + Phone	25	10	42.24	N/A	N/A	3
Acanac	VDSL	Broadband + Phone	25	10	40.61	N/A	N/A	6

ISP	Network Technology	Bundled Services	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Overage Penalty ($PPP)	Contract length (months)
Acanac	VDSL	Broadband + Phone	25	10	38.98	N/A	N/A	12
Acanac	VDSL	Broadband + Phone + TV	25	10	76.34	N/A	N/A	1
Acanac	VDSL	Broadband + Phone + TV	25	10	74.72	N/A	N/A	3
Acanac	VDSL	Broadband + Phone + TV	25	10	73.09	N/A	N/A	6
Acanac	VDSL	Broadband + Phone + TV	25	10	71.46	N/A	N/A	12
Acanac	Cable	Broadband + Phone	25	2	37.36	N/A	N/A	1
Acanac	Cable	Broadband + Phone	25	2	35.73	N/A	N/A	3
Acanac	Cable	Broadband + Phone	25	2	34.11	N/A	N/A	6
Acanac	Cable	Broadband + Phone	25	2	32.48	N/A	N/A	12
Acanac	Cable	Broadband + Phone + TV	25	2	69.84	N/A	N/A	1
Acanac	Cable	Broadband + Phone + TV	25	2	68.21	N/A	N/A	3
Acanac	Cable	Broadband + Phone + TV	25	2	66.59	N/A	N/A	6
Acanac	Cable	Broadband + Phone + TV	25	2	64.96	N/A	N/A	12
Acanac	Cable	Broadband + Phone	35	3	40.61	N/A	N/A	1
Acanac	Cable	Broadband + Phone	35	3	38.98	N/A	N/A	3
Acanac	Cable	Broadband + Phone	35	3	37.36	N/A	N/A	6
Acanac	Cable	Broadband + Phone	35	3	35.73	N/A	N/A	12
Acanac	Cable	Broadband + Phone + TV	35	3	73.09	N/A	N/A	1
Acanac	Cable	Broadband + Phone + TV	35	3	71.46	N/A	N/A	3
Acanac	Cable	Broadband + Phone + TV	35	3	69.84	N/A	N/A	6
Acanac	Cable	Broadband + Phone + TV	35	3	68.21	N/A	N/A	12
Bell	Fiber	Broadband	5	1	35.73	20	3.25/GB	1
Bell	Fiber	Broadband	5	1	60.12	N/A	N/A	1
Bell	Fiber	Broadband	15	10	43.86	60	3.25/GB	1
Bell	Fiber	Broadband	15	10	68.25	N/A	N/A	1
Bell	Fiber	Broadband	25	10	50.37	100	3.25/GB	1
Bell	Fiber	Broadband	25	10	74.76	N/A	N/A	1

ISP	Network Technology	Bundled Services	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Overage Penalty ($PPP)	Contract length (months)
Bell	Fiber	Broadband	50	10	70.69	175	3.25/GB	1
Bell	Fiber	Broadband	50	10	95.08	N/A	N/A	1
Cogeco	Cable	Broadband	6	1.5	36.54	35	1.22/GB	.
Cogeco	Cable	Broadband	10	1.5	41.42	80	1.22/GB	.
Cogeco	Cable	Broadband	14	2	51.18	125	1.22/GB	.
Cogeco	Cable	Broadband	20	2	50.37	150	1.22/GB	.
Cogeco	Cable	Broadband	30	2	60.12	275	1.22/GB	.
Cogeco	Cable	Broadband	60	2	77.20	375	1.22/GB	.
Cogeco	Cable	Broadband + TV	6	1.5	57.94	35	1.22/GB	.
Cogeco	Cable	Broadband + TV	10	1.5	63.63	80	1.22/GB	.
Cogeco	Cable	Broadband + TV	14	2	68.51	125	1.22/GB	.
Cogeco	Cable	Broadband + TV	20	2	69.33	150	1.22/GB	.
Cogeco	Cable	Broadband + TV	30	2	79.08	275	1.22/GB	.
Cogeco	Cable	Broadband + TV	60	2	96.15	375	1.22/GB	.
Cogeco	Cable	Broadband + Phone	6	1.5	50.36	35	1.22/GB	.
Cogeco	Cable	Broadband + Phone	10	1.5	56.05	80	1.22/GB	.
Cogeco	Cable	Broadband + Phone	14	2	60.93	125	1.22/GB	.
Cogeco	Cable	Broadband + Phone	20	2	61.74	150	1.22/GB	.
Cogeco	Cable	Broadband + Phone	30	2	71.50	275	1.22/GB	.
Cogeco	Cable	Broadband + Phone	60	2	88.57	375	1.22/GB	.
Cogeco	Cable	Broadband + Phone + TV	6	1.5	77.45	35	1.22/GB	.
Cogeco	Cable	Broadband + Phone + TV	10	1.5	83.14	80	1.22/GB	.
Cogeco	Cable	Broadband + Phone + TV	14	2	88.02	125	1.22/GB	.
Cogeco	Cable	Broadband + Phone + TV	20	2	88.83	150	1.22/GB	.
Cogeco	Cable	Broadband + Phone + TV	30	2	98.59	275	1.22/GB	.
Cogeco	Cable	Broadband + Phone + TV	60	2	115.66	375	1.22/GB	.
Rogers	DSL	Broadband	25	2	42.27	80	1.63/GB	.
Rogers	DSL	Broadband	35	3	52.84	120	1.22/GB	.
Rogers	DSL	Broadband	45	4	60.97	150	1.02/GB	.
Rogers	DSL	Broadband	150	10	105.68	250	0.41/GB	.
Rogers	Fiber	Broadband	250	250	183.73	500	0.41/GB	.
Rogers	DSL	Broadband + TV	25	2	89.83	80	1.63/GB	.
Rogers	DSL	Broadband + Phone + TV	25	2	101.18	80	1.63/GB	.

ISP	Network Technology	Bundled Services	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Overage Penalty ($PPP)	Contract length (months)
Teksavvy	DSL	Broadband	7	1	20.32	75	0.20/GB	.
Teksavvy	DSL	Broadband	7	1	24.38	300	0.20/GB	.
Teksavvy	DSL	Broadband	7	1	32.51	N/A	N/A	.
Teksavvy	DSL	Broadband	10	1	26.82	300	0.20/GB	.
Teksavvy	DSL	Broadband	10	1	36.58	N/A	N/A	.
Teksavvy	DSL	Broadband	15	1	26.82	300	0.20/GB	.
Teksavvy	DSL	Broadband	15	1	39.02	N/A	N/A	.
Teksavvy	DSL	Broadband	15	10	28.45	300	0.20/GB	.
Teksavvy	DSL	Broadband	15	10	40.64	N/A	N/A	.
Teksavvy	DSL	Broadband	25	10	32.51	300	0.20/GB	.
Teksavvy	DSL	Broadband	25	10	47.15	N/A	N/A	.
Teksavvy	Cable	Broadband	25	2	32.48	300	0.41/GB	.
Teksavvy	Cable	Broadband	25	2	48.74	N/A	N/A	.
Teksavvy	Cable	Broadband	35	3	40.61	300	0.41/GB	.
Teksavvy	Cable	Broadband	35	3	65.00	N/A	N/A	.
Teksavvy	Cable	Broadband	45	4	44.67	300	0.41/GB	.
Teksavvy	Cable	Broadband	45	4	81.26	N/A	N/A	.
Teksavvy	Cable	Broadband	150	10	69.07	300	0.41/GB	.
Teksavvy	Cable	Broadband	150	10	178.82	N/A	N/A	.
Velcom	DSL	Broadband	7	1	20.28	100	0.08/GB	N/A
Velcom	DSL	Broadband	7	1	24.35	400	0.08/GB	N/A
Velcom	DSL	Broadband	7	1	31.67	N/A	N/A	N/A
Velcom	DSL	Broadband	10	1	26.79	400	0.08/GB	N/A
Velcom	DSL	Broadband	10	1	34.92	N/A	N/A	N/A
Velcom	DSL	Broadband	15	1	26.79	400	0.08/GB	N/A
Velcom	DSL	Broadband	15	1	38.17	N/A	N/A	N/A
Velcom	DSL	Broadband	25	10	32.48	400	0.08/GB	N/A
Velcom	DSL	Broadband	25	10	46.30	N/A	N/A	N/A
Velcom	DSL	Broadband	50	10	44.67	400	0.08/GB	N/A
Velcom	DSL	Broadband	50	10	67.44	N/A	N/A	N/A
Velcom	Cable	Broadband	28	1	38.17	300	0.41/GB	N/A

Home Broadband Pricing Data for Hong Kong, China

ISP	Network Technology	Bundled Services	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Overage Penalty ($PPP)	Contract length (months)
Hong Kong Broadband Network Limited	Fiber	Broadband	100	100	30.60	N/A	N/A	24
Hong Kong Broadband Network Limited	Fiber	Broadband + Phone	100	100	37.52	N/A	N/A	24
Hong Kong Broadband Network Limited	Fiber	Broadband + TV	100	100	36.98	N/A	N/A	24
Hong Kong Broadband Network Limited	Fiber	Broadband + Phone + TV	100	100	42.99	N/A	N/A	24
Hong Kong Broadband Network Limited	Fiber	Broadband	500	500	39.71	N/A	N/A	24
Hong Kong Broadband Network Limited	Fiber	Broadband + Phone	500	500	46.63	N/A	N/A	24
Hong Kong Broadband Network Limited	Fiber	Broadband + TV	500	500	46.08	N/A	N/A	24
Hong Kong Broadband Network Limited	Fiber	Broadband + Phone + TV	500	500	48.45	N/A	N/A	24
Hong Kong Broadband Network Limited	Fiber	Broadband	1000	1000	48.82	N/A	N/A	24
Hong Kong Broadband Network Limited	Fiber	Broadband + Phone	1000	1000	56.10	N/A	N/A	24
Hong Kong Broadband Network Limited	Fiber	Broadband + TV	1000	1000	55.19	N/A	N/A	24
Hong Kong Broadband Network Limited	Fiber	Broadband + Phone + TV	1000	1000	52.09	N/A	N/A	24
i-cable	Cable	Broadband	50	10	30.78	N/A	N/A	24
i-cable	Cable	Broadband	130	10	36.25	N/A	N/A	24

ISP	Network Technology	Bundled Services	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Overage Penalty ($PPP)	Contract length (months)
i-cable	Cable	Broadband + Phone	50	10	39.89	N/A	N/A	24
i-cable	Cable	Broadband + Phone	130	10	45.36	N/A	N/A	24
i-cable	Cable	Broadband + TV	50	10	76.32	N/A	N/A	24
i-cable	Cable	Broadband + TV	130	10	81.79	N/A	N/A	24
i-cable	Cable	Broadband + Phone + TV	50	10	87.25	N/A	N/A	24
i-cable	Cable	Broadband + Phone + TV	130	10	92.71	N/A	N/A	24
3 in HK	Fiber	Broadband	10	1	26.96	N/A	N/A	24
3 in HK	Fiber	Broadband	100	100	30.78	N/A	N/A	24
3 in HK	Fiber	Broadband	200	200	39.89	N/A	N/A	24
3 in HK	Fiber	Broadband	300	300	39.89	N/A	N/A	24
3 in HK	Fiber	Broadband	500	500	49.00	N/A	N/A	24
3 in HK	Fiber	Broadband	1000	1000	70.86	N/A	N/A	24
PCCW	Fiber	Broadband	18	1	72.50	N/A	N/A	24
PCCW	Fiber	Broadband	30	10	72.50	N/A	N/A	24
PCCW	Fiber	Broadband	100	30	72.50	N/A	N/A	24
PCCW	Fiber	Broadband	300	300	72.50	N/A	N/A	24
PCCW	Fiber	Broadband	500	500	90.71	N/A	N/A	24
PCCW	Fiber	Broadband	1000	1000	108.93	N/A	N/A	24

Home Broadband Pricing Data for Prague, Czech Republic

ISP	Network Technology	Bundled Services	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Overage Penalty ($PPP)	Contract length (months)
O2	DSL	Broadband	20	2	36.86	N/A	N/A	12
O2	DSL	Broadband	40	2	44.23	N/A	N/A	12
O2	DSL	Broadband + TV	20	2	47.88	N/A	N/A	12
O2	DSL	Broadband + TV	40	2	55.26	N/A	N/A	12
UPC	Cable	Broadband	30	1	22.77	N/A	N/A	N/A
UPC	Cable	Broadband	60	6	38.32	N/A	N/A	N/A
UPC	Cable	Broadband	120	10	45.62	N/A	N/A	N/A
UPC	Cable	Broadband + TV	30	1	41.75	N/A	N/A	N/A
UPC	Cable	Broadband + TV	60	6	49.85	N/A	N/A	N/A
UPC	Cable	Broadband + TV	120	10	56.79	N/A	N/A	N/A
UPC	Cable	Broadband + Phone + TV	30	1	45.40	N/A	N/A	N/A
UPC	Cable	Broadband + Phone + TV	60	6	53.50	N/A	N/A	N/A
UPC	Cable	Broadband + Phone + TV	120	10	60.44	N/A	N/A	N/A

Home Broadband Pricing Data for Copenhagen, Denmark

ISP	Network Technology	Bundled Services	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Overage Penalty ($PPP)	Contract length (months)
DLG Tele	DSL	Broadband	4.6	0.9	31.52	.	.	6
DLG Tele	DSL	Broadband	10	1.8	34.11	.	.	6
DLG Tele	DSL	Broadband	18	1.8	44.44	.	.	6
DLG Tele	DSL	Broadband + Phone	4.6	0.9	35.87	.	.	6
DLG Tele	DSL	Broadband + Phone	10	1.8	38.45	.	.	6
DLG Tele	DSL	Broadband + Phone	18	1.8	48.79	.	.	6
DLG Tele	DSL	Broadband + Phone + TV	10	1.8	59.12	.	.	6
DLG Tele	DSL	Broadband + Phone + TV	18	1.8	60.41	.	.	6
Fullrate	DSL	Broadband + Phone	10	1	25.71	.	.	6
Fullrate	DSL	Broadband + Phone	20	2	32.17	.	.	6
Fullrate	DSL	Broadband + Phone	35	5	36.05	.	.	6
Fullrate	DSL	Broadband + Phone	50	5	38.63	.	.	6
Fullrate	DSL	Broadband + Phone + TV	20	2	57.88	.	.	6
Fullrate	DSL	Broadband + Phone + TV	35	5	61.76	.	.	6
Fullrate	DSL	Broadband + Phone + TV	50	5	64.34	.	.	6
Perspektiv	DSL	Broadband + Phone	5	1	24.42	.	.	6
Perspektiv	DSL	Broadband + Phone	10	1	25.71	.	.	6
Perspektiv	DSL	Broadband + Phone	20	2	32.17	.	.	6
Perspektiv	DSL	Broadband + Phone	30	3	45.09	.	.	6
Perspektiv	DSL	Broadband + Phone	40	4	51.55	.	.	6
Perspektiv	DSL	Broadband + Phone	50	5	64.47	.	.	6
Perspektiv	DSL	Broadband + Phone	50	10	70.93	.	.	6
YouSee	Cable	Broadband	10	1	25.71	200	.	6
YouSee	Cable	Broadband	25	3	32.17	600	.	6
YouSee	Cable	Broadband	50	5	38.63	1000	.	6
YouSee	Cable	Broadband	100	10	51.55	2000	.	6
YouSee	Cable	Broadband + Phone	10	1	28.29	200	.	6

ISP	Network Technology	Bundled Services	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Overage Penalty ($PPP)	Contract length (months)
YouSee	Cable	Broadband + Phone	25	3	34.75	600	.	6
YouSee	Cable	Broadband + Phone	50	5	41.21	1000	.	6
YouSee	Cable	Broadband + Phone	100	10	54.13	2000	.	6
YouSee	Cable	Broadband + Phone + TV	10	1	55.30	200	.	6
YouSee	Cable	Broadband + Phone + TV	25	3	61.76	600	.	6
YouSee	Cable	Broadband + Phone + TV	50	5	68.22	1000	.	6
YouSee	Cable	Broadband + Phone + TV	100	10	81.14	2000	.	6
SEAS-NVE	Fiber	Broadband	15	15	25.71	N/A	N/A	6
SEAS-NVE	Fiber	Broadband + Phone	30	30	34.75	N/A	N/A	6
SEAS-NVE	Fiber	Broadband + Phone	40	40	38.63	N/A	N/A	6
SEAS-NVE	Fiber	Broadband + Phone	60	60	51.55	N/A	N/A	6
SEAS-NVE	Fiber	Broadband + Phone	90	90	64.47	N/A	N/A	6
Stofa	Cable	Broadband + TV	20	3	48.27	400	Throttle	6
Stofa	Cable	Broadband + TV	40	5	58.61	800	Throttle	6
Stofa	Cable	Broadband + TV	60	10	68.94	1200	Throttle	6
Stofa	Cable	Broadband + TV	150	15	77.99	2500	Throttle	6
Stofa	Cable	Broadband + Phone + TV	20	3	61.06	400	Throttle	6
Stofa	Cable	Broadband + Phone + TV	40	5	71.40	800	Throttle	6
Stofa	Cable	Broadband + Phone + TV	60	10	81.74	1200	Throttle	6
Stofa	Cable	Broadband + Phone + TV	150	15	90.78	2500	Throttle	6
TDC	DSL	Broadband	20	2	34.11	.	.	6
TDC	DSL	Broadband + Phone	20	2	40.57	.	.	6
TDC	DSL	Broadband + Phone + TV	20	2	53.49	.	.	6
Telenor	DSL	Broadband + Phone	10	1	25.71	.	.	6
Telenor	DSL	Broadband + Phone	20	1	29.59	.	.	6
Telenor	DSL	Broadband + Phone	20	2	32.17	.	.	6
Telia	DSL	Broadband + Phone	4	0.5	24.42	.	.	6

ISP	Network Technology	Bundled Services	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Overage Penalty ($PPP)	Contract length (months)
Telia	DSL	Broadband + Phone	10	1	25.71	.	.	6
Telia	DSL	Broadband + Phone	14	1	30.88	.	.	6
Telia	DSL	Broadband + Phone	20	1	32.17	.	.	6
Telia	DSL	Broadband + Phone	30	10	32.17	.	.	6
Telia	DSL	Broadband + Phone	40	10	45.09	.	.	6
Telia	DSL	Broadband + Phone	50	10	51.55	.	.	6
Telia	DSL	Broadband + Phone + TV	20	1	42.51	.	.	6

Home Broadband Pricing Data for Paris, France

ISP	Network Technology	Bundled Services	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Overage Penalty ($PPP)	Contract length (months)
Bouygues Telecom	ADSL	Broadband + Phone + TV	20	16	37.09	.	.	.
Bouygues Telecom	Fiber	Broadband + Phone + TV	100	50	44.07	.	.	.
Darty	ADSL	Broadband + Phone + TV	20	1	37.09	.	.	.
Darty	Fiber	Broadband + Phone + TV	100	50	44.07	.	.	.
Free	ADSL	Broadband + Phone + TV	28	1	34.87	.	.	.
Free	VDSL	Broadband + Phone + TV	100	40	34.87	.	.	.
Free	Fiber	Broadband + Phone + TV	100	50	34.87	.	.	.
Orange	ADSL	Broadband + Phone	8	0.8	44.07	N/A	N/A	N/A
Orange	ADSL	Broadband + Phone + TV	20	0.8	39.42	N/A	N/A	N/A
Orange	Fiber	Broadband + Phone + TV	100	50	39.42	N/A	N/A	N/A
Orange	Fiber	Broadband + Phone + TV	200	50	40.58	N/A	N/A	N/A
SFR	ADSL	Broadband + Phone + TV	25	.	34.87	N/A	N/A	N/A
SFR	Fiber	Broadband + Phone	300	.	23.24	N/A	N/A	N/A
SFR	Fiber	Broadband + Phone + TV	300	.	26.73	N/A	N/A	N/A
Teleconnect	ADSL	Broadband + Phone	20	.	37.09	N/A	N/A	N/A

Home Broadband Pricing Data for Berlin, Germany

ISP	Network Technology	Bundled Services	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Overage Penalty ($PPP)	Contract length (months)
1&1	DSL	Broadband + Phone	16	1	25.30	100	Throttle	24
1&1	DSL	Broadband + Phone	6	0.5	31.63	N/A	N/A	24
1&1	DSL	Broadband + Phone	16	1	37.96	N/A	N/A	24
1&1	DSL	Broadband + Phone	50	10	37.96	N/A	N/A	24
1&1	DSL	Broadband + Phone	6	0.5	31.63	N/A	N/A	N/A
1&1	DSL	Broadband + Phone	16	1	37.96	N/A	N/A	N/A
1&1	DSL	Broadband + Phone	50	10	37.96	N/A	N/A	N/A
Deutsche Telekom	DSL	Broadband + Phone	16	1	37.91	75	Throttle	12
Deutsche Telekom	DSL	Broadband + Phone	50	10	50.57	200	Throttle	24
Deutsche Telekom	Fiber	Broadband + Phone	100	.	63.23	300	Throttle	24
Deutsche Telekom	Fiber	Broadband + Phone	200	.	69.56	400	Throttle	24
Deutsche Telekom	DSL	Broadband + Phone + TV	16	1	50.57	75	Throttle	24
Deutsche Telekom	DSL	Broadband + Phone + TV	25	5	56.90	200	Throttle	24
Deutsche Telekom	DSL	Broadband + Phone + TV	50	10	56.90	200	Throttle	24
Deutsche Telekom	DSL	Broadband + Phone + TV	100	.	75.89	300	Throttle	24
Deutsche Telekom	DSL	Broadband + Phone + TV	200	.	82.22	400	Throttle	24
Kabel Deutschland	Cable	Broadband + Phone	10	0.6	25.19	N/A	N/A	24
Kabel Deutschland	Cable	Broadband + Phone	20	1	25.19	N/A	N/A	24
Kabel Deutschland	Cable	Broadband + Phone	32	2	31.52	N/A	N/A	24
Kabel Deutschland	Cable	Broadband + Phone	100	6	37.85	N/A	N/A	24
Kabel Deutschland	Cable	Broadband	20	1	25.19	N/A	N/A	24
Kabel Deutschland	Cable	Broadband + Phone + TV	32	2	36.46	N/A	N/A	24
Kabel Deutschland	Cable	Broadband + Phone + TV	100	6	42.78	N/A	N/A	24
O2	DSL	Broadband + Phone	16	1	31.63	50	Throttle	24

ISP	Network Technology	Bundled Services	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Overage Penalty ($PPP)	Contract length (months)
O2	DSL	Broadband + Phone	50	.	37.95	.	.	24
O2	DSL	Broadband + Phone	16	1	31.63	50	Throttle	N/A
O2	DSL	Broadband + Phone	50	.	37.95	.	.	N/A
TeleColumbus	Cable	Broadband	16	1	22.77	N/A	N/A	24
TeleColumbus	Cable	Broadband	32	2	31.63	N/A	N/A	24
TeleColumbus	Cable	Broadband	64	3	37.96	N/A	N/A	24
TeleColumbus	Cable	Broadband	128	4	50.62	N/A	N/A	24
TeleColumbus	Cable	Broadband + Phone	16	1	25.30	N/A	N/A	24
TeleColumbus	Cable	Broadband + Phone	32	2	31.63	N/A	N/A	24
TeleColumbus	Cable	Broadband + Phone	64	3	44.29	N/A	N/A	24
TeleColumbus	Cable	Broadband + Phone	128	4	56.95	N/A	N/A	24
TeleColumbus	Cable	Broadband + Phone + TV	16	1	33.52	N/A	N/A	24
TeleColumbus	Cable	Broadband + Phone + TV	32	2	39.85	N/A	N/A	24
TeleColumbus	Cable	Broadband + Phone + TV	64	3	52.51	N/A	N/A	24
TeleColumbus	Cable	Broadband + Phone + TV	128	4	65.16	N/A	N/A	24
Versatel	DSL	Broadband + Phone	6	0.5	37.85	N/A	N/A	24
Versatel	DSL	Broadband + Phone	16	0.8	50.51	N/A	N/A	12
Versatel	DSL	Broadband + Phone	16	0.8	50.51	N/A	N/A	24
Vodafone	DSL	Broadband + Phone	6	.	31.58	.	.	24
Vodafone	DSL	Broadband + Phone	16	0.8	37.91	.	.	12
Vodafone	DSL	Broadband + Phone	16	0.8	37.91	.	.	24
Vodafone	DSL	Broadband + Phone	50	10	44.24	.	.	24
Vodafone	DSL	Broadband + Phone + TV	16	0.8	50.57	.	.	24
Vodafone	DSL	Broadband + Phone + TV	50	10	56.90	.	.	24

Home Broadband Pricing Data for Dublin, Ireland

ISP	Network Technology	Bundled Services	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Overage Penalty ($PPP)	Contract length (months)
Digiweb	DSL	Broadband + Phone	7	0.384	74.37	100	.	12
Digiweb	DSL	Broadband + Phone	24	0.768	86.77	150	.	12
Digiweb	Fixed Wireless	Broadband	5	1	36.52	30	.	12
Digiweb	Fixed Wireless	Broadband	10	1	48.72	60	.	12
Digiweb	Fixed Wireless	Broadband	30	1	54.82	100	.	12
Digiweb	Fixed Wireless	Broadband + Phone	5	1	36.52	30	.	12
Digiweb	Fixed Wireless	Broadband + Phone	10	1	48.72	60	.	12
Digiweb	Fixed Wireless	Broadband + Phone	30	1	54.82	100	.	12
Digiweb	Fiber	Broadband	70	20	48.72	70	.	18
Digiweb	Fiber	Broadband	70	20	48.72	200	.	18
Digiweb	Fiber	Broadband	70	20	48.72	N/A	N/A	18
Digiweb	Fiber	Broadband + Phone	70	20	60.91	70	.	18
Digiweb	Fiber	Broadband + Phone	70	20	79.21	200	.	18
Digiweb	Fiber	Broadband + Phone	70	20	109.70	N/A	N/A	18
eircom	DSL	Broadband + Phone	24	0.768	54.88	30	.	12
eircom	DSL	Broadband + Phone	24	0.768	60.98	N/A	N/A	12
eircom	Fiber	Broadband + Phone	50	15	54.88	30	.	12
eircom	Fiber	Broadband + Phone	50	15	60.98	N/A	N/A	12
eircom	Fiber	Broadband + Phone	70	20	73.17	N/A	N/A	12
Magnet	Fiber	Broadband	24	.	42.68	N/A	N/A	N/A
Magnet	Fiber	Broadband	70	20	54.88	N/A	N/A	N/A
Magnet	Fiber	Broadband + Phone	60	.	48.78	N/A	N/A	N/A
Magnet	Fiber	Broadband + Phone	100	.	60.98	N/A	N/A	N/A
Magnet	Fiber	Broadband + TV	30	.	60.96	N/A	N/A	N/A
Magnet	Fiber	Broadband + Phone + TV	30	.	70.72	N/A	N/A	N/A
Magnet	Fiber	Broadband + Phone + TV	60	.	92.67	N/A	N/A	N/A

ISP	Network Technology	Bundled Services	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Overage Penalty ($PPP)	Contract length (months)
Magnet	Fiber	Broadband + Phone + TV	100	.	104.87	N/A	N/A	N/A
Smart Telecom	Fiber	Broadband + Phone	24	1	36.52	350	.	12
Vodafone Ireland	Fiber	Broadband	70	.	36.59	20	7.32/150GB	12
Vodafone Ireland	Fiber	Broadband	70	.	42.68	N/A*	N/A	12
Vodafone Ireland	Fiber	Broadband + Phone	70	.	48.78	N/A*	N/A	12

Home Broadband Pricing Data for Tokyo, Japan

ISP	Network Technology	Bundled Services	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Overage Penalty ($PPP)	Contract length (months)
J:COM	Cable	Broadband	12	2	39.44	N/A	N/A	24
J:COM	Cable	Broadband + Phone + TV	12	2	74.55	N/A	N/A	24
J:COM	Cable	Broadband	40	2	54.50	N/A	N/A	24
J:COM	Cable	Broadband + Phone	40	2	44.59	N/A	N/A	24
J:COM	Cable	Broadband	160	10	59.45	N/A	N/A	24
J:COM	Cable	Broadband + Phone	160	10	51.52	N/A	N/A	24
J:COM	Cable	Broadband + TV	160	10	54.54	N/A	N/A	24
J:COM	Cable	Broadband + Phone + TV	160	10	65.87 - 89.65	N/A	N/A	24
iTSCOM	Cable	Broadband	8	.	31.71	N/A	N/A	24
iTSCOM	Cable	Broadband	30	.	45.58	N/A	N/A	24
iTSCOM	Cable	Broadband	160	.	59.45	N/A	N/A	24
iTSCOM	Cable	Broadband + TV	30	.	108.99	N/A	N/A	24
iTSCOM	Cable	Broadband + Phone + TV	30	.	116.22	N/A	N/A	24
iTSCOM	Cable	Broadband + TV	160	.	85.21	N/A	N/A	24
iTSCOM	Cable	Broadband + Phone + TV	160	.	96.40	N/A	N/A	24
iTSCOM	Cable	Broadband + Phone	8	.	42.90	N/A	N/A	24
iTSCOM	Cable	Broadband + Phone + TV	8	.	89.47	N/A	N/A	24
NTT East	Fiber	Broadband	100	100	30.47 - 57.22	N/A	N/A	12
NTT East	Fiber	Broadband + Phone	100	100	35.43 - 62.18	N/A	N/A	12
NTT East	Fiber	Broadband + TV	100	100	40.38 - 63.66	N/A	N/A	12
NTT East	Fiber	Broadband	100	100	31.88 - 58.63	N/A	N/A	24
NTT East	Fiber	Broadband + Phone	100	100	36.84 - 63.59	N/A	N/A	24
NTT East	Fiber	Broadband + TV	100	100	41.79 - 65.08	N/A	N/A	24
NTT East	Fiber	Broadband	100	100	33.93 - 60.69	N/A	N/A	N/A
NTT East	Fiber	Broadband + Phone	100	100	38.89 - 65.64	N/A	N/A	N/A
NTT East	Fiber	Broadband + TV	100	100	43.84 - 67.13	N/A	N/A	N/A
NTT East	Fiber	Broadband	100	100	36.31 - 66.04	1.2	.	12

ISP	Network Technology	Bundled Services	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Overage Penalty ($PPP)	Contract length (months)
NTT East	Fiber	Broadband	100	100	29.73 - 67.38	1.2	.	24
NTT East	Fiber	Broadband	100	100	39.63 - 69.36	1.2	.	N/A
KDDI	Fiber	Broadband	1000	1000	33.69 - 62.42	N/A	N/A	N/A
KDDI	Fiber	Broadband + Phone	1000	1000	38.64 - 67.38	N/A	N/A	N/A
KDDI	Fiber	Broadband + TV	1000	1000	38.64 - 67.38	N/A	N/A	N/A
KDDI	Fiber	Broadband + Phone + TV	1000	1000	43.60 - 72.33	N/A	N/A	N/A
Yahoo BB	DSL	Broadband + Phone	8	0.9	30.97	N/A	N/A	.
Yahoo BB	DSL	Broadband + Phone	12	1	34.93	N/A	N/A	.
Yahoo BB	DSL	Broadband + Phone	26	1	37.91	N/A	N/A	.
Yahoo BB	DSL	Broadband + Phone	50	3	38.90	N/A	N/A	.
Yahoo BB	DSL	Broadband + Phone	50.5	12.5	41.87	N/A	N/A	.
Yahoo BB	DSL	Broadband	8	0.9	46.75	N/A	N/A	.
Yahoo BB	DSL	Broadband	12	1	50.71	N/A	N/A	.
Yahoo BB	DSL	Broadband	26	1	53.69	N/A	N/A	.
Yahoo BB	DSL	Broadband	50	3	54.68	N/A	N/A	.
Yahoo BB	DSL	Broadband	50.5	12.5	57.65	N/A	N/A	.
Yahoo BB	DSL	Broadband + Phone	12	1	17.83	N/A	N/A	24
Yahoo BB	DSL	Broadband + Phone	50	3	25.38	N/A	N/A	24
Yahoo BB	DSL	Broadband	12	1	33.60	N/A	N/A	24
Yahoo BB	DSL	Broadband	50	3	41.16	N/A	N/A	24
Yahoo BB	DSL	Broadband + Phone	8	0.9	15.43 - 43.74	0.2	.	24
Yahoo BB	DSL	Broadband + Phone	12	1	19.20 - 47.51	0.2	.	24
Yahoo BB	DSL	Broadband + Phone	26	1	20.15 - 48.46	0.2	.	24
Yahoo BB	DSL	Broadband + Phone	50	3	20.15 - 48.46	0.2	.	24
Yahoo BB	DSL	Broadband + Phone	50.5	12.5	22.98 - 51.29	0.2	.	24
Yahoo BB	DSL	Broadband	8	0.9	31.21 - 59.52	0.2	.	24
Yahoo BB	DSL	Broadband	12	1	34.98 - 63.29	0.2	.	24

ISP	Network Technology	Bundled Services	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Overage Penalty ($PPP)	Contract length (months)
Yahoo BB	DSL	Broadband	26	1	35.93 - 64.24	0.2	.	24
Yahoo BB	DSL	Broadband	50	3	35.93 - 64.24	0.2	.	24
Yahoo BB	DSL	Broadband	50.5	12.5	38.76 - 67.07	0.2	.	24

NOTE: Costs for some plans vary based on a number of factors such as location, additional services, and previous providers. For more granular information on these price ranges, please refer to the full data set, which is available for download at http://oti.newamerica. net/publications/policy/reining_in_the_cost_of_connectivity.

Home Broadband Pricing Data for Riga, Latvia

ISP	Network Technology	Bundled Services	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Overage Penalty ($PPP)	Contract length (months)
Baltcom	Fiber	Broadband	50	50	25.28	N/A	N/A	1, 12, or 24
Baltcom	Fiber	Broadband	250	250	25.28	N/A	N/A	1, 12, or 24
Baltcom	Fiber	Broadband	500	500	97.22	N/A	N/A	1, 12, or 24
Baltcom	Fiber	Broadband + TV	100	100	33.06	N/A	N/A	1, 12, or 24
Balti-Com	Cable	Broadband	20	5	16.81	N/A	N/A	24
Balti-Com	Cable	Broadband + Phone	20	5	19.53	N/A	N/A	24
Balti-Com	Cable	Broadband + TV	20	5	19.03	N/A	N/A	24
Balti-Com	Cable	Broadband + Phone + TV	20	5	21.75	N/A	N/A	24
Balti-Com	Cable	Broadband	20	5	22.22	N/A	N/A	12
Balti-Com	Cable	Broadband + Phone	20	5	24.94	N/A	N/A	12
Balti-Com	Cable	Broadband + TV	20	5	24.53	N/A	N/A	12
Balti-Com	Cable	Broadband + Phone + TV	20	5	27.25	N/A	N/A	12
Balti-Com	Cable	Broadband	20	5	22.22	N/A	N/A	1
Balti-Com	Cable	Broadband + Phone	20	5	24.94	N/A	N/A	1
Balti-Com	Cable	Broadband + TV	20	5	24.53	N/A	N/A	1
Balti-Com	Cable	Broadband + Phone + TV	20	5	27.25	N/A	N/A	1
Balti-Com	Cable	Broadband	100	20	21.78	N/A	N/A	24
Balti-Com	Cable	Broadband + Phone	100	20	24.50	N/A	N/A	24
Balti-Com	Cable	Broadband + Phone + TV	100	20	26.19	N/A	N/A	24
Balti-Com	Cable	Broadband	100	20	24.53	N/A	N/A	12
Balti-Com	Cable	Broadband + Phone	100	20	27.25	N/A	N/A	12
Balti-Com	Cable	Broadband + TV	100	20	28.11	N/A	N/A	12
Balti-Com	Cable	Broadband + Phone + TV	100	20	30.83	N/A	N/A	12
Balti-Com	Cable	Broadband	100	20	30.03	N/A	N/A	12
Balti-Com	Cable	Broadband + Phone	100	20	32.75	N/A	N/A	1
Balti-Com	Cable	Broadband + TV	100	20	30.86	N/A	N/A	1
Balti-Com	Cable	Broadband + Phone + TV	100	20	33.58	N/A	N/A	1
Balti-Com	Cable	Broadband + Phone	250	50	41.31	N/A	N/A	24
Balti-Com	Cable	Broadband + Phone + TV	250	50	41.31	N/A	N/A	24
Balti-Com	Cable	Broadband + Phone	250	50	47.06	N/A	N/A	12

ISP	Network Technology	Bundled Services	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Overage Penalty ($PPP)	Contract length (months)
Balti-Com	Cable	Broadband + Phone + TV	250	50	47.06	N/A	N/A	12
Balti-Com	Cable	Broadband + Phone	250	50	47.06	N/A	N/A	1
Balti-Com	Cable	Broadband + Phone + TV	250	50	47.06	N/A	N/A	1
Lattelecom	DSL	Broadband	5	0.5	21.28	N/A	N/A	12 or 24
Lattelecom	DSL	Broadband + Phone + TV	5	0.5	56.39	N/A	N/A	12 or 24
Lattelecom	DSL	Broadband	6	0.5	34.94	N/A	N/A	12 or 24
Lattelecom	DSL	Broadband + Phone + TV	6	0.5	66.17	N/A	N/A	12 or 24
Lattelecom	DSL	Broadband	10	0.8	48.61	N/A	N/A	12 or 24
Lattelecom	DSL	Broadband + Phone + TV	10	0.8	75.92	N/A	N/A	12 or 24
Lattelecom	DSL	Broadband	20	5	48.61	N/A	N/A	12 or 24
Lattelecom	DSL	Broadband + Phone + TV	20	5	75.92	N/A	N/A	12 or 24
Lattelecom	Fiber	Broadband	50	50	34.94	N/A	N/A	12
Lattelecom	Fiber	Broadband	100	100	48.61	N/A	N/A	12
Lattelecom	Fiber	Broadband	200	200	62.28	N/A	N/A	12
Lattelecom	Fiber	Broadband	50	50	29.08	N/A	N/A	24
Lattelecom	Fiber	Broadband	100	100	42.75	N/A	N/A	24
Lattelecom	Fiber	Broadband	200	200	56.39	N/A	N/A	24
Lattelecom	Fiber	Broadband + Phone	50	50	50.56	N/A	N/A	12
Lattelecom	Fiber	Broadband + Phone	50	50	44.69	N/A	N/A	24
Lattelecom	Fiber	Broadband + Phone	100	100	62.28	N/A	N/A	12
Lattelecom	Fiber	Broadband + Phone	100	100	56.39	N/A	N/A	24
Lattelecom	Fiber	Broadband + Phone	200	200	77.89	N/A	N/A	12
Lattelecom	Fiber	Broadband + Phone	200	200	72.03	N/A	N/A	24
Lattelecom	Fiber	Broadband + TV	50	50	52.53	N/A	N/A	12
Lattelecom	Fiber	Broadband + TV	50	50	46.64	N/A	N/A	24
Lattelecom	Fiber	Broadband + TV	100	100	62.28	N/A	N/A	12
Lattelecom	Fiber	Broadband + TV	100	100	56.39	N/A	N/A	24
Lattelecom	Fiber	Broadband + TV	200	200	79.83	N/A	N/A	12
Lattelecom	Fiber	Broadband + TV	200	200	74.00	N/A	N/A	24
Lattelecom	Fiber	Broadband + Phone + TV	50	50	62.28	N/A	N/A	12
Lattelecom	Fiber	Broadband + Phone + TV	50	50	56.39	N/A	N/A	24

ISP	Network Technology	Bundled Services	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Overage Penalty ($PPP)	Contract length (months)
Lattelecom	Fiber	Broadband + Phone + TV	100	100	75.97	N/A	N/A	12
Lattelecom	Fiber	Broadband + Phone + TV	100	100	70.08	N/A	N/A	24
Lattelecom	Fiber	Broadband + Phone + TV	200	200	89.61	N/A	N/A	12
Lattelecom	Fiber	Broadband + Phone + TV	200	200	85.67	N/A	N/A	24
Lattelecom	Fiber	Broadband + Phone + TV	500	500	140.36	N/A	N/A	12 or 24

NOTE: Contract lengths affect upfront sign up fees: lower fees are charged for longer contracts.

Home Broadband Pricing Data for Mexico City, Mexico

ISP	Network Technology	Bundled Services	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Overage Penalty ($PPP)	Contract length (months)
Cablevision	Cable	Broadband	100	33	195.44	.	.	.
Cablevision	Cable	Broadband	50	16	130.25	.	.	.
Cablevision	Cable	Broadband	30	10	104.17	.	.	.
Cablevision	Cable	Broadband	20	7	91.13	.	.	.
Cablevision	Cable	Broadband	12	4	65.06	.	.	.
Cablevision	Cable	Broadband	8	2	48.11	.	.	.
Cablevision	Cable	Broadband + Phone	50	16	136.77 - 143.29	.	.	.
Cablevision	Cable	Broadband + Phone	30	10	97.65 - 100.26	.	.	.
Cablevision	Cable	Broadband + Phone	12	4	71.58 - 74.19	.	.	.
Cablevision	Cable	Broadband + Phone	10	3	59.84 - 62.45	.	.	.
Cablevision	Cable	Broadband + Phone	6	2	46.81 - 49.41	.	.	.
Cablevision	Cable	Broadband + TV	50	16	136.77 - 143.29	.	.	.
Cablevision	Cable	Broadband + TV	30	10	97.65 - 100.26	.	.	.
Cablevision	Cable	Broadband + TV	12	4	71.58 - 74.19	.	.	.
Cablevision	Cable	Broadband + TV	10	3	59.84 - 62.45	.	.	.
Cablevision	Cable	Broadband + TV	6	2	46.81 - 49.41	.	.	.
Cablevision	Cable	Broadband + Phone + TV	50	16	182.40 - 191.53	.	.	.
Cablevision	Cable	Broadband + Phone + TV	30	10	130.25 - 136.77	.	.	.
Cablevision	Cable	Broadband + Phone + TV	12	4	97.65 - 102.87	.	.	.
Cablevision	Cable	Broadband + Phone + TV	10	3	84.62 - 88.53	.	.	.
Cablevision	Cable	Broadband + Phone + TV	6	2	65.06 - 68.45	.	.	.
Totalplay (Iusacell)	Fiber	Broadband	5	1	44.20	.	.	.
Totalplay (Iusacell)	Fiber	Broadband	10	3	58.54	.	.	.
Totalplay (Iusacell)	Fiber	Broadband	15	5	78.10	.	.	.
Totalplay (Iusacell)	Fiber	Broadband	35	11	97.65	.	.	.
Totalplay (Iusacell)	Fiber	Broadband	50	16	123.73	.	.	.

ISP	Network Technology	Bundled Services	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Overage Penalty ($PPP)	Contract length (months)
Totalplay (Iusacell)	Fiber	Broadband	100	33	175.88	.	.	.
Totalplay (Iusacell)	Fiber	Broadband	200	66	254.11	.	.	.
Totalplay (Iusacell)	Fiber	Broadband + Phone + TV	9	3	71.58 - 75.49	.	.	.
Totalplay (Iusacell)	Fiber	Broadband + Phone + TV	15	5	84.62 - 88.53	.	.	.
Totalplay (Iusacell)	Fiber	Broadband + Phone + TV	25	8	97.65 - 102.87	.	.	.
Totalplay (Iusacell)	Fiber	Broadband + Phone + TV	45	15	130.25 - 136.77	.	.	.
Totalplay (Iusacell)	Fiber	Broadband + Phone + TV	75	25	182.40 - 191.53	.	.	.
Totalplay (Iusacell)	Fiber	Broadband + Phone + TV	100	33	208.47 - 218.90	.	.	.
Totalplay (Iusacell)	Fiber	Broadband + Phone + TV	200	66	260.63 - 271.06	.	.	.
Maxcom	DSL	Broadband + Phone	4	1	50.72	.	.	.
Maxcom	DSL	Broadband + TV	4	1	58.54	.	.	.
TelMex	Fiber	Broadband + Phone	5	1	78.10	.	.	.
TelMex	Fiber	Broadband + Phone	10	3	130.25	.	.	.
TelMex	Fiber	Broadband + Phone	20	6	156.19	.	.	.
Axtel	Fiber	Broadband + Phone	4	4	50.72	.	.	.
Axtel	Fiber	Broadband + Phone	10	10	70.27	.	.	.
Axtel	Fiber	Broadband + Phone	20	20	84.62	.	.	.
Axtel	Fiber	Broadband + Phone	200	200	130.25	.	.	.
Axtel	Fiber	Broadband + Phone + TV	4	4	67.01 - 74.19	.	.	.
Axtel	Fiber	Broadband + Phone + TV	10	10	86.57 - 102.87	.	.	.
Axtel	Fiber	Broadband + Phone + TV	20	20	100.91 - 123.73	.	.	.
Axtel	Fiber	Broadband + Phone + TV	200	200	149.80 - 175.88	.	.	.

NOTE: Price ranges reflect cost differences based on payment method. Customers paying with credit cards pay lower prices than customers paying in cash.

Home Broadband Pricing Data for Amsterdam, Netherlands

ISP	Network Technology	Bundled Services	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Overage Penalty ($PPP)	Contract length (months)
KPN	.	Broadband	8	1	31.93	.	.	12
KPN	.	Broadband	40	4	43.98	.	.	12
KPN	.	Broadband	80	8	56.02	.	.	12
KPN	.	Broadband + Phone	8	1	37.95	.	.	12
KPN	.	Broadband + Phone	40	4	50.00	.	.	12
KPN	.	Broadband + Phone	80	8	62.05	.	.	12
KPN	Fiber	Broadband + Phone	50	50	50.00	.	.	12
KPN	Fiber	Broadband + Phone	100	100	62.05	.	.	12
KPN	Fiber	Broadband + Phone	500	500	86.14	.	.	12
KPN	.	Broadband + Phone + TV	8	1	57.83	.	.	12
KPN	.	Broadband + Phone + TV	40	4	69.88	.	.	12
KPN	.	Broadband + Phone + TV	80	8	81.93	.	.	12
KPN	Fiber	Broadband + Phone + TV	50	50	69.88	.	.	12
KPN	Fiber	Broadband + Phone + TV	100	100	81.93	.	.	12
KPN	Fiber	Broadband + Phone + TV	500	500	106.02	.	.	12
Solcon	DSL	Broadband	8	1	33.13	.	.	.
Solcon	DSL	Broadband	25	3	39.16	.	.	.
Solcon	DSL	Broadband	40	4	45.18	.	.	.
Solcon	Fiber	Broadband	50	50	52.41	.	.	.
Solcon	Fiber	Broadband	100	100	70.48	.	.	.
Solcon	DSL	Broadband + Phone	8	1	39.76	.	.	.
Solcon	DSL	Broadband + Phone	25	3	45.78	.	.	.
Solcon	DSL	Broadband + Phone	40	4	51.81	.	.	.
Solcon	Fiber	Broadband + Phone	50	50	59.04	.	.	.
Solcon	Fiber	Broadband + Phone	100	100	77.11	.	.	.
Solcon	DSL	Broadband + Phone + TV	8	1	58.73	.	.	.
Solcon	DSL	Broadband + Phone + TV	25	3	64.76	.	.	.

ISP	Network Technology	Bundled Services	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Overage Penalty ($PPP)	Contract length (months)
Solcon	DSL	Broadband + Phone + TV	40	4	70.78	.	.	.
Solcon	Fiber	Broadband + Phone + TV	50	50	68.07	.	.	.
Solcon	Fiber	Broadband + Phone + TV	100	100	86.14	.	.	.
Online	.	Broadband	10	1	24.04	.	.	12
Online	.	Broadband	30	3	30.06	.	.	12
Online	.	Broadband	50	5	36.08	.	.	12
Online	.	Broadband	10	1	18.01	.	.	24
Online	.	Broadband	30	3	21.02	.	.	24
Online	.	Broadband	50	5	24.04	.	.	24
Online	.	Broadband + Phone	10	1	36.08	.	.	12
Online	.	Broadband + Phone	30	3	42.11	.	.	12
Online	.	Broadband + Phone	50	5	48.13	.	.	12
Online	.	Broadband + Phone + TV	10	1	48.13	.	.	12
Online	.	Broadband + Phone + TV	30	3	54.16	.	.	12
Online	.	Broadband + Phone + TV	50	5	60.18	.	.	12
Tele2	.	Broadband	20	1	32.53	.	.	12
Tele2	.	Broadband	50	5	35.54	.	.	12
Tele2	.	Broadband + Phone	20	1	40.36	.	.	12
Tele2	.	Broadband + Phone	50	5	43.37	.	.	12
Tele2	.	Broadband + Phone + TV	20	1	46.39	.	.	12
Telfort	.	Broadband	8	1	22.29	N/A	N/A	12
Telfort	.	Broadband	30	3	25.30	N/A	N/A	12
Telfort	.	Broadband	50	5	31.33	N/A	N/A	12
Telfort	.	Broadband + Phone	30	3	28.31	N/A	N/A	12
Telfort	.	Broadband + Phone	50	5	34.34	N/A	N/A	12
Telfort	Fiber	Broadband + Phone	50	50	48.19	N/A	N/A	12
Telfort	Fiber	Broadband + Phone	100	100	60.24	N/A	N/A	12
Telfort	.	Broadband + Phone + TV	30	3	43.37	N/A	N/A	12
Telfort	.	Broadband + Phone + TV	50	5	49.40	N/A	N/A	12

ISP	Network Technology	Bundled Services	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Overage Penalty ($PPP)	Contract length (months)
Telfort	Fiber	Broadband + Phone + TV	50	50	60.24	N/A	N/A	12
UPC	Cable	Broadband + TV	60	6	67.11	N/A	N/A	12
UPC	Cable	Broadband + TV	100	10	73.13	N/A	N/A	12
UPC	Cable	Broadband + TV	150	10	85.18	N/A	N/A	12
UPC	Cable	Broadband + Phone + TV	30	3	47.59	N/A	N/A	24
Ziggo	Cable	Broadband + TV	20	2	46.93	N/A	N/A	12
Ziggo	Cable	Broadband + TV	60	6	58.98	N/A	N/A	12
Ziggo	Cable	Broadband + TV	150	15	71.02	N/A	N/A	12
Ziggo	Cable	Broadband + Phone + TV	20	2	52.95	N/A	N/A	12
Ziggo	Cable	Broadband + Phone + TV	60	6	65.00	N/A	N/A	12
Ziggo	Cable	Broadband + Phone + TV	150	15	77.05	N/A	N/A	12

Home Broadband Pricing Data for Bucharest, Romania

ISP	Network Technology	Bundled Services	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Overage Penalty ($PPP)	Contract length (months)
ALLNET	Fiber	Broadband	4	.	17.96	.	.	24
ALLNET	Fiber	Broadband	10	.	29.94	.	.	24
ALLNET	Fiber	Broadband	30	.	44.91	.	.	N/A
ALLNET	Fiber	Broadband	50	.	89.82	.	.	N/A
Comtel	Fiber	Broadband	10	.	17.82	.	.	6
Comtel	Fiber	Broadband	20	.	32.07	.	.	6
Comtel	Fiber	Broadband	30	.	44.91	.	.	6
Comtel	Fiber	Broadband	50	.	62.87	.	.	6
DCN Telecom	Fiber	Broadband	4	.	15.99	.	.	.
DCN Telecom	Fiber	Broadband	10	.	21.32	.	.	.
DCN Telecom	Fiber	Broadband	20	.	26.65	.	.	.
Madnet	Fiber	Broadband	40	.	20.96	N/A	N/A	N/A
Madnet	Fiber	Broadband	50	.	22.44	N/A	N/A	N/A
Madnet	Fiber	Broadband	60	.	26.71	N/A	N/A	N/A
Madnet	Fiber	Broadband	80	.	32.05	N/A	N/A	N/A
Madnet	Fiber	Broadband + TV	40	.	44.91	N/A	N/A	N/A
Madnet	Fiber	Broadband + TV	50	.	49.38	N/A	N/A	N/A
Madnet	Fiber	Broadband + TV	60	.	62.63	N/A	N/A	N/A
Madnet	Fiber	Broadband + TV	80	.	70.97	N/A	N/A	N/A
RCS & RDS	Fiber	Broadband	50	.	17.37	N/A	N/A	12
RCS & RDS	Fiber	Broadband	100	.	23.35	N/A	N/A	12
Romtelcom	ADSL	Broadband + Phone	4 to 6	1	21.53	N/A	N/A	24
Romtelcom	VDSL	Broadband + Phone	20	.	21.53	N/A	N/A	24
Romtelcom	Fiber	Broadband + Phone	50	16	21.53	N/A	N/A	24
Romtelcom	ADSL	Broadband + Phone + TV	4 to 6	1	34.93	N/A	N/A	24
Romtelcom	VDSL	Broadband + Phone + TV	20	.	34.93	N/A	N/A	24
Romtelcom	Fiber	Broadband + Phone + TV	50	16	34.93	N/A	N/A	24
Romtelcom	ADSL	Broadband + Phone	8 to 22	1	28.15	N/A	N/A	24
Romtelcom	VDSL	Broadband + Phone	30 to 100	.	28.15	N/A	N/A	24
Romtelcom	Fiber	Broadband + Phone	100	32	28.15	N/A	N/A	24
Romtelcom	ADSL	Broadband + Phone + TV	8 to 22	1	40.89	N/A	N/A	24
Romtelcom	VDSL	Broadband + Phone + TV	30 to 100	.	40.89	N/A	N/A	24
Romtelcom	Fiber	Broadband + Phone + TV	100	32	40.89	N/A	N/A	24

ISP	Network Technology	Bundled Services	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Overage Penalty ($PPP)	Contract length (months)
UPC	Fiber	Broadband	20	3	14.97	.	.	.
UPC	Fiber	Broadband	60	4	20.96	.	.	.
UPC	Fiber	Broadband	100	4	23.95	.	.	.
UPC	Fiber	Broadband	120	6	29.94	.	.	.
UPC	Fiber	Broadband	150	6	29.94	.	.	.
UPC	Fiber	Broadband + TV	20	3	35.33	.	.	.

Home Broadband Pricing Data for Seoul, South Korea

ISP	Network Technology	Bundled Services	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Overage Penalty ($PPP)	Contract length (months)
C&M	Cable	Broadband + Phone + TV	160	.	19.37	N/A	N/A	24
C&M	Cable	Broadband + Phone + TV	100	.	18.16	N/A	N/A	24
C&M	Cable	Broadband + Phone + TV	10	.	14.52	N/A	N/A	24
C&M	Cable	Broadband + Phone + TV	10	.	14.52	N/A	N/A	12
C&M	Cable	Broadband	100	.	39.94	N/A	N/A	12
C&M	Cable	Broadband	100	.	17.97	N/A	N/A	24
C&M	Cable	Broadband	100	.	17.97	N/A	N/A	36
C&M	Cable	Broadband	160	.	44.78	N/A	N/A	N/A
C&M	Cable	Broadband	160	.	39.94	N/A	N/A	12
C&M	Cable	Broadband	160	.	17.67	N/A	N/A	24
C&M	Cable	Broadband	160	.	19.17	N/A	N/A	36
C&M	Cable	Broadband	10	.	14.40	N/A	N/A	12
C&M	Cable	Broadband	10	.	14.40	N/A	N/A	24
C&M	Cable	Broadband	10	.	14.40	N/A	N/A	36
C&M	Cable	Broadband + Phone + TV	100	.	32.80	N/A	N/A	36
C&M	Cable	Broadband + TV	100	.	73.71	N/A	N/A	N/A
C&M	Cable	Broadband + TV	100	.	41.03 - 57.37	N/A	N/A	12
C&M	Cable	Broadband + TV	100	.	23.00 - 50.71	N/A	N/A	24
C&M	Cable	Broadband + TV	100	.	27.40 - 41.03	N/A	N/A	36
C&M	Cable	Broadband + TV	160	.	35.59	N/A	N/A	36
C&M	Cable	Broadband + TV	160	.	32.68	N/A	N/A	36
C&M	Cable	Broadband + TV	160	.	42.24	N/A	N/A	36
C&M	Cable	Broadband + TV	10	.	25.30	N/A	N/A	12
C&M	Cable	Broadband + TV	10	.	24.21	N/A	N/A	24
C&M	Cable	Broadband + TV	10	.	24.21 - 27.84	N/A	N/A	36
HelloVision	Fiber	Broadband	1000	1000	48.42	N/A	N/A	N/A
HelloVision	Fiber	Broadband	1000	1000	43.57	N/A	N/A	12
HelloVision	Fiber	Broadband	1000	1000	38.73	N/A	N/A	24
HelloVision	Fiber	Broadband	1000	1000	33.89	N/A	N/A	36
HelloVision	Fiber	Broadband	1000	1000	31.47	N/A	N/A	48
HelloVision	Fiber	Broadband + TV	1000	1000	43.57	N/A	N/A	N/A
HelloVision	Fiber	Broadband + TV	1000	1000	38.73	N/A	N/A	12
HelloVision	Fiber	Broadband + TV	1000	1000	33.89	N/A	N/A	24
HelloVision	Fiber	Broadband + TV	1000	1000	29.05	N/A	N/A	36
HelloVision	Fiber	Broadband + TV	1000	1000	26.63	N/A	N/A	48

ISP	Network Technology	Bundled Services	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Overage Penalty ($PPP)	Contract length (months)
HelloVision	Fiber	Broadband + Phone	1000	1000	43.57	N/A	N/A	N/A
HelloVision	Fiber	Broadband + Phone	1000	1000	38.73	N/A	N/A	12
HelloVision	Fiber	Broadband + Phone	1000	1000	33.89	N/A	N/A	24
HelloVision	Fiber	Broadband + Phone	1000	1000	29.05	N/A	N/A	36
HelloVision	Fiber	Broadband + Phone	1000	1000	26.63	N/A	N/A	48
HelloVision	Fiber	Broadband + Phone + TV	1000	1000	41.15	N/A	N/A	N/A
HelloVision	Fiber	Broadband + Phone + TV	1000	1000	36.31	N/A	N/A	12
HelloVision	Fiber	Broadband + Phone + TV	1000	1000	31.47	N/A	N/A	24
HelloVision	Fiber	Broadband + Phone + TV	1000	1000	26.63	N/A	N/A	36
HelloVision	Fiber	Broadband + Phone + TV	1000	1000	24.21	N/A	N/A	48
HelloVision	Fiber	Broadband	200	.	43.57	N/A	N/A	N/A
HelloVision	Fiber	Broadband	200	.	39.22	N/A	N/A	12
HelloVision	Fiber	Broadband	200	.	34.86	N/A	N/A	24
HelloVision	Fiber	Broadband	200	.	30.50	N/A	N/A	36
HelloVision	Fiber	Broadband	200	.	28.32	N/A	N/A	48
HelloVision	Fiber	Broadband + TV	200	.	39.22	N/A	N/A	N/A
HelloVision	Fiber	Broadband + TV	200	.	34.86	N/A	N/A	12
HelloVision	Fiber	Broadband + TV	200	.	30.50	N/A	N/A	24
HelloVision	Fiber	Broadband + TV	200	.	26.14	N/A	N/A	36
HelloVision	Fiber	Broadband + TV	200	.	23.97	N/A	N/A	48
HelloVision	Fiber	Broadband + Phone	200	.	39.22	N/A	N/A	N/A
HelloVision	Fiber	Broadband + Phone	200	.	34.86	N/A	N/A	12
HelloVision	Fiber	Broadband + Phone	200	.	30.50	N/A	N/A	24
HelloVision	Fiber	Broadband + Phone	200	.	26.14	N/A	N/A	36
HelloVision	Fiber	Broadband + Phone	200	.	23.97	N/A	N/A	48
HelloVision	Fiber	Broadband + Phone + TV	200	.	37.04	N/A	N/A	N/A
HelloVision	Fiber	Broadband + Phone + TV	200	.	32.68	N/A	N/A	12
HelloVision	Fiber	Broadband + Phone + TV	200	.	28.32	N/A	N/A	24
HelloVision	Fiber	Broadband + Phone + TV	200	.	23.97	N/A	N/A	36

ISP	Network Technology	Bundled Services	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Overage Penalty ($PPP)	Contract length (months)
HelloVision	Fiber	Broadband + Phone + TV	200	.	21.79	N/A	N/A	48
HelloVision	Fiber	Broadband	160	.	39.94	N/A	N/A	N/A
HelloVision	Fiber	Broadband	160	.	35.95	N/A	N/A	12
HelloVision	Fiber	Broadband	160	.	31.95	N/A	N/A	24
HelloVision	Fiber	Broadband	160	.	27.96	N/A	N/A	36
HelloVision	Fiber	Broadband	160	.	25.96	N/A	N/A	48
HelloVision	Fiber	Broadband + TV	160	.	35.95	N/A	N/A	N/A
HelloVision	Fiber	Broadband + TV	160	.	31.95	N/A	N/A	12
HelloVision	Fiber	Broadband + TV	160	.	27.96	N/A	N/A	24
HelloVision	Fiber	Broadband + TV	160	.	23.97	N/A	N/A	36
HelloVision	Fiber	Broadband + TV	160	.	21.97	N/A	N/A	48
HelloVision	Fiber	Broadband + Phone	160	.	35.95	N/A	N/A	N/A
HelloVision	Fiber	Broadband + Phone	160	.	31.95	N/A	N/A	12
HelloVision	Fiber	Broadband + Phone	160	.	27.96	N/A	N/A	24
HelloVision	Fiber	Broadband + Phone	160	.	23.97	N/A	N/A	36
HelloVision	Fiber	Broadband + Phone	160	.	21.97	N/A	N/A	48
HelloVision	Fiber	Broadband + Phone + TV	160	.	33.95	N/A	N/A	N/A
HelloVision	Fiber	Broadband + Phone + TV	160	.	29.96	N/A	N/A	12
HelloVision	Fiber	Broadband + Phone + TV	160	.	25.96	N/A	N/A	24
HelloVision	Fiber	Broadband + Phone + TV	160	.	21.97	N/A	N/A	36
HelloVision	Fiber	Broadband + Phone + TV	160	.	19.97	N/A	N/A	48
HelloVision	Fiber	Broadband	80	.	36.31	N/A	N/A	N/A
HelloVision	Fiber	Broadband	80	.	32.68	N/A	N/A	12
HelloVision	Fiber	Broadband	80	.	29.05	N/A	N/A	24
HelloVision	Fiber	Broadband	80	.	25.42	N/A	N/A	36
HelloVision	Fiber	Broadband	80	.	23.60	N/A	N/A	48
HelloVision	Fiber	Broadband + TV	80	.	32.68	N/A	N/A	N/A
HelloVision	Fiber	Broadband + TV	80	.	29.05	N/A	N/A	12
HelloVision	Fiber	Broadband + TV	80	.	25.42	N/A	N/A	24
HelloVision	Fiber	Broadband + TV	80	.	21.79	N/A	N/A	36
HelloVision	Fiber	Broadband + TV	80	.	19.97	N/A	N/A	48
HelloVision	Fiber	Broadband + Phone	80	.	32.68	N/A	N/A	N/A
HelloVision	Fiber	Broadband + Phone	80	.	29.05	N/A	N/A	12

ISP	Network Technology	Bundled Services	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Overage Penalty ($PPP)	Contract length (months)
HelloVision	Fiber	Broadband + Phone	80	.	25.42	N/A	N/A	24
HelloVision	Fiber	Broadband + Phone	80	.	21.79	N/A	N/A	36
HelloVision	Fiber	Broadband + Phone	80	.	19.97	N/A	N/A	48
HelloVision	Fiber	Broadband + Phone + TV	80	.	30.86	N/A	N/A	N/A
HelloVision	Fiber	Broadband + Phone + TV	80	.	27.23	N/A	N/A	12
HelloVision	Fiber	Broadband + Phone + TV	80	.	23.60	N/A	N/A	24
HelloVision	Fiber	Broadband + Phone + TV	80	.	19.97	N/A	N/A	36
HelloVision	Fiber	Broadband + Phone + TV	80	.	18.16	N/A	N/A	48
HelloVision	Fiber	Broadband	8	.	31.47	N/A	N/A	N/A
HelloVision	Fiber	Broadband	8	.	28.32	N/A	N/A	12
HelloVision	Fiber	Broadband	8	.	25.18	N/A	N/A	24
HelloVision	Fiber	Broadband	8	.	22.03	N/A	N/A	36
HelloVision	Fiber	Broadband	8	.	20.46	N/A	N/A	48
HelloVision	Fiber	Broadband + TV	8	.	28.32	N/A	N/A	N/A
HelloVision	Fiber	Broadband + TV	8	.	25.18	N/A	N/A	12
HelloVision	Fiber	Broadband + TV	8	.	22.03	N/A	N/A	24
HelloVision	Fiber	Broadband + TV	8	.	18.88	N/A	N/A	36
HelloVision	Fiber	Broadband + TV	8	.	17.31	N/A	N/A	48
HelloVision	Fiber	Broadband + Phone	8	.	28.32	N/A	N/A	N/A
HelloVision	Fiber	Broadband + Phone	8	.	25.18	N/A	N/A	12
HelloVision	Fiber	Broadband + Phone	8	.	22.03	N/A	N/A	24
HelloVision	Fiber	Broadband + Phone	8	.	18.88	N/A	N/A	36
HelloVision	Fiber	Broadband + Phone	8	.	17.31	N/A	N/A	48
HelloVision	Fiber	Broadband + Phone + TV	8	.	26.75	N/A	N/A	N/A
HelloVision	Fiber	Broadband + Phone + TV	8	.	23.60	N/A	N/A	12
HelloVision	Fiber	Broadband + Phone + TV	8	.	20.46	N/A	N/A	24
HelloVision	Fiber	Broadband + Phone + TV	8	.	17.31	N/A	N/A	36
HelloVision	Fiber	Broadband + Phone + TV	8	.	15.73	N/A	N/A	48
HelloVision	Fiber	Broadband + Phone + TV	160	160	38.73	N/A	N/A	48

ISP	Network Technology	Bundled Services	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Overage Penalty ($PPP)	Contract length (months)
HelloVision	Fiber	Broadband + Phone + TV	160	160	30.26	N/A	N/A	48
KT	Fiber	Broadband	50	50	30.86	N/A	N/A	36
KT	Fiber	Broadband	50	50	32.68	N/A	N/A	24
KT	Fiber	Broadband	50	50	34.50	N/A	N/A	12
KT	Fiber	Broadband	50	50	36.31	N/A	N/A	N/A
KT	Fiber	Broadband + Phone	50	50	29.05 - 32.68	N/A	N/A	36
KT	Fiber	Broadband + Phone	50	50	31.47 - 34.62	N/A	N/A	24
KT	Fiber	Broadband + Phone	50	50	32.56 - 36.07	N/A	N/A	12
KT	Fiber	Broadband + Phone	50	50	37.64 - 41.33	N/A	N/A	N/A
KT	DSL	Broadband	50	10	30.86	N/A	N/A	36
KT	DSL	Broadband	50	10	32.68	N/A	N/A	24
KT	DSL	Broadband	50	10	34.50	N/A	N/A	12
KT	DSL	Broadband	50	10	36.31	N/A	N/A	N/A
KT	DSL	Broadband	8	0.64	30.86	N/A	N/A	36
KT	DSL	Broadband	8	0.64	32.68	N/A	N/A	24
KT	DSL	Broadband	8	0.64	34.50	N/A	N/A	12
KT	DSL	Broadband	8	0.64	36.31	N/A	N/A	N/A
KT	Fiber	Broadband	100	100	37.04	N/A	N/A	36
KT	Fiber	Broadband	100	100	39.22	N/A	N/A	24
KT	Fiber	Broadband	100	100	41.39	N/A	N/A	12
KT	Fiber	Broadband	100	100	43.57	N/A	N/A	N/A
KT	Fiber	Broadband + Phone	100	100	29.05 - 32.68	N/A	N/A	36
KT	Fiber	Broadband + Phone	100	100	31.47 - 34.62	N/A	N/A	24
KT	Fiber	Broadband + Phone	100	100	32.56 - 36.07	N/A	N/A	12
KT	Fiber	Broadband + Phone	100	100	44.69 - 48.37	N/A	N/A	N/A
KT	DSL	Broadband	100	100	37.04	N/A	N/A	36
KT	DSL	Broadband	100	100	39.22	N/A	N/A	24
KT	DSL	Broadband	100	100	41.39	N/A	N/A	12
KT	DSL	Broadband	100	100	43.57	N/A	N/A	N/A
KT	Fiber	Broadband + TV	100	100	37.52 - 47.20	N/A	N/A	36
KT	Fiber	Broadband + Phone + TV	100	100	38.73 - 48.42	N/A	N/A	36
LG Uplus	Fiber	Broadband	100	100	23.00 30.26	N/A	N/A	36
LG Uplus	Fiber	Broadband + Phone	100	100	25.42 - 37.52	N/A	N/A	36

ISP	Network Technology	Bundled Services	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Overage Penalty ($PPP)	Contract length (months)
LG Uplus	Fiber	Broadband + TV	100	100	36.80 - 42.24	N/A	N/A	36
LG Uplus	Fiber	Broadband + Phone + TV	100	100	34.98 - 47.08	N/A	N/A	36
LG Uplus	Fiber	Broadband	100	100	27.48 - 33.53	N/A	N/A	24
LG Uplus	Fiber	Broadband	100	100	31.83 - 36.73	N/A	N/A	12
LG Uplus	Fiber	Broadband	100	100	39.94	N/A	N/A	N/A
SK broadband	Fiber	Broadband	100	100	24.21 - 35.95	N/A	N/A	36
SK broadband	Fiber	Broadband	100	100	35.95	N/A	N/A	48
SK broadband	Fiber	Broadband	100	100	35.95	N/A	N/A	24
SK broadband	Fiber	Broadband	100	100	35.95	N/A	N/A	12
SK broadband	Fiber	Broadband	100	100	35.95	N/A	N/A	N/A
SK broadband	Fiber	Broadband	10	10	27.84 - 30.50	N/A	N/A	36
SK broadband	Fiber	Broadband	10	10	30.50	N/A	N/A	24
SK broadband	Fiber	Broadband	10	10	30.50	N/A	N/A	12
SK broadband	Fiber	Broadband	10	10	30.50	N/A	N/A	N/A
SK broadband	Fiber	Broadband + Phone + TV	100	100	36.31 - 43.57	N/A	N/A	N/A
SK broadband	Fiber	Broadband + Phone + TV	100	100	36.31 - 43.57	N/A	N/A	12
SK broadband	Fiber	Broadband + Phone + TV	100	100	36.31 - 43.57	N/A	N/A	24
SK broadband	Fiber	Broadband + Phone + TV	100	100	36.31 - 43.57	N/A	N/A	36
SK broadband	Fiber	Broadband + Phone	100	100	25.42 - 31.47	N/A	N/A	36
SK broadband	Fiber	Broadband + TV	100	100	35.10 - 41.15	N/A	N/A	N/A
SK broadband	Fiber	Broadband + TV	100	100	35.10 - 41.15	N/A	N/A	12
SK broadband	Fiber	Broadband + TV	100	100	35.10 - 41.15	N/A	N/A	24
SK broadband	Fiber	Broadband + TV	100	100	35.10 - 41.15	N/A	N/A	36

NOTE: Costs for some plans vary based on a number of factors such as location, additional services, and previous providers. For more granular information on these price ranges, please refer to the full data set, which is available for download at http://oti.newamerica.net/publications/policy/reining_in_the_cost_of_connectivity.

Home Broadband Pricing Data for Zurich, Switzerland

ISP	Network Technology	Bundled Services	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Overage Penalty ($PPP)	Contract length (months)
Green	DSL	Broadband	10	1	46.76	.	.	24
Green	DSL	Broadband	20	2	56.12	.	.	12
Green	DSL	Broadband	30	3	70.50	.	.	12
Green	DSL	Broadband	50	5	85.61	.	.	12
Green	DSL	Broadband	50	10	112.23	.	.	12
Green	Fiber	Broadband	20	2	56.12	.	.	12
Green	Fiber	Broadband	30	3	70.50	.	.	12
Green	Fiber	Broadband	50	5	84.89	.	.	12
Green	Fiber	Broadband	100	5	99.28	.	.	12
Green	Fiber	Broadband	100	20	164.03	.	.	12
Green	DSL	Broadband + Phone	10	1	51.80	.	.	12
Green	DSL	Broadband + Phone	20	2	66.19	.	.	24
Green	DSL	Broadband + Phone	30	3	80.58	.	.	24
Green	DSL	Broadband + Phone + TV	20	2	66.19	.	.	24
Green	DSL	Broadband + Phone + TV	10	1	46.04	.	.	12
Sunrise	DSL	Broadband + Phone	5	0.5	32.37	.	.	12
Sunrise	DSL	Broadband + Phone	15	1	46.76	.	.	12
Sunrise	DSL	Broadband + Phone	30	3	61.15	.	.	12
Sunrise	DSL	Broadband + Phone + TV	5	0.5	32.37	.	.	12
Sunrise	DSL	Broadband + Phone + TV	15	1	46.76	.	.	12
Sunrise	DSL	Broadband + Phone + TV	30	3	61.15	.	.	12
Swisscom	DSL	Broadband	20	2	63.31	N/A	N/A	12
Swisscom	DSL	Broadband + Phone	5	0.5	42.70	N/A	N/A	12
Swisscom	DSL	Broadband + Phone	10	1	53.49	N/A	N/A	12
Swisscom	DSL	Broadband + Phone	20	2	67.88	N/A	N/A	12
Swisscom	DSL	Broadband + Phone + TV	5	0.5	64.03	N/A	N/A	12
Swisscom	Fiber	Broadband + TV	100	50	97.12	N/A	N/A	12
Swisscom	DSL	Broadband + Phone + TV	15	1.5	78.42	N/A	N/A	12
Swisscom	DSL	Broadband + Phone + TV	30	3	92.81	N/A	N/A	12

ISP	Network Technology	Bundled Services	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Overage Penalty ($PPP)	Contract length (months)
Swisscom	DSL	Broadband + Phone + TV	50	5	107.19	N/A	N/A	12
UPC	Cable	Broadband	10	1	48.49	N/A	N/A	12
UPC	Cable	Broadband	35	5	60.00	N/A	N/A	12
UPC	Cable	Broadband	75	7	67.19	N/A	N/A	12
UPC	Cable	Broadband	150	10	77.27	N/A	N/A	12
UPC	Cable	Broadband + Phone	75	7	70.07	N/A	N/A	12
UPC	Cable	Broadband + Phone	75	7	84.46	N/A	N/A	12
UPC	Cable	Broadband + Phone + TV	35	5	62.88	N/A	N/A	12
UPC	Cable	Broadband + Phone + TV	150	10	84.46	N/A	N/A	12
VTX	DSL	Broadband + Phone	10	.	24.46	.	.	12
VTX	DSL	Broadband + Phone	12	.	33.81	.	.	12
VTX	DSL	Broadband + Phone	20	.	41.01	.	.	12
VTX	DSL	Broadband + Phone	30	.	55.40	.	.	12
VTX	DSL	Broadband + Phone	50	.	62.59	.	.	12
VTX	DSL	Broadband + Phone	10	.	24.46	.	.	24
VTX	DSL	Broadband + Phone	12	.	33.81	.	.	24
VTX	DSL	Broadband + Phone	20	.	41.01	.	.	24
VTX	DSL	Broadband + Phone	30	.	55.40	.	.	24
VTX	DSL	Broadband + Phone	50	.	62.59	.	.	24
VTX	DSL	Broadband + Phone + TV	10	.	29.96	.	.	24
VTX	DSL	Broadband + Phone + TV	20	.	46.51	.		24
VTX	DSL	Broadband + Phone + TV	50	.	68.09	.		24

Home Broadband Pricing Data for London, United Kingdom

ISP	Network Technology	Bundled Services	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Overage Penalty ($PPP)	Contract length (months)
BT	Fiber	Broadband + Phone	16	4	47.65	N/A	N/A	18
BT	Fiber	Broadband + Phone	38	9.5	58.26	N/A	N/A	18
BT	Fiber	Broadband + Phone	76	19	62.80	N/A	N/A	18
EE Broadband (formerly Orange)	DSL	Broadband + Phone	14	.	26.52 - 35.61	N/A	N/A	12
EE Broadband (formerly Orange)	Fiber	Broadband + Phone	38	.	45.08 - 52.65	N/A	N/A	12
EE Broadband (formerly Orange)	Fiber	Broadband + Phone	76	.	60.23 - 67.80	N/A	N/A	12
PlusNet	DSL	Broadband + Phone	17	.	31.05	10	.	12
PlusNet	DSL	Broadband + Phone	17	.	37.11	N/A	N/A	12
PlusNet	Fiber	Broadband + Phone	38	.	46.20	40	.	18
PlusNet	Fiber	Broadband + Phone	76	.	52.26	N/A	N/A	18
Sky (now includes O2)	DSL	Broadband + Phone	16	1.3	29.55	N/A	N/A	12
Sky (now includes O2)	DSL	Broadband + Phone + TV	16	1.3	38.26	N/A	N/A	12
Sky (now includes O2)	Fiber	Broadband + Phone	38	.	44.70	N/A	N/A	12
Sky (now includes O2)	Fiber	Broadband + Phone	76	19	67.42	N/A	N/A	12
Talk Talk	DSL	Broadband + Phone	14	.	28.80	N/A	N/A	12
Talk Talk	DSL	Broadband + Phone + TV	14	.	46.14	N/A	N/A	18
Talk Talk	Fiber	Broadband + Phone	38	.	47.65	N/A	N/A	18
Talk Talk	Fiber	Broadband + Phone	76	.	55.23	N/A	N/A	18
Talk Talk	Fiber	Broadband + Phone + TV	38	.	71.14	N/A	N/A	18
Talk Talk	Fiber	Broadband + Phone + TV	76	.	78.71	N/A	N/A	18
Virgin	Fiber	Broadband	30	.	28.41	N/A	N/A	18
Virgin	Fiber	Broadband + Phone	30	.	48.59	N/A	N/A	18
Virgin	Fiber	Broadband + Phone + TV	30	.	48.59	N/A	N/A	18

ISP	Network Technology	Bundled Services	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Overage Penalty ($PPP)	Contract length (months)
Virgin	Fiber	Broadband	60	.	33.45	N/A	N/A	18
Virgin	Fiber	Broadband + Phone	60	.	59.65	N/A	N/A	18
Virgin	Fiber	Broadband + Phone + TV	60	.	59.65	N/A	N/A	18
Virgin	Fiber	Broadband	100	.	47.35	N/A	N/A	18
Virgin	Fiber	Broadband + Phone	100	.	58.70	N/A	N/A	18
Zen	DSL	Broadband	16	1	27.83	20	Throttle	1
Zen	DSL	Broadband	16	1	38.67	100	Throttle	1
Zen	DSL	Broadband	16	1	54.15	200	Throttle	1
Zen	DSL	Broadband	16	1	54.12	20	Throttle	1-12 months, depending on current provider
Zen	DSL	Broadband	16	1	64.95	100	Throttle	1-12 months, depending on current provider

Home Broadband Pricing Data for Bristol, VA, USA

ISP	Network Technology	Bundled Services	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Overage Penalty ($PPP)	Contract length (months)
BVU	Fiber	Broadband	6	1	26.36	N/A	N/A	N/A
BVU	Fiber	Broadband	12	2	35.16	N/A	N/A	N/A
BVU	Fiber	Broadband	16	3	39.56	N/A	N/A	N/A
BVU	Fiber	Broadband	20	5	49.95	N/A	N/A	N/A
BVU	Fiber	Broadband	30	10	59.95	N/A	N/A	N/A
BVU	Fiber	Broadband	50	20	99.95	N/A	N/A	N/A
BVU	Fiber	Broadband	110	20	169.95	N/A	N/A	N/A
BVU	Fiber	Broadband	250	30	259.95	N/A	N/A	N/A
BVU	Fiber	Broadband	1000	50	319.95	N/A	N/A	N/A
BVU	Fiber	Broadband + Phone + TV	6	1	54.79	N/A	N/A	N/A
BVU	Fiber	Broadband + TV	6	1	41	N/A	N/A	N/A
BVU	Fiber	Broadband + Phone	6	1	40.14	N/A	N/A	N/A
CenturyLink	DSL	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Charter	Cable	Broadband	30	4	37.49	N/A	N/A	N/A
Charter	Cable	Broadband + Phone	30	4	49.99*	N/A	N/A	N/A
Charter	Cable	Broadband + Phone + TV	30	4	99.97	N/A	N/A	N/A

Home Broadband Pricing Data for Chattanooga, TN, USA

ISP	Network Technology	Bundled Services	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Overage Penalty ($PPP)	Contract length (months)
AT&T	DSL	Broadband	6	.	40.48	250	10/50GB	12
AT&T	DSL	Broadband	12	.	45.48	250	10/50GB	12
AT&T	DSL	Broadband + Phone	6	.	55.98	250	10/50GB	12
AT&T	DSL	Broadband + Phone	12	.	70.48	250	10/50GB	12
AT&T	DSL	Broadband + Phone	18	.	75.48	250	10/50GB	12
AT&T	DSL	Broadband + Phone	24	.	85.48	250	10/50GB	12
AT&T	DSL	Broadband + Phone + TV	6	.	96	250	10/50GB	12
AT&T	DSL	Broadband + Phone + TV	12	.	137.66	250	10/50GB	12
AT&T	DSL	Broadband + Phone + TV	18	.	129.33	250	10/50GB	12
Comcast	Cable	Broadband	6	3	49.95	250	No fee (notify 1st offense, shut off 2nd offense)	N/A
Comcast	Cable	Broadband	25	5	39.99	250	No fee (notify 1st offense, shut off 2nd offense)	N/A
Comcast	Cable	Broadband	50	10	49.99	250	No fee (notify 1st offense, shut off 2nd offense)	N/A
Comcast	Cable	Broadband + Phone	20	5	80.9	250	No fee (notify 1st offense, shut off 2nd offense)	N/A
Comcast	Cable	Broadband + TV	25	5	54.97	250	No fee (notify 1st offense, shut off 2nd offense)	N/A
Comcast	Cable	Broadband + TV	50	10	71.22	250	No fee (notify 1st offense, shut off 2nd offense)	N/A
Comcast	Cable	Broadband + Phone + TV	20	5	150.85	250	No fee (notify 1st offense, shut off 2nd offense)	N/A
Comcast	Cable	Broadband + Phone + TV	50	10	159.99	250	No fee (notify 1st offense, shut off 2nd offense)	N/A
EPB	Fiber	Broadband	100	100	57.99	N/A	N/A	N/A
EPB	Fiber	Broadband	1000	1000	69.99	N/A	N/A	N/A

ISP	Network Technology	Bundled Services	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Overage Penalty ($PPP)	Contract length (months)
EPB	Fiber	Broadband + Phone	100	100	68.83	N/A	N/A	N/A
EPB	Fiber	Broadband + Phone	1000	1000	79.03	N/A	N/A	N/A
EPB	Fiber	Broadband + Phone + TV	100	100	81.82	N/A	N/A	N/A
EPB	Fiber	Broadband + Phone + TV	1000	1000	92.02	N/A	N/A	N/A

Home Broadband Pricing Data for Kansas City, MO, USA

ISP	Network Technology	Bundled Services	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Overage Penalty ($PPP)	Contract length (months)
Earthlink	Cable	Broadband	7	.	35.95	.	.	12
Earthlink	Cable	Broadband	15	.	45.9	.	.	12
Google Fiber	Fiber	Broadband	5	1	0	N/A	N/A	N/A
Google Fiber	Fiber	Broadband	1000	1000	70	N/A	N/A	12
Google Fiber	Fiber	Broadband + TV	1000	1000	120 - 260	N/A	N/A	24
Time Warner Cable	Cable	Broadband	15	1	34.99	N/A	N/A	12
Time Warner Cable	Cable	Broadband	20	2	54.99	N/A	N/A	12
Time Warner Cable	Cable	Broadband	30	5	64.99	N/A	N/A	12
Time Warner Cable	Cable	Broadband	50	5	74.99	N/A	N/A	12
Time Warner Cable	Cable	Broadband + TV	20	2	64.99	N/A	N/A	12
Time Warner Cable	Cable	Broadband + TV	30	5	74.99	N/A	N/A	12
Time Warner Cable	Cable	Broadband + TV	50	5	84.99	N/A	N/A	12
Time Warner Cable	Cable	Broadband + Phone	15	1	54.98	N/A	N/A	12
Time Warner Cable	Cable	Broadband + Phone	20	2	64.98	N/A	N/A	12
Time Warner Cable	Cable	Broadband + Phone	30	5	80.97	N/A	N/A	12
Time Warner Cable	Cable	Broadband + Phone	50	5	90.97	N/A	N/A	12
Time Warner Cable	Cable	Broadband + Phone + TV	15	1	99.99	N/A	N/A	12

NOTE: At the time of data collection, Google Fiber offered a basic TV plan for $90/month. However, this plan did not include cable channels, which are included in the $120/month plan.

Home Broadband Pricing Data for Kansas City, KC, USA

ISP	Network Technology	Bundled Services	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Overage Penalty ($PPP)	Contract length (months)
Earthlink	Cable	Broadband	7	.	35.95	.	.	12
Earthlink	Cable	Broadband	15	.	45.9	.	.	12
Google Fiber	Fiber	Broadband	5	1	0	N/A	N/A	N/A
Google Fiber	Fiber	Broadband	1000	1000	70	N/A	N/A	12
Google Fiber	Fiber	Broadband + TV	1000	1000	120 - 260	N/A	N/A	24
Time Warner Cable	Cable	Broadband	15	1	34.99	N/A	N/A	12
Time Warner Cable	Cable	Broadband	20	2	54.99	N/A	N/A	12
Time Warner Cable	Cable	Broadband	30	5	64.99	N/A	N/A	12
Time Warner Cable	Cable	Broadband	50	5	74.99	N/A	N/A	12
Time Warner Cable	Cable	Broadband + TV	20	2	64.99	N/A	N/A	12
Time Warner Cable	Cable	Broadband + TV	30	5	74.99	N/A	N/A	12
Time Warner Cable	Cable	Broadband + TV	50	5	84.99	N/A	N/A	12
Time Warner Cable	Cable	Broadband + Phone	15	1	54.98	N/A	N/A	12
Time Warner Cable	Cable	Broadband + Phone	20	2	64.98	N/A	N/A	12
Time Warner Cable	Cable	Broadband + Phone	30	5	80.97	N/A	N/A	12
Time Warner Cable	Cable	Broadband + Phone	50	5	90.97	N/A	N/A	12
Time Warner Cable	Cable	Broadband + Phone + TV	15	1	99.99	N/A	N/A	12

NOTE: At the time of data collection, Google Fiber offered a basic TV plan for $90/month. However, this plan did not include cable channels, which are included in the $120/month plan.

Home Broadband Pricing Data for Lafayette, LA, USA

ISP	Network Technology	Bundled Services	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Overage Penalty ($PPP)	Contract length (months)
AT&T	DSL	Broadband	6	.	40.48	250	10/50GB	24
AT&T	DSL	Broadband	12	.	45.48	250	10/50GB	24
AT&T	DSL	Broadband	18	.	50.48	250	10/50GB	24
AT&T	DSL	Broadband	24	.	60.48	250	10/50GB	24
AT&T	DSL	Broadband	45	.	76	250	10/50GB	24
AT&T	DSL	Broadband	6	.	40.48	250	10/50GB	12
AT&T	DSL	Broadband	12	.	45.48	250	10/50GB	12
AT&T	DSL	Broadband + Phone	6	.	55.98	250	10/50GB	12
AT&T	DSL	Broadband + Phone	12	.	70.48	250	10/50GB	12
AT&T	DSL	Broadband + Phone	18	.	75.48	250	10/50GB	12
AT&T	DSL	Broadband + Phone	24	.	85.48	250	10/50GB	12
AT&T	DSL	Broadband + Phone + TV	6	.	96	250	10/50GB	12
AT&T	DSL	Broadband + Phone + TV	12	.	137.66	250	10/50GB	12
AT&T	DSL	Broadband + Phone + TV	18	.	129.33	250	10/50GB	12
Cox	Cable	Broadband	5	1	41.74	100	N/A	12
Cox	Cable	Broadband	25	5	53.24	250	N/A	12
Cox	Cable	Broadband	50	10	65.24	300	N/A	12
Cox	Cable	Broadband	150	20	95.49	.	N/A	12
Cox	Cable	Broadband + phone	5	1	59.99	100	N/A	12
Cox	Cable	Broadband + phone	25	5	75.99	250	N/A	12
Cox	Cable	Broadband + phone	50	10	93.99	300	N/A	12
Cox	Cable	Broadband + TV	5	1	92.98	100	N/A	36
Cox	Cable	Broadband + TV	25	5	102.32	250	N/A	36
Cox	Cable	Broadband + phone + TV	5	1	106.97	100	N/A	12
Cox	Cable	Broadband + phone + TV	25	5	164.97	250	N/A	12
Cox	Cable	Broadband + phone + TV	50	10	231.97	300	N/A	12
	Cable	Broadband + phone + TV	150	20	306.96	.	N/A	12
LUS	Fiber	Broadband	15	15	34.95	400	N/A	N/A
LUS	Fiber	Broadband	40	40	49.95	700	N/A	N/A
LUS	Fiber	Broadband	75	75	99.95	1200	N/A	N/A
LUS	Fiber	Broadband	100	100	199.95	2000	N/A	N/A

ISP	Network Technology	Bundled Services	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Overage Penalty ($PPP)	Contract length (months)
LUS	Fiber	Broadband	1000	1000	999.95	10000	N/A	N/A
LUS	Fiber	Broadband + phone	15	15	44.9	400	N/A	N/A
LUS	Fiber	Broadband + phone + TV	15	15	65.39	400	N/A	N/A

Home Broadband Pricing Data for Los Angeles, CA, USA

ISP	Network Technology	Bundled Services	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Overage Penalty ($PPP)	Contract length (months)
AT&T	DSL	Broadband	6	1	46	250	N/A	12
AT&T	DSL	Broadband	12	1	51	250	N/A	12
AT&T	DSL	Broadband	18	1	56	250	N/A	12
AT&T	DSL	Broadband + Phone	6	1	71	250	N/A	12
AT&T	DSL	Broadband + Phone	12	1	76	250	N/A	12
AT&T	DSL	Broadband + TV	6	1	64	250	N/A	12
AT&T	DSL	Broadband + TV	18	1	116	250	N/A	12
AT&T	DSL	Broadband + Phone + TV	18	1	109	250	N/A	24
Time Warner Cable	Cable	Broadband	15	1	44.99	N/A	N/A	12
Time Warner Cable	Cable	Broadband	20	2	54.99	N/A	N/A	12
Time Warner Cable	Cable	Broadband	30	5	64.99	N/A	N/A	12
Time Warner Cable	Cable	Broadband	50	5	74.99	N/A	N/A	12
Time Warner Cable	Cable	Broadband + Phone	15	1	59.97	N/A	N/A	12
Time Warner Cable	Cable	Broadband + Phone	20	2	79.97	N/A	N/A	12
Time Warner Cable	Cable	Broadband + Phone	30	5	89.97	N/A	N/A	12
Time Warner Cable	Cable	Broadband + Phone	50	5	99.97	N/A	N/A	12
Time Warner Cable	Cable	Broadband + TV	20	2	69.98	N/A	N/A	12
Time Warner Cable	Cable	Broadband + TV	30	5	79.98	N/A	N/A	12
Time Warner Cable	Cable	Broadband + TV	50	5	89.98	N/A	N/A	12
Time Warner Cable	Cable	Broadband + Phone + TV	15	1	79.96	N/A	N/A	12
Time Warner Cable	Cable	Broadband + Phone + TV	20	2	99.96	N/A	N/A	12
Time Warner Cable	Cable	Broadband + Phone + TV	30	5	109.96	N/A	N/A	12
Time Warner Cable	Cable	Broadband + Phone + TV	50	5	119.96	N/A	N/A	12
Verizon	Fiber	Broadband	15	5	74.99	N/A	N/A	N/A
Verizon	Fiber	Broadband	50	25	84.99	N/A	N/A	N/A
Verizon	Fiber	Broadband	75	35	94.99	N/A	N/A	N/A
Verizon	Fiber	Broadband	150	65	134.99	N/A	N/A	N/A
Verizon	Fiber	Broadband	300	65	214.99	N/A	N/A	N/A

ISP	Network Technology	Bundled Services	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Overage Penalty ($PPP)	Contract length (months)
Verizon	Fiber	Broadband	15	5	59.99	N/A	N/A	24
Verizon	Fiber	Broadband	50	25	69.99	N/A	N/A	24
Verizon	Fiber	Broadband	75	35	79.99	N/A	N/A	24
Verizon	Fiber	Broadband + TV	15	5	69.99	N/A	N/A	N/A
Verizon	Fiber	Broadband + TV	50	25	79.99	N/A	N/A	N/A
Verizon	Fiber	Broadband + TV	75	35	84.99	N/A	N/A	N/A
Verizon	Fiber	Broadband + TV	150	65	134.99	N/A	N/A	N/A
Verizon	Fiber	Broadband + TV	300	65	204.99	N/A	N/A	N/A
Verizon	Fiber	Broadband + Phone + TV	15	5	69.99	N/A	N/A	N/A
Verizon	Fiber	Broadband + Phone + TV	50	25	79.99	N/A	N/A	N/A
Verizon	Fiber	Broadband + Phone + TV	75	35	84.99	N/A	N/A	N/A
Verizon	Fiber	Broadband + Phone + TV	150	65	134.99	N/A	N/A	N/A
Verizon	Fiber	Broadband + Phone + TV	300	65	204.99	N/A	N/A	N/A
CenturyLink	DSL	Broadband	10	.	39.95	250	N/A	12
Charter	Cable	Broadband	30	4	37.49	N/A	N/A	N/A
Charter	Cable	Broadband + Phone	30	4	49.99	N/A	N/A	N/A
Charter	Cable	Broadband + Phone + TV	30	4	99.97	N/A	N/A	N/A

Home Broadband Pricing Data for New York, NY, USA

ISP	Network Technology	Bundled Services	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Overage Penalty ($PPP)	Contract length (months)
New York Connect	Cable	Broadband	10	0.512	51.95	.	.	.
RCN	Fiber	Broadband	25	2	34.99	.	.	N/A
RCN	Fiber	Broadband	50	6	34.99	.	.	N/A
RCN	Fiber	Broadband	75	10	59.99	.	.	N/A
RCN	Fiber	Broadband + TV	25	2	79.99	.	.	N/A
RCN	Fiber	Broadband + TV	50	6	89.99	.	.	N/A
RCN	Fiber	Broadband + TV	75	10	114.99	.	.	N/A
RCN	Fiber	Broadband + Phone + TV	25	2	89.99	.	.	N/A
RCN	Fiber	Broadband + Phone + TV	50	6	99.99	.	.	N/A
RCN	Fiber	Broadband + Phone + TV	75	10	124.99	.	.	N/A
Time Warner Cable	Cable	Broadband	15	1	34.99	N/A	N/A	N/A
Time Warner Cable	Cable	Broadband	20	2	54.99	N/A	N/A	N/A
Time Warner Cable	Cable	Broadband	30	5	64.99	N/A	N/A	N/A
Time Warner Cable	Cable	Broadband	50	5	74.99	N/A	N/A	N/A
Time Warner Cable	Cable	Broadband + Phone	15	1	54.98	N/A	N/A	N/A
Time Warner Cable	Cable	Broadband + Phone	20	2	74.98	N/A	N/A	N/A
Time Warner Cable	Cable	Broadband + Phone	30	5	84.98	N/A	N/A	N/A
Time Warner Cable	Cable	Broadband + Phone	50	5	94.98	N/A	N/A	N/A
Time Warner Cable	Cable	Broadband + TV	15	1	54.98	N/A	N/A	N/A
Time Warner Cable	Cable	Broadband + TV	20	2	64.99	N/A	N/A	N/A
Time Warner Cable	Cable	Broadband + TV	30	5	84.98	N/A	N/A	N/A
Time Warner Cable	Cable	Broadband + TV	50	5	94.98	N/A	N/A	N/A
Time Warner Cable	Cable	Broadband + Phone + TV	15	1	74.97	N/A	N/A	N/A
Time Warner Cable	Cable	Broadband + Phone + TV	20	2	94.97	N/A	N/A	N/A
Time Warner Cable	Cable	Broadband + Phone + TV	30	5	104.97	N/A	N/A	N/A
Time Warner Cable	Cable	Broadband + Phone + TV	50	5	114.97	N/A	N/A	N/A
Verizon	DSL	Broadband	1.1 to 15	0.4 to 0.8	29.99	N/A	N/A	N/A

ISP	Network Technology	Bundled Services	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Overage Penalty ($PPP)	Contract length (months)
Verizon	DSL	Broadband + Phone	1.1 to 15	0.4 to 0.8	44.99	N/A	N/A	N/A
Verizon	DSL	Broadband + Phone + TV	1.1 to 15	0.4 to 0.8	74.99	N/A	N/A	N/A
Verizon	Fiber	Broadband	15	5	59.99	N/A	N/A	24
Verizon	Fiber	Broadband	15	5	74.99	N/A	N/A	N/A
Verizon	Fiber	Broadband	50	25	69.99	N/A	N/A	24
Verizon	Fiber	Broadband	50	25	84.99	N/A	N/A	N/A
Verizon	Fiber	Broadband	75	35	79.99	N/A	N/A	24
Verizon	Fiber	Broadband	75	35	94.99	N/A	N/A	N/A
Verizon	Fiber	Broadband	150	65	129.99	N/A	N/A	24
Verizon	Fiber	Broadband	150	65	134.99	N/A	N/A	N/A
Verizon	Fiber	Broadband	300	65	209.99	N/A	N/A	24
Verizon	Fiber	Broadband	300	65	214.99	N/A	N/A	N/A
Verizon	Fiber	Broadband	500	100	299.99	N/A	N/A	24
Verizon	Fiber	Broadband	500	100	304.99	N/A	N/A	N/A
Verizon	Fiber	Broadband + TV	15	5	69.99	N/A	N/A	N/A
Verizon	Fiber	Broadband + TV	50	25	74.99	N/A	N/A	N/A
Verizon	Fiber	Broadband + TV	75	35	79.99	N/A	N/A	N/A
Verizon	Fiber	Broadband + TV	150	65	129.99	N/A	N/A	N/A
Verizon	Fiber	Broadband + TV	300	65	199.99	N/A	N/A	N/A
Verizon	Fiber	Broadband + TV	500	100	289.99	N/A	N/A	N/A
Verizon	Fiber	Broadband + Phone	15	5	54.99	N/A	N/A	24
Verizon	Fiber	Broadband + Phone	15	5	74.99	N/A	N/A	N/A
Verizon	Fiber	Broadband + Phone	50	25	79.99	N/A	N/A	N/A
Verizon	Fiber	Broadband + Phone	75	35	84.99	N/A	N/A	N/A
Verizon	Fiber	Broadband + Phone	150	65	134.99	N/A	N/A	N/A
Verizon	Fiber	Broadband + Phone	300	65	204.99	N/A	N/A	N/A
Verizon	Fiber	Broadband + Phone	500	100	294.99	N/A	N/A	N/A
Verizon	Fiber	Broadband + Phone + TV	15	5	69.99	N/A	N/A	N/A
Verizon	Fiber	Broadband + Phone + TV	50	25	74.99	N/A	N/A	N/A
Verizon	Fiber	Broadband + Phone + TV	75	35	79.99	N/A	N/A	N/A
Verizon	Fiber	Broadband + Phone + TV	150	65	129.99	N/A	N/A	N/A
Verizon	Fiber	Broadband + Phone + TV	300	65	199.99	N/A	N/A	N/A
Verizon	Fiber	Broadband + Phone + TV	500	100	289.99	N/A	N/A	N/A

Home Broadband Pricing Data for San Francisco, CA, USA

ISP	Network Technology	Bundled Services	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Overage Penalty ($PPP)	Contract length (months)
Astound	Fiber	Broadband	15	2	30	300	15 per 1 - 25GB	N/A
Astound	Fiber	Broadband	30	3	50	300	15 per 1 - 25GB	N/A
Astound	Fiber	Broadband	50	5	40	300	15 per 1 - 25GB	N/A
Astound	Fiber	Broadband + Phone + TV	15	2	134	300	15 per 1 - 25GB	N/A
Astound	Fiber	Broadband + Phone + TV	15	2	89	300	15 per 1 - 25GB	N/A
Astound	Fiber	Broadband + Phone + TV	15	2	209	300	15 per 1 - 25GB	N/A
Astound	Fiber	Broadband + Phone + TV	30	3	154	300	15 per 1 - 25GB	N/A
Astound	Fiber	Broadband + Phone + TV	30	3	159	300	15 per 1 - 25GB	N/A
Astound	Fiber	Broadband + Phone + TV	30	3	229	300	15 per 1 - 25GB	N/A
Astound	Fiber	Broadband + Phone + TV	50	5	174	300	15 per 1 - 25GB	N/A
Astound	Fiber	Broadband + Phone + TV	50	5	89	300	15 per 1 - 25GB	N/A
Astound	Fiber	Broadband + Phone + TV	50	5	249	300	15 per 1 - 25GB	N/A
LMi	DSL	Broadband	6	0.768	59.95	N/A	N/A	N/A
LMi	DSL	Broadband + Phone	20	.	39.99	N/A	N/A	N/A
Comcast	Cable	Broadband	25	5	37.49	.	.	.
Comcast	Cable	Broadband	20	.	43.1	.	.	.
Comcast	Cable	Broadband	50	10	74.95	.	.	.
Comcast	Cable	Broadband	105	20	114.95	.	.	.
Comcast	Cable	Broadband	6	1	49.95	.	.	.
Comcast	Cable	Broadband	30	6	59.99	.	.	.
Comcast	Cable	Broadband + TV	25	.	74.99	.	.	24
Comcast	Cable	Broadband + TV	25	.	84.99	.	.	24
Comcast	Cable	Broadband + TV	25	.	129.99	.	.	24
Comcast	Cable	Broadband + TV	25	.	79.99	.	.	.
Comcast	Cable	Broadband + TV	25	.	129.99	.	.	.
Comcast	Cable	Broadband + TV	50	.	94.99	.	.	.
Comcast	Cable	Broadband + TV	50	.	104.99	.	.	.
Comcast	Cable	Broadband + Phone	25	.	49.99	.	.	24
Comcast	Cable	Broadband + Phone + TV	25	.	109.5	.	.	24
Comcast	Cable	Broadband + Phone + TV	25	.	99	.	.	N/A

ISP	Network Technology	Bundled Services	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Overage Penalty ($PPP)	Contract length (months)
Comcast	Cable	Broadband + Phone + TV	25	.	119.99	.	.	24
Comcast	Cable	Broadband + Phone + TV	25	.	119.99	.	.	N/A
Comcast	Cable	Broadband + Phone + TV	50	.	139.99	.	.	24
Comcast	Cable	Broadband + Phone + TV	50	.	139.99	.	.	N/A
i-Step	DSL	Broadband	6	0.768	49	N/A	N/A	12
i-Step	DSL	Broadband	6	0.768	69	N/A	N/A	12
i-Step	DSL	Broadband	8	1	83	N/A	N/A	12
i-Step	DSL	Broadband	10	1	91	N/A	N/A	12
i-Step	DSL	Broadband	15	1	98	N/A	N/A	12
Sonic.net	DSL	Broadband + Phone	20	2.5	39.95	N/A	N/A	N/A
Webpass	Fiber	Broadband	100	100	50	Throttle*	N/A	N/A
Webpass	Fiber	Broadband	100	100	37.5	Throttle*	N/A	12

Home Broadband Pricing Data for Washington, DC, USA

ISP	Network Technology	Bundled Services	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Overage Penalty ($PPP)	Contract length (months)
Comcast	Cable	Broadband	6	1	49.95	.	.	24
Comcast	Cable	Broadband	25	5	54.99	.	.	24
Comcast	Cable	Broadband	50	10	67.5	.	.	24
Comcast	Cable	Broadband	105	20	102.5	.	.	24
Comcast	Cable	Broadband + Phone	20	.	62.5	.	.	12
Comcast	Cable	Broadband + Phone + TV	20	.	112.5	.	.	24
Comcast	Cable	Broadband + Phone + TV	50	10	145	.	.	24
RCN	Cable	Broadband	10	0.8	34.99	N/A	N/A	N/A
RCN	Cable	Broadband	25	2	39.99	N/A	N/A	N/A
RCN	Cable	Broadband	50	6	39.99	N/A	N/A	N/A
RCN	Cable	Broadband	75	10	79.99	N/A	N/A	N/A
RCN	Cable	Broadband + TV	25	2	89.99	N/A	N/A	N/A
RCN	Cable	Broadband + TV	50	6	104.99	N/A	N/A	N/A
RCN	Cable	Broadband + Phone + TV	25	2	68.3	N/A	N/A	N/A
RCN	Cable	Broadband + Phone + TV	50	6	114.99	N/A	N/A	N/A
Verizon	DSL	Broadband	15	0.8	29.99	N/A	N/A	N/A
Verizon	DSL	Broadband + Phone	15	0.8	44.99	N/A	N/A	N/A
Verizon	DSL	Broadband + Phone + TV	15	0.8	74.99	N/A	N/A	N/A
Verizon	DSL	Broadband	15	0.8	29.99	N/A	N/A	N/A
Verizon	DSL	Broadband + Phone	15	0.8	44.99	N/A	N/A	N/A
Verizon	DSL	Broadband + Phone + TV	15	0.8	74.99	N/A	N/A	N/A
Verizon	Fiber	Broadband	15	5	59.99	N/A	N/A	24
Verizon	Fiber	Broadband	15	5	74.99	N/A	N/A	N/A
Verizon	Fiber	Broadband	50	25	69.99	N/A	N/A	24
Verizon	Fiber	Broadband	50	25	84.99	N/A	N/A	N/A
Verizon	Fiber	Broadband	75	35	79.99	N/A	N/A	24
Verizon	Fiber	Broadband	75	35	94.99	N/A	N/A	N/A
Verizon	Fiber	Broadband	150	65	129.99	N/A	N/A	24
Verizon	Fiber	Broadband	150	65	134.99	N/A	N/A	N/A
Verizon	Fiber	Broadband	300	65	209.99	N/A	N/A	24
Verizon	Fiber	Broadband	300	65	214.99	N/A	N/A	N/A
Verizon	Fiber	Broadband + Phone	15	5	74.99	N/A	N/A	24
Verizon	Fiber	Broadband + Phone	50	25	84.99	N/A	N/A	24

ISP	Network Technology	Bundled Services	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Overage Penalty ($PPP)	Contract length (months)
Verizon	Fiber	Broadband + Phone	75	35	89.99	N/A	N/A	24
Verizon	Fiber	Broadband + Phone	150	65	164.98	N/A	N/A	24
Verizon	Fiber	Broadband + Phone	300	65	244.99	N/A	N/A	24
Verizon	Fiber	Broadband + Phone + TV	15	5	79.99	N/A	N/A	24
Verizon	Fiber	Broadband + Phone + TV	50	25	89.99	N/A	N/A	24
Verizon	Fiber	Broadband + Phone + TV	75	35	94.99	N/A	N/A	24
Verizon	Fiber	Broadband + Phone + TV	150	65	184.98	N/A	N/A	24
Verizon	Fiber	Broadband + Phone + TV	300	65	264.98	N/A	N/A	24

In this appendix, we present all of the mobile broadband packages available for a USB-dongle modem that we found in our 2013 Cost of Connectivity report. The full data set, including additional information on activation fees, modem purchase or rental fees, and other notes, is available for download at http://oti.newamerica.net/publications/policy/reining_in_the_cost_of_connectivity.

Mobile Broadband Pricing Data for Toronto, Canada

ISP	Network Technology	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Cap Penalty ($PPP)	Contract length (months)
Bell	4G LTE	75	50	8.13	0.1	automatically bumped to next price tier	0 or 24
Bell	4G LTE	75	50	24.39	0.5	automatically bumped to next price tier	0 or 24
Bell	4G LTE	75	50	36.59	2	automatically bumped to next price tier	0 or 24
Bell	4G LTE	75	50	56.91	6	automatically bumped to next price tier	0 or 24
Bell	4G LTE	75	50	69.11	10	automatically bumped to next price tier	0 or 24
Bell	4G LTE	75	50	85.37	15	8.13/GB	0 or 24
Rogers	LTE	100	50	20.33	0.2	automatically bumped to next price tier	24
Rogers	LTE	100	50	36.59	3	automatically bumped to next price tier	24
Rogers	LTE	100	50	52.85	6	automatically bumped to next price tier	24
Rogers	LTE	100	50	69.11	10	8.13/GB	24
Rogers	LTE	100	50	4.07	0.01	automatically bumped to next price tier	0
Rogers	LTE	100	50	8.13	0.1	automatically bumped to next price tier	0
Rogers	LTE	100	50	16.26	0.5	automatically bumped to next price tier	0
Rogers	LTE	100	50	32.52	5	8.13/GB	0
Telus	4G LTE	75	.	8.13	0.1	automatically bumped to next price tier	0 to 24
Telus	4G LTE	75	.	24.39	0.5	automatically bumped to next price tier	0 to 24
Telus	4G LTE	75	.	36.59	2	automatically bumped to next price tier	0 to 24
Telus	4G LTE	75	.	56.91	6	automatically bumped to next price tier	0 to 24
Telus	4G LTE	75	.	69.11	10	0.04/MB	0 to 24
WIND Mobile	4G	21	6	12.20	1	0.01/MB	N/A
WIND Mobile	4G	21	6	20.33	3	0.01/MB	N/A
WIND Mobile	4G	21	6	28.46	10	Throttle	N/A
Mobilicity	4G	21	6	28.46	6	Throttle	N/A
Mobilicity	4G	21	6	16.26	20	Throttle	N/A

Mobile Broadband Pricing Data for Hong Kong, China

ISP	Network Technology	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Cap Penalty ($PPP)	Contract length (months)
3 Hong Kong	4G LTE	100	.	17.85	0.4	Throttle	.
3 Hong Kong	4G LTE	150	.	17.85	0.4	Throttle	.
3 Hong Kong	4G LTE	100/150	.	52.46	2	Throttle	.
3 Hong Kong	4G LTE	100/150	.	90.71	5	Throttle	.
3 Hong Kong	4G LTE	100/150	.	105.28	10	Throttle	.
3 Hong Kong	4G LTE	100/150	.	119.85	15	Throttle	.
3 Hong Kong	4G LTE	100/150	.	134.43	20	Throttle	.
3 Hong Kong	3G	7.2	.	12.39	0.4	Throttle	.
3 Hong Kong	3G	21	.	12.39	0.4	Throttle	.
3 Hong Kong	3G	42	.	12.39	0.4	Throttle	.
3 Hong Kong	4G LTE	7.2	.	59.74	5	Throttle	.
3 Hong Kong	4G LTE	21	.	72.50	5	Throttle	.
3 Hong Kong	4G LTE	42	.	81.60	5	Throttle	.
PCCW - HKT	4G LTE	150	50	49.00	2.5	Suspend	24
PCCW - HKT	4G LTE	150	50	65.39	5	Suspend	24
PCCW - HKT	4G LTE	150	50	72.68	10	Suspend	24
PCCW - HKT	4G LTE	150	50	83.61	20	Suspend	24
PCCW - HKT	4G LTE	150	50	156.28	80	Suspend	24
China Mobile Hong Kong	3G	0.375	.	14.57	N/A	.	.
China Mobile Hong Kong	4G LTE	100	.	23.68	2	Throttle	.
China Mobile Hong Kong	4G LTE	100	.	27.69	5	Throttle	.
SmarTone	4G LTE / WCDMA / GSM	150	50	40.07	5	Throttle	18
SmarTone	4G LTE / WCDMA / GSM	150	50	58.29	10	Throttle	18
SmarTone	4G LTE / WCDMA / GSM	150	50	76.50	20	Throttle	18
SmarTone	WCDMA / GSM	42	5.76	40.07	5	Throttle	18
SmarTone	WCDMA / GSM	42	5.76	58.29	10	Throttle	18
SmarTone	WCDMA / GSM	42	5.76	76.50	20	Throttle	18
SmarTone	WCDMA / GSM	7.2	5.76	40.07	5	Throttle	18
SmarTone	WCDMA / GSM	7.2	5.76	58.29	10	Throttle	18
SmarTone	WCDMA / GSM	7.2	5.76	76.50	20	Throttle	18
1O1O	EDGE / HSDPA / LTE	100	.	74.86	5	Throttle	12 - 24
1O1O	EDGE / HSDPA / LTE	100	.	93.08	15	Throttle	12 - 24
1O1O	EDGE / HSDPA / LTE	100	.	104.01	7	Throttle	12 - 24
1O1O	EDGE / HSDPA / LTE	100	.	111.29	30	Throttle	12 - 24

ISP	Network Technology	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Cap Penalty ($PPP)	Contract length (months)
1O1O	EDGE / HSDPA / LTE	100	.	122.22	20	Throttle	12 - 24
1O1O	EDGE / HSDPA / LTE	100	.	140.44	35	Throttle	12 - 24
one2free	LTE / DC-HSPA+ / HSPA / UMTS / EDGE	100	.	15.85	1	.	12
one2free	LTE / DC-HSPA+ / HSPA / UMTS / EDGE	100	.	34.06	5	.	12
one2free	LTE / DC-HSPA+ / HSPA / UMTS / EDGE	100	.	55.92	10	.	12

Mobile Broadband Pricing Data for Prague, Czech Republic

ISP	Network Technology	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Cap Penalty ($PPP)	Contract length (months)
O2	4G, 3G	20	N/A	17.74	1	.	24
O2	4G, 3G	20	N/A	22.12	1	.	N/A
T-Mobile	3G (GPRS, EDGE)	42	5.76	10.88	0.15	.	.
T-Mobile	3G (GPRS, EDGE)	42	5.76	18.18	0.4	.	.
T-Mobile	3G (GPRS, EDGE)	42	5.76	25.47	1	.	.
T-Mobile	3G (GPRS, EDGE)	42	5.76	14.53	1	.	.
T-Mobile	3G (GPRS, EDGE)	42	5.76	21.82	3	.	.
T-Mobile	3G (GPRS, EDGE)	42	5.76	36.42	10	.	.
T-Mobile	3G (GPRS, EDGE)	42	5.76	51.02	30	.	.
Vodafone	4G	21.6	5.76	19.56	0.5	Throttle	N/A
Vodafone	4G	43.2	5.76	19.56	0.5	Throttle	N/A
Vodafone	4G	150	75	19.56	0.5	Throttle	N/A
Vodafone	4G	21.6	5.76	29.12	1.5	Throttle	N/A
Vodafone	4G	43.2	5.76	29.12	1.5	Throttle	N/A
Vodafone	4G	150	75	29.12	1.5	Throttle	N/A
Vodafone	4G	21.6	5.76	39.12	4	Throttle	N/A
Vodafone	4G	43.2	5.76	39.12	4	Throttle	N/A
Vodafone	4G	150	75	39.12	4	Throttle	N/A
Vodafone	4G	21.6	5.76	73.65	10	Throttle	N/A
Vodafone	4G	43.2	5.76	73.65	10	Throttle	N/A
Vodafone	4G	150	75	73.65	10	Throttle	N/A

Mobile Broadband Pricing Data for Copenhagen, Denmark

ISP	Network Technology	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Cap Penalty ($PPP)	Contract length (months)
3	4G / 3G	8-35 (4G), 4-20 (3G)	2-24 (4G), 1-4 (3G)	8.91	1	3.75 for 1 GB; 8.91 for 5 GB; 16.67 for 10 GB	6
3	4G / 3G	8-35 (4G), 4-20 (3G)	2-24 (4G), 1-4 (3G)	16.67	10	3.75 for 1 GB; 8.91 for 5 GB; 16.67 for 10 GB	6
3	4G / 3G	8-35 (4G), 4-20 (3G)	2-24 (4G), 1-4 (3G)	32.17	40	3.75 for 1 GB; 8.91 for 5 GB; 16.67 for 10 GB	6
3	4G / 3G	8-35 (4G), 4-20 (3G)	2-24 (4G), 1-4 (3G)	38.63	200	3.75 for 1 GB; 8.91 for 5 GB; 16.67 for 10 GB	6
3	4G / 3G	8-35 (4G), 4-20 (3G)	2-24 (4G), 1-4 (3G)	51.55	N/A	3.75 for 1 GB; 8.91 for 5 GB; 16.67 for 10 GB	6
DLG Tele	4G	6	1	19.25	10	Throttle	6
Fullrate	HSDPA / Turbo 3G	6	1	5.17	1	Throttle	6
Fullrate	HSDPA / Turbo 3G	20	5	7.75	1	Throttle	6
Fullrate	HSDPA / Turbo 3G	6	1	12.92	5	Throttle	6
Fullrate	HSDPA / Turbo 3G	20	5	15.50	5	Throttle	6
Fullrate	HSDPA / Turbo 3G	6	1	25.84	15	Throttle	6
Fullrate	HSDPA / Turbo 3G	20	5	28.42	15	Throttle	
Lebara	3G	.	.	5.04	0.3	5.04	N/A
Lebara	3G	.	.	6.33	1	6.33	N/A
Lebara	3G	.	.	10.21	2	10.21	N/A
Lebara	3G	.	.	12.79	5	12.79	N/A
OiSTER	4G	20	4	10.21	5	Throttle	6
OiSTER	4G	20	4	12.79	10	Throttle	6
OiSTER	4G	20	4	20.54	20	Throttle	6
OiSTER	4G	20	4	25.71	100	Throttle	6
Telenor	4G	71	43	12.79	1	Throttle	6
Telenor	4G	71	43	17.96	5	Throttle	6
Telenor	4G	71	43	30.88	15	Throttle	6
Telenor	4G	71	43	43.80	100	Throttle	6
Telia	4G	71	43	6.33	0.5	Throttle	6
Telia	4G	71	43	12.79	2	Throttle	6
Telia	4G	71	43	25.71	10	Throttle	6
Telia	4G	71	43	38.63	100	Throttle	6
Telia	4G	71	43	51.55	500	Throttle	6
CBB	.	7	1	6.33	2	6.33	N/A
CBB	.	7	1	4.30	2	Throttle	12
CBB	.	7	1	19.12	15	19.12	N/A

Mobile Broadband Pricing Data for Paris, France

ISP	Network Technology	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Cap Penalty ($PPP)	Contract length (months)
Bouygues Telecom	H+	42	.	11.51	0.5	Throttle	N/A
Bouygues Telecom	H+	42	.	23.14	5	Throttle	24
Bouygues Telecom	H+	42	.	28.95	5	Throttle	N/A
Bouygues Telecom	H+	42	.	46.40	10	Throttle	24
Bouygues Telecom	H+	42	.	52.21	10	Throttle	N/A
Orange	3G	14.4	.	15.00	1	Stop service	12
Orange	3G	14.4	.	19.65	1	Stop service	N/A
Orange	4G / H+	100 to 150	.	38.26	5	Throttle video only	12
Orange	4G / H+	100 to 150	.	42.91	5	Throttle video only	N/A
Orange	4G / H+	100 to 150	.	61.51	10	Throttle video only	24
Orange	4G / H+	100 to 150	.	66.16	10	Throttle video only	N/A
SFR	3G	42	.	17.43	3	.	12
SFR	3G and 4G	42 to 100	.	29.06	6	.	12

Mobile Broadband Pricing Data for Berlin, Germany

ISP	Network Technology	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Cap Penalty ($PPP)	Contract length (months)
1&1	HSDPA/UMTS	14.4	.	12.65	1	Throttle	N/A
1&1	HSDPA/UMTS	14.4	.	25.30	5	Throttle	N/A
1&1	HSDPA/UMTS	21.6	.	37.96	10	Throttle	N/A
Deutsche Telekom	LTE+	7.2	1.4	25.25	1	Throttle	24
Deutsche Telekom	LTE+	21.6	5.7	37.91	3	Throttle	24
Deutsche Telekom	LTE+	100	10	63.23	10	Throttle	24
Deutsche Telekom	LTE+	100	10	88.54	30	Throttle	24
E-plus	.	7.2	1.4	12.66	0.25	Throttle	24
E-plus	.	7.2	1.4	18.99	0.75	Throttle	24
E-plus	.	7.2	1.4	25.32	2	Throttle	24
E-plus	.	7.2	1.4	31.65	5	Throttle	24
O2	.	7.2		31.63	5	Throttle	24
O2	.	21.1		44.29	7.5	Throttle	24
O2	.	50		56.95	10	Throttle	24
Kabel Deutschland	.	7.2	.	25.30	5	Throttle	N/A
Vodafone	.	7.2	.	19.29	1	Throttle	24
Vodafone	.	21.6	.	30.68	3	Throttle	24
Vodafone	.	42.2	.	42.08	6	Throttle	24
Vodafone	.	50	.	53.47	10	Throttle	24

Mobile Broadband Pricing Data for Dublin, Ireland

ISP	Network Technology	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Cap Penalty ($PPP)	Contract length (months)
eircom	3G	21	.	6.10	1	.	12
eircom	3G	21	.	24.38	7.5	.	N/A
eircom	3G	21	.	24.78	10	.	12
Meteor	3G	21	.	21.06	5	0.02/MB	12
Meteor	3G	21	.	24.78	10	0.02/MB	12
Meteor	3G	21	.	30.98	20	0.02/MB	12
Meteor	3G	21	.	24.78	20	0.02/MB	18
Meteor	3G	21	.	30.98	30	0.02/MB	18
O2	HSPA	21	5.76	24.38	7.5	2.48/MB	N/A
O2	HSPA	21	5.76	24.78	15	2.48/MB	6
O2	HSPA	21	5.76	24.78	15	2.48/MB	12
Three	3G	21	5.76	15.84	2	6.20/MB	12
Three	3G	21	5.76	26.82	15	6.20/MB	12
Three	3G	21	5.76	42.67	60	6.20/MB	12
Three	3G	21	5.76	9.74	1	6.20/MB	12
Vodafone	GSM / GPRS / EDGE / HSPA+	21	5.76	24.38	10	0.02/MB	12
Vodafone	GSM / GPRS / EDGE / HSPA+	21	.	30.48	10	0.02/MB	12
Vodafone	GSM / GPRS / EDGE / HSPA+	42	.	36.57	10	0.02/MB	12

Mobile Broadband Pricing Data for Tokyo, Japan

ISP	Network Technology	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Cap Penalty ($PPP)	Contract length (months)
J:COM	3G (WiMax)	40	15.4	33.97	N/A	N/A	12
NTT DoCoMo	4G (LTE)	75	25	61.43	7	Throttle	24
NTT DoCoMo	4G (LTE)	75	25	75.30	7	Throttle	N/A
NTT DoCoMo	4G (LTE)	75	25	51.52	3	Throttle	24
NTT DoCoMo	4G (LTE)	75	25	65.40	3	Throttle	N/A
NTT DoCoMo	4G (LTE)	75	25	66.39	7	Throttle	24
NTT DoCoMo	4G (LTE)	75	25	80.26	7	Throttle	N/A
NTT DoCoMo	4G (LTE)	75	25	66.39	7	Throttle	24
NTT DoCoMo	4G (LTE)	75	25	80.26	7	Throttle	N/A

Mobile Broadband Pricing Data for Riga, Latvia

ISP	Network Technology	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Cap Penalty ($PPP)	Contract length (months)
Tele2	3G	4	.	11.56	5	Throttle	12
Tele2	3G	4	.	11.56	5	Throttle	N/A
Tele2	3G	4	.	20.42	15	Throttle	12
Tele2	3G	4	.	20.42	15	Throttle	N/A
Tele2	3G	6	.	34.53	25	Throttle	12
Tele2	3G	6	.	34.53	25	Throttle	N/A
Bite	3G	21.6	.	6.94	0.5	0.08/MB	N/A
Bite	3G	21.6	.	6.94	0.5	0.08/MB	12 or 24
Bite	3G	21.6	.	12.50	2	0.08/MB	N/A
Bite	3G	21.6	.	12.50	2	0.08/MB	12 or 24
Bite	3G	21.6	.	19.44	6	0.08/MB	N/A
Bite	3G	21.6	.	19.44	6	0.08/MB	12 or 24
Bite	3G	21.6	.	23.61	10	0.08/MB	N/A
Bite	3G	21.6	.	23.61	10	0.08/MB	12 or 24
LMT	4G	4	.	13.78	2	Throttle	0-36
LMT	4G	4	.	19.31	10	Throttle	0-36
LMT	4G	4	.	33.08	N/A	N/A	0-36
LMT	4G	20	.	52.33	N/A	N/A	0-36
Triatel	3G	3.1	1.8	8.06	No data included, pay .01/MB	0.03/MB	0-3
Triatel	3G	3.1	1.8	16.39	2	2.78/GB	0-3
Triatel	3G	3.1	1.8	38.61	N/A	N/A	0-3

NOTE: Contract lengths affect upfront device fees: lower fees are charged for longer contracts.

Mobile Broadband Pricing Data for Mexico City, Mexico

ISP	Network Technology	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Cap Penalty ($PPP)	Contract length (months)
Iusacell	4G	21.6	.	10.30	0.005	Throttle or can upgrade to next cap level	12, 18, or 24
Iusacell	4G	21.6	.	19.43	0.01	Throttle or can upgrade to next cap level	12, 18, or 24
Iusacell	4G	21.6	.	25.95	0.05	Throttle or can upgrade to next cap level	12, 18, or 24
Iusacell	4G	21.6	.	29.86	0.1	Throttle or can upgrade to next cap level	12, 18, or 24
Iusacell	4G	21.6	.	32.46	0.5	Throttle or can upgrade to next cap level	12, 18, or 24
Iusacell	4G	21.6	.	38.98	2	Throttle or can upgrade to next cap level	12, 18, or 24
Iusacell	4G	21.6	.	52.02	3	Throttle or can upgrade to next cap level	12, 18, or 24
Iusacell	4G	21.6	.	58.54	5	Throttle or can upgrade to next cap level	12, 18, or 24
Iusacell	4G	21.6	.	78.10	10	Throttle	12, 18, or 24
Movistar	3G	7.2	.	25.95	0.5	Throttle, or can pay 7.82/100MB	N/A
Movistar	3G	7.2	.	32.46	1	Throttle, or can pay 7.82/100MB	N/A
Movistar	3G	7.2	.	36.38	3	Throttle, or can pay 7.82/100MB	N/A
Movistar	3G	7.2	.	55.93	5	Throttle, or can pay 7.82/100MB	N/A
Movistar	3G	7.2	.	76.79	10	Throttle, or can pay 7.82/100MB	N/A
Telcel	HSPA+	21	.	23.34	0.4	Throttle or can pay for next level	N/A
Telcel	HSPA+	21	.	25.95	0.5	Throttle or can pay for next level	N/A
Telcel	HSPA+	21	.	32.46	1	Throttle or can pay for next level	N/A
Telcel	HSPA+	21	.	38.98	3	Throttle or can pay for next level	N/A
Telcel	HSPA+	21	.	58.54	5	Throttle or can pay for next level	N/A
Telcel	HSPA+	21	.	78.10	10	Throttle or can pay 6.39 for extra 100 MB, 25.95 for extra 500, or 38.98 for extra 1000MB	N/A

NOTE: Contract lengths affect upfront device fees: lower fees are charged for longer contracts.

Mobile Broadband Pricing Data for Amsterdam, Netherlands

ISP	Network Technology	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Cap Penalty ($PPP)	Contract length (months)
KPN	.	14	.	24.10	0.5	.12/MB	
KPN	.	25	.	42.17	2.5	.12/MB	
KPN	.	50	.	54.22	5	.12/MB	
T-Mobile	.	14.4	.	10.84	0.25	Throttle	24
T-Mobile	.	14.4	.	15.66	1	Throttle	24
T-Mobile	.	14.4	.	25.30	2.5	Throttle	24
T-Mobile	.	14.4	.	42.17	10	Throttle	24
T-Mobile	.	14.4	.	12.05	0.25	Throttle	12
T-Mobile	.	14.4	.	16.87	1	Throttle	12
T-Mobile	.	14.4	.	26.51	2.5	Throttle	12
T-Mobile	.	14.4	.	43.37	10	Throttle	12
Vodafone	.	7.2	.	16.27	1	.09/MB	24
Vodafone	.	14.4	2	20.23	2.5	.09/MB	24
Vodafone	.	14.4	2	25.30	2.5	.09/MB	12
Vodafone	.	50	.	43.37	7	.09/MB	24
Tele2	.	40	3	36.75	3	Throttled	12

Mobile Broadband Pricing Data for Bucharest, Romania

ISP	Network Technology	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Cap Penalty ($PPP)	Contract length (months)
Orange	3G	21	5.76	26.71	3	Throttle to 128k	12
Orange	3G	21	5.76	34.72	5	Throttle to 128k	12
Orange	H+	43.2	5.76	42.73	10	Throttle to 128k	12
Orange	4G / H+	75	37.5	53.42	16	Throttle to 128k	12
Orange	4G / H+	75	37.5	66.77	25	Throttle to 128k	12
RCS & RDS	HSDPA	7.2	3.6	8.98	5	Throttle	12
RCS & RDS	HSDPA	7.2	3.6	14.97	10	Throttle	12

Mobile Broadband Pricing Data for Seoul, South Korea

ISP	Network Technology	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Cap Penalty ($PPP)	Contract length (months)
LG Uplus	4G (LTE + EVDO Rev. A)	100	50	39.94	5	.04/MB	24
LG Uplus	4G (LTE + EVDO Rev. A)	100	50	66.57	10	.04/MB	24
SK Telecom	4G (LTE)	75	37.5	42.36	5	If overage is less than 880MB, then penality is .02/MB. If overage is between 880MB and 3GB, then penality is 21.79. If overage is over 3GB, user will pay 21.79 and usage will be throttled, but user can avoid throttling by paying .01/MB.	24
SK Telecom	4G (LTE)	75	37.5	54.47	9	If overage is less than 880MB, then penality is .02/MB. If overage is between 880MB and 3GB, then penality is 21.79. If overage is over 3GB, user will pay 21.79 and usage will be throttled, but user can avoid throttling by paying .01/MB.	24
SK Telecom	3G (Wibro)	10	3	6.05	30	.01/MB	24
SK Telecom	3G (Wibro)	10	3	14.52	50	.01/MB	24
SK Telecom	3G (Wibro)	10	3	24.21	N/A	N/A	24

Mobile Broadband Pricing Data for Zurich, Switzerland

ISP	Network Technology	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Cap Penalty ($PPP)	Contract length (months)
Orange	HSDPA	21.1	5.76	35.25	5	Throttle	12
Orange	HSDPA	21.1	5.76	35.25	5	Throttle	24
Orange	HSDPA	21.1	5.76	13.67	1	Throttle	12
Orange	HSDPA	21.1	5.76	13.67	1	Throttle	24
Sunrise	HSDPA	150	50	5.40	0.25	.	12
Sunrise	HSDPA	150	50	5.40	0.25	.	24
Sunrise	HSDPA	150	50	10.79	1	.	12
Sunrise	HSDPA	150	50	10.79	1	.	24
Sunrise	HSDPA	150	50	25.18	5	.	12
Sunrise	HSDPA	150	50	25.18	5	.	24
Sunrise	HSDPA	150	50	35.25	10	.	12
Sunrise	HSDPA	150	50	35.25	10	.	24
Swisscom	4G LTE	7	2	13.67	0.5	Throttle	12
Swisscom	4G LTE	7	2	13.67	0.5	Throttle	24
Swisscom	4G LTE	7	1	20.86	N/A	N/A	12
Swisscom	4G LTE	7	1	20.86	N/A	N/A	24
Swisscom	4G LTE	21	2	35.25	N/A	N/A	12
Swisscom	4G LTE	21	2	35.25	N/A	N/A	24
Swisscom	4G LTE	150	30	49.64	N/A	N/A	12
Swisscom	4G LTE	150	30	49.64	N/A	N/A	24

Mobile Broadband Pricing Data for London, United Kingdom

ISP	Network Technology	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Cap Penalty ($PPP)	Contract length (months)
Orange	HSPA+	21.6	5.76	15.15	0.5	4.55/day	18
Orange	HSPA+	21.6	5.76	18.94	0.5	4.55/day	12
Orange	HSPA+	21.6	5.76	22.73	2	4.55/day	18
Orange	HSPA+	21.6	5.76	26.52	2	4.55/day	12
Orange	HSPA+	21.6	5.76	37.88	5	4.55/day	18
Orange	HSPA+	21.6	5.76	45.45	5	4.55/day	12
Three.co.uk	HSPA+	21	5.76	11.92	1	Throttle	24
Three.co.uk	HSPA+	21	5.76	24.23	5	Throttle	1
Three.co.uk	HSPA+	21	5.76	24.23	15	Throttle	24
Three.co.uk	HSPA+	42	.	13.47	1	Throttle	24
Three.co.uk	HSPA+	42	.	24.23	5	Throttle	1
Three.co.uk	HSPA+	42	.	25.77	15	Throttle	24
Vodafone	3G	21.6	5.76	15.15	1	9.09/250MB	1 or 12
Vodafone	3G	21.6	5.76	22.73	2	9.09/250MB	1 or 12
Vodafone	3G	21.6	5.76	30.30	4	9.09/250MB	1 or 12
Vodafone	3G	21.6	5.76	45.45	10	9.09/250MB	1 or 12
O2	3G	7.2	5.76	15.47	1	.	1
O2	3G	7.2	5.76	23.21	2	.	1
TMobile	HSPA+	21.6	5.76	11.36	1	4.55/day	1 or 18
TMobile	HSPA+	21.6	5.76	15.15	2	4.55/day	1 or 18
TMobile	HSPA+	21.6	5.76	22.73	5	4.55/day	1 or 18
EE	4G	100	50	19.68	1	.	24
EE	4G	100	50	24.23	3	.	1 or 24
EE	4G	100	50	31.80	5	.	1 or 24
EE	4G	100	50	39.38	8	.	1 or 24

Mobile Broadband Pricing Data for All U.S. Cities

ISP	Network Technology	Download speed (Mbps)	Upload speed (Mbps)	Monthly Price ($PPP)	Data Cap (GB)	Data Cap Penalty ($PPP)	Contract length (months)
AT&T	4G (HSPA+)	.	.	50.00	5	10/GB	N/A
AT&T	4G (HSPA+)	.	.	50.00	5	10/GB	12
AT&T	4G (HSPA+)	.	.	50.00	5	10/GB	24
Verizon	4G	.	.	30.00	4	15/GB	N/A
Verizon	4G	.	.	40.00	6	15/GB	N/A
Verizon	4G	.	.	50.00	8	15/GB	N/A
Verizon	4G	.	.	60.00	10	15/GB	N/A
Verizon	4G	.	.	70.00	12	15/GB	N/A
Verizon	4G	.	.	80.00	14	15/GB	N/A
Verizon	4G	.	.	90.00	16	15/GB	N/A
Verizon	4G	.	.	100.00	18	15/GB	N/A
Verizon	4G	.	.	110.00	20	15/GB	N/A
Verizon	4G	.	.	185.00	30	15/GB	N/A
Verizon	4G	.	.	260.00	40	15/GB	N/A
Verizon	4G	.	.	335.00	50	15/GB	N/A
T-Mobile	4G	.	.	20.00	0.5	Throttle	24
T-Mobile	4G	.	.	30.00	2.5	Throttle	24
T-Mobile	4G	.	.	40.00	4.5	Throttle	24
T-Mobile	4G	.	.	50.00	6.5	Throttle	24
T-Mobile	4G	.	.	60.00	8.5	Throttle	24
T-Mobile	4G	.	.	70.00	10.5	Throttle	24
T-Mobile	4G	.	.	20.00	0.5	Throttle	24
Sprint	3G/4G	6	.	49.99	6	.05/MB	24
Sprint	3G/4G	6	.	79.99	12	.05/MB	24

Home Broadband Pricing

Country	City	ISP	Website
Canada	Toronto	Acanac	http://www.acanac.ca/
Canada	Toronto	Bell	http://www.bell.ca/Bell_Internet/
Canada	Toronto	Cogeco	http://www.cogeco.ca/web/on/en/residential/internet/
Canada	Toronto	Rogers	http://www.rogers.com/web/link/hispeedBrowseFlowDefaultPlans
Canada	Toronto	Teksavvy	http://teksavvy.com/en/residential/internet/
Canada	Toronto	Velcom	http://www.velcom.ca/main.htm
China	Hong Kong	Hong Kong Broadband Network Limited	https://apply.hkbn.net
China	Hong Kong	i-cable	http://www.cabletv.com.hk/en/
China	Hong Kong	3 in HK	http://www.threebb.com.hk/eng/index.html
China	Hong Kong	PCCW	http://www.netvigator.com/eng/index.php
Czech Republic	Prague	O2	http://www.o2.cz/osobni/en/
Czech Republic	Prague	UPC	http://www.upc.cz
Denmark	Copenhagen	DLG Tele	http://www.dlgtele.dk/privat/
Denmark	Copenhagen	Fullrate	http://www.fullrate.dk/
Denmark	Copenhagen	Perspektiv	http://www.perspektivbredband.dk/Webpages/Privat/Bredband_xDSL.aspx
Denmark	Copenhagen	YouSee	http://yousee.dk/
Denmark	Copenhagen	SEAS-NVE	http://www.seas-nve.dk/Privat/Fibernet/
Denmark	Copenhagen	Stofa	https://stofa.dk
Denmark	Copenhagen	TDC	http://privat.tdc.dk/
Denmark	Copenhagen	Telenor	http://www.telenor.dk/privat/
Denmark	Copenhagen	Telia	http://ww3.telia.dk/bredbaand/
France	Paris	Bouygues Telecom	http://www.laboutique.bouyguestelecom.fr/
France	Paris	Darty	http://www.bouyguestelecom.darty.com/
France	Paris	Free	http://www.free.fr/
France	Paris	Orange	http://abonnez-vous.orange.fr/prehome.aspx
France	Paris	SFR	http://adsl.sfr.fr/
France	Paris	Teleconnect	http://www.teleconnect.fr
Germany	Berlin	1&1	http://dsl.1und1.de
Germany	Berlin	Deutsche Telekom	http://www.telekom.de/privatkunden/
Germany	Berlin	Kabel Deutschland	https://www.kabeldeutschland.de/
Germany	Berlin	O2	http://dsl.o2online.de/
Germany	Berlin	TeleColumbus	http://www.telecolumbus.de
Germany	Berlin	Versatel	http://www.versatel.de/dsl/
Germany	Berlin	Vodafone	http://dslshop.vodafone.de/
Ireland	Dublin	Digiweb	http://www.digiweb.ie/home/
Ireland	Dublin	eircom	https://secure.eircom.net/
Ireland	Dublin	Magnet	https://www.magnet.ie/
Ireland	Dublin	Smart Telecom	http://www.smarttelecom.ie/

Country	City	ISP	Website
Ireland	Dublin	Vodafone Ireland	https://www.vodafone.ie/
Japan	Tokyo	J:COM	http://www.jcom.co.jp
Japan	Tokyo	iTSCOM	http://www.itscom.net/service/
Japan	Tokyo	NTT East	https://flets.com/
Japan	Tokyo	KDDI	http://www.au.kddi.com/
Japan	Tokyo	Yahoo BB	http://bbpromo.yahoo.co.jp/
Latvia	Riga	Baltcom	http://www.baltcom.lv/lv/baltcom/
Latvia	Riga	Balti-Com	http://www.balticom.lv/
Latvia	Riga	Lattelecom	http://www.lattelecom.lv/majai/
Mexico	Mexico City	Cablevision	http://www.cablevision.net.mx/paquetes
Mexico	Mexico City	Totalplay (Iusacell)	http://www.totalplay.com.mx/
Mexico	Mexico City	Maxcom	http://www.maxcom.com/residencial.php
Mexico	Mexico City	TelMex	http://www.telmex.com/web/hogar
Mexico	Mexico City	Axtel	http://www.axtel.mx/residencial/
Netherlands	Amsterdam	KPN	https://www.kpn.com/prive/home.htm
Netherlands	Amsterdam	Solcon	http://www.solcon.nl/
Netherlands	Amsterdam	Online	http://www.online.nl/
Netherlands	Amsterdam	Tele2	http://www.tele2.nl/
Netherlands	Amsterdam	Telfort	https://www.telfort.nl/Home.htm
Netherlands	Amsterdam	UPC	https://www.upc.nl/
Netherlands	Amsterdam	Ziggo	https://www.ziggo.nl/
Romania	Bucharest	ALLNET	http://www.allnet.ro/acasa
Romania	Bucharest	Comtel	http://www.comtelnetworks.ro/
Romania	Bucharest	DCN Telecom	http://www.dcn.ro/
Romania	Bucharest	Madnet	http://www.madnet.ro/acasa/
Romania	Bucharest	RCS & RDS	http://www.rcs-rds.ro/internet-digi-net/fiberlink/pachete
Romania	Bucharest	Romtelcom	http://www.romtelcom.ro/
Romania	Bucharest	UPC	http://www.upc.ro/
South Korea	Seoul	C&M	http://www.tv-road.co.kr/cnm/gwangjin/view.php
South Korea	Seoul	HelloVision	http://www.cjhellovision.com/
South Korea	Seoul	KT	http://www.olleh-qook.com
South Korea	Seoul	LG Uplus	http://www.uplus.co.kr/
South Korea	Seoul	SK broadband	http://service.skbroadband.com/
Switzerland	Zürich	Green	http://www.green.ch/
Switzerland	Zürich	Sunrise	http://www1.sunrise.ch/
Switzerland	Zürich	Swisscom	https://www.swisscom.ch/
Switzerland	Zürich	UPC	http://www.upc-cablecom.ch/
Switzerland	Zürich	VTX	http://www.vtx.ch/
UK	London	BT	http://www.productsandservices.bt.com/
UK	London	EE Broadband (formerly Orange)	https://broadband.ee.co.uk/home.do
UK	London	PlusNet	https://www.plus.net/
UK	London	Sky (now includes O2)	http://www.sky.com/shop/
UK	London	Talk Talk	http://sales.talktalk.co.uk/
UK	London	Virgin	http://store.virginmedia.com/

Country	City	ISP	Website
UK	London	Zen	https://www.zen.co.uk/home-office/
USA	Bristol	BVU	http://www.bvu-optinet.com/templates/default.php
USA	Bristol	CenturyLink	http://www.centurylink.com/
USA	Bristol	Charter	https://www.charter.com/
USA	Chattanooga	AT&T	http://www.att.com/u-verse/
USA	Chattanooga	Comcast	http://www.comcast.com/corporate/shop/productoverview.html
USA	Chattanooga	EPB	https://epbfi.com
USA	Kansas City, MO	Earthlink	http://www.earthlink.net/
USA	Kansas City, MO	Google Fiber	https://fiber.google.com/cities/kansascity/plans/
USA	Kansas City, MO	Time Warner Cable	https://www.timewarnercable.com/en/residential-home.html
USA	Kansas City, KS	Earthlink	http://www.earthlink.net/
USA	Kansas City, KS	Google Fiber	https://fiber.google.com/cities/kansascity/plans/
USA	Kansas City, KS	Time Warner Cable	https://www.timewarnercable.com/en/residential-home.html
USA	Lafayette	AT&T	http://www.att.com/u-verse/
USA	Lafayette	Cox	https://store.cox.com/
USA	Lafayette	LUS	http://www.lusfiber.com/index.php/
USA	Los Angeles	AT&T	http://www.att.com/u-verse/
USA	Los Angeles	Time Warner Cable	http://www.timewarnercable.com/en/residential-home/internet/internet-service-plans.html
USA	Los Angeles	Verizon	https://www22.verizon.com/home/shop/shopping.htm
USA	Los Angeles	CenturyLink	http://www.centurylink.com/
USA	Los Angeles	Charter Communications	http://www.charter.com/
USA	New York	New York Connect	http://www.nyct.net/priceplans/pp_res_cable.html
USA	New York	RCN	http://www.rcn.com/new-york/high-speed-internet/services-and-pricing
USA	New York	RCN	http://www.rcn.com/new-york/
USA	New York	Time Warner Cable	https://order.timewarnercable.com/OfferList.aspx
USA	New York	Verizon	http://www.verizon.com/
USA	San Francisco	Astound	http://www.astound.net/
USA	San Francisco	LMi	http://www.lmi.net/
USA	San Francisco	Comcast	http://www.comcast.com/
USA	San Francisco	i-Step Communications	http://www.istep.com/internet/
USA	San Francisco	Sonic.net	http://sonic.net/solutions/home/internet/fusion/
USA	San Francisco	Webpass	http://www.webpass.net/residential
USA	Washington, DC	Comcast	http://www.comcast.com/
USA	Washington, DC	RCN	http://www.rcn.com/dc-metro/
USA	Washington, DC	Verizon	http://www.verizon.com/home/highspeedinternet/#plans

Mobile Broadband Pricing

Country	City	ISP	Website
Canada	Toronto	Bell	http://www.bell.ca/Mobility/
Canada	Toronto	Rogers	http://www.rogers.com/web/content/mobile-internet
Canada	Toronto	Telus	http://mobility.telus.com/en/ON/mobile_internet/index.shtml
Canada	Toronto	WIND Mobile	http://www.windmobile.ca/plans-and-devices/plans#internet-plans
Canada	Toronto	Mobilicity	http://mobilicity.ca/plans/mobile-internet-plans/
China	Hong Kong	3 Hong Kong	http://www.three.com.hk/website/appmanager/three/home?lang=eng
China	Hong Kong	PCCW - HKT	http://www.pccw-hkt.com/en/Mobile-Internet/
China	Hong Kong	China Mobile Hong Kong	http://www.hk.chinamobile.com/en/services_plan
China	Hong Kong	SmarTone	http://www.smartone.com/en/mobile_and_price_plans/
China	Hong Kong	1O1O	http://1010.hkcsl.com/jsp/home/index.jsp
China	Hong Kong	one2free	http://one2free.hkcsl.com/jsp/home/index.jsp
Czech Republic	Prague	O2	http://www.o2.cz/osobni/en/317910-predplacena_sada/
Czech Republic	Prague	T-Mobile	https://www.t-mobile.cz/web/cz/osobni/internet
Czech Republic	Prague	Vodafone	http://www.vodafone.cz/internet/internet-do-notebooku/
Denmark	Copenhagen	3	http://www.3.dk/Privat/Mobilt-bredband/
Denmark	Copenhagen	DLG Tele	http://www.dlgtele.dk/privat/mobilt-bredbaand/
Denmark	Copenhagen	Fullrate	https://www.fullrate.dk/privat/mobilt_bredbaand/
Denmark	Copenhagen	Lebara	http://www.lebara.dk/
Denmark	Copenhagen	OiSTER	http://www.oister.dk/
Denmark	Copenhagen	Telenor	http://www.telenor.dk/privat/mobilt_bredbaand/
Denmark	Copenhagen	Telia	https://shop.telia.dk/index.ep
Denmark	Copenhagen	CBB	https://www.cbb.dk/
France	Paris	Bouygues Telecom	http://www.laboutique.bouyguestelecom.fr/
France	Paris	Orange	http://boutique.orange.fr/
France	Paris	SFR	http://www.sfr.fr/
Germany	Berlin	1&1	http://mobile.1und1.de/
Germany	Berlin	Deutsche Telekom	http://www.t-mobile.de/datentarife/
Germany	Berlin	E-plus	http://www.eplus.de/
Germany	Berlin	O2	https://www.o2online.de/tarife/tarife-zum-surfen/
Germany	Berlin	Kabel Deutschland	https://www.kabeldeutschland.de/mobilfunk/
Germany	Berlin	Vodafone	http://www.vodafone.de/index.html
Ireland	Dublin	eircom	http://www.emobile.ie/phonesplansmore/broadband/
Ireland	Dublin	Meteor	http://www1.meteor.ie/mobilebroadband/
Ireland	Dublin	O2	http://www.o2online.ie/o2/
Ireland	Dublin	Three	https://www.three.ie/shop/
Ireland	Dublin	Vodafone	http://www.vodafone.ie/mobilebroadband/
Japan	Tokyo	J:COM	http://www.jcom.co.jp/files/campaign/wimax/
Japan	Tokyo	NTT DoCoMo	https://www.nttdocomo.co.jp/
Latvia	Riga	Tele2	http://www.tele2.lv/internets/internets-datoram1/
Latvia	Riga	Bite	http://www.bite.lv/lv/private
Latvia	Riga	LMT	http://www.lmt.lv/lv/internets-datora

Country	City	ISP	Website
Latvia	Riga	Triatel	http://www.triatel.lv/lv/
Mexico	Mexico City	Iusacell	http://www.iusacell.com.mx/bam/
Mexico	Mexico City	Movistar	http://www.movistar.com.mx/
Mexico	Mexico City	Telcel	http://www.telcelshop.com.mx/
Netherlands	Amsterdam	KPN	https://www.kpn.com/prive/mobiel/mobielinternet.htm
Netherlands	Amsterdam	T-Mobile	http://www.t-mobile.nl/mobiel-internet
Netherlands	Amsterdam	Vodafone	https://www.vodafone.nl/
Netherlands	Amsterdam	Tele2	https://www.tele2.nl/mobiel/
Romania	Bucharest	Orange	https://www.orange.ro/internet-mobil/index.html
Romania	Bucharest	RCS & RDS	http://www.rcs-rds.ro/internet-digi-net/mobil
South Korea	Seoul	LG Uplus	http://www.uplus.co.kr/
South Korea	Seoul	SK Telecom	http://www.tworld.co.kr/outsitens.jsp; http://www.tlogin.co.kr/index.php
Switzerland	Zürich	Orange	http://www.orange.ch/
Switzerland	Zürich	Sunrise	http://www1.sunrise.ch/
Switzerland	Zürich	Swisscom	http://www.swisscom.ch/en/residential/internet.html
UK	London	Orange	http://shop.orange.co.uk/mobile-broadband
UK	London	Three.co.uk	http://www.three.co.uk/Discover/Mobile_Broadband
UK	London	Vodafone	http://www.vodafone.co.uk/shop/dongles-and-mobile-wi-fi/index.htm
UK	London	O2	http://www.o2.co.uk/broadband
UK	London	TMobile	http://www.t-mobile.co.uk/shop/mobile-broadband/
UK	London	EE	http://shop.ee.co.uk/mobile-broadband-group/
USA	All Cities	AT&T	http://www.att.com/shop/wireless/plans/dataplans.html
USA	All Cities	Sprint	https://www.sprint.com/mysprint/pages/sl/global/index.jsp?INTNAV=ATG:HE:SprintLogo
USA	All Cities	T-Mobile	http://www.t-mobile.com/cell-phone-plans/mobile-broadband.html
USA	All Cities	Verizon	http://www.verizonwireless.com/wcms/consumer/shop.html

MAIN OFFICE

1899 L Street NW
Suite 400
Washington, DC 20036
Phone 202 986 2700
Fax 202 986 3696

NEW AMERICA NYC

199 Lafayette Street
Suite 3B
New York, NY 10012

NEW AMERICA
FOUNDATION

WWW.NEWAMERICA.NET