

ACS

Telecommunications Consultants

The Broadband Market in Jersey

A Market Information Paper

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Broadband - What to expect

What is broadband?

Traditional telephone lines used to carry just speech but with the advent of the Internet telephone companies introduced new services that enabled consumers' easier access to the World Wide Web from their home computer. It soon became desirable to have faster speeds than can be provided by ordinary telephone lines and thus new services that allowed the sending of more information over these lines were introduced. The most popular at the present time is Asymmetric Digital Subscriber Line (ADSL) which enabled far more information to be sent over existing lines. This type of service is called "broadband" as it allows the sending of many different types of voice and information signals at the same time. As well as ADSL consumers in Jersey can also use broadband services over mobile telephone networks and will, over the next few years, also be able to get broadband over fibre optical connections and other types of wireless networks. Broadband services come in a number of download speed options (see Table 2) measured in Megabits (one million bits) per second. A "bit" is a single piece of electrical information. Service providers always state "up to" in advertised speeds. All broadband services are 'contended', that is, the bandwidth is shared between a number of users, typically 50. Therefore in the worst case a 2Mb/s service, for example, may on certain occasions deliver 1/50th of the advertised speed. Networks rely on the fact that this will rarely happen.

What are the differences between ADSL, fibre, mobile and other wireless broadband services?

ADSL is delivered over existing telephone wires and is available throughout the island. When you buy a broadband service you also need to buy some additional equipment to make it work (see Table 1 below). The main expense is the Router which is needed to convert the ADSL signal into a signal suitable for computers. Most Routers now come with wireless connectivity called "WiFi" which enables connection to the broadband service without wires within the home. Most laptop and tablet computers have this connectivity as standard.

Fibre is delivered over a new optical network that is in process of island wide installation. Fibre promises to deliver more reliable services but will require different equipment in the home which will need an electricity supply at the point of entry. Mobile broadband is provided by all Jersey mobile networks using a system called "3G" and requires a special "dongle" for use in the home.

Another Jersey telephone company, Newtel, is now offering a "WiMax" service under the brand name "ytel" which is also a type of wireless broadband network. The basic service is advertised at 4Mb/s and is contended the same as other broadband networks. It requires the purchase of a special wireless router to connect to your computer. The service is "burstable" up to 20Mb/s, that is to say that when there is low contention the download speed is temporarily increased for a short period. While this assists in the download of large amounts of data, it is not possible to measure actual performance from your computer in the same way as other broadband services. As this service is very new we will be monitoring its performance and add it to future reports in more detail.

What services do I need and use?

Table 1 below sets out the services and products that you will need to purchase in order to have the selected type of broadband connection.

	Download Speed Mb/s	Monthly subscription	Installation one off cost	Monthly line rental	Router one off cost	Dongle one off cost	Additional electricity cost
ADSL	2 to 20	£	£	£	£	-	-
Mobile	*	£	-	-	-	£	-
Fibre	2 to 1000	£	£	£**	£	-	£**
WiMax	4 up to 20	£	-	£	£	-	-

Table 1

* The speed will vary for a number of technical reasons.

** When fibre is used an additional quarterly electricity cost will be incurred - see text below.

Table 1 shows the one off and recurring costs for the various options of broadband. JT is currently installing a new fibre optic network and will over the next few years convert all telephone lines to fibre. On conversion of your line you will be expected to provide an electric socket near where the telephone line enters your house from the street to power the new fibre equipment.

JT has an internal wiring policy in connection with the fibre roll-out, which ensures that no-one is forced to pay for the wiring required to get electricity to this point. However, if the customer wishes to have the connection and equipment in a place that requires lots of extra wiring work, then JT's network engineer can arrange this, at a cost

This equipment will be operating 24/7 and will add an average of between £6 and £12 to your annual electricity bill, a cost not formerly incurred for a telephone line. It is necessary to pay a monthly line rental in addition to the ADSL cost even if you do not need a telephone. Currently neither JT nor the regulator has indicated whether a broadband only option will be available in the future.

Most current Internet users have email accounts and now many also have Facebook, You Tube and other social media accounts too. The extent to which you use the Internet will dictate the service that you need. The available ADSL services are shown in Table 2 below. For occasional access to email and social media sites most users will be content with a 2Mb/s service. For those who actively participate in social media and perhaps download films and television programmes for later viewing, for example BBC iPlayer, a faster connection will speed the process but is not entirely necessary. If, however, you want to watch live video, such as ITV Player, then a 4Mb/s or 8Mb/s service will be necessary to make the viewing more enjoyable without too many pauses. Heavy users of the Internet, such as on-line gamers or people wishing to share files will probably need at least an 8Mb/s service.

If you are a light user of the Internet a mobile broadband service may be suitable. Current 3G mobile network services (see Table 3) offer reasonable speeds but are also subject to contention which for technical reasons affects the download speed more than ADSL. As always a balance must be struck between speed and budget.

Why isn't my service as fast as advertised?

ADSL is delivered over wires not originally designed for high speed data, so your location in relation to the broadband distribution point will affect speed, generally the further away,

the slower the speed. Other factors such as contention and line quality can also slow the service. You can measure your line speed using one of many Internet sites that offer a speed testing service. If your speed is well below the advertised rate, upgrading to a faster service is unlikely to improve matters much. You are entitled to ask your operator to test before you buy. If you purchase a product that subsequently does not improve your service, you may have recourse through the Supply of Goods and Services (Jersey) Law 2009. This should improve with a fibre connection as the network is designed specifically for broadband.

Why does my bill vary each month?

Some operators have monthly data usage limits (see Table 2) measured in Gigabytes (GB). A Gigabyte is a measure of the amount of data sent and received. If you exceed this limit an additional charge may be levied depending upon your supplier. Most users have Wi-Fi as well as wired computer connections so that other members of the family can share. Take care to add security to your Wi-Fi network or your neighbour may use your service free! Many other devices found in the home also use Wi-Fi including mobile phones, TV game consuls and printers all of which can use up Internet bandwidth. It is easy to exceed monthly limits if you (or your children) are a regular user of social media and on-line video services. Some operators also have a "fair usage" policy and if you are a heavy user you may be asked to move to a more expensive service. Changing supplier may be a way of saving money, simply go to the new supplier and ask to move but there is likely to be a charge unless an introductory offer is operating. Take care that you also do not have an unexpired contract with your existing supplier; otherwise you may still be liable to payment until the term expires.

You can download free programs from the Internet that monitor your broadband usage which may help you manage your account.

Fixed Line Broadband Options

ADSL Speed Offers *						Added usage cost over limit	
Network	2Mb/s	4Mb/s	8Mb/s	16Mb/s	20Mb/s		
JT	£17.99	£22.99	£27.99	£34.99	£49.99	← Monthly cost	
	10GB	20GB	40GB	40GB	40GB	← Download limit	£0.30/GB**
Newtel	£16.99	£21.99	£26.99	£33.99	£48.99	← Monthly cost	
	None	None	None	None	None	← Download limit	
Sure	£15.00	£19.50	£24.00	£30.00	£43.00	← Monthly cost	
	None	None	None	None	None	← Download limit	

Table 2

* Remember that a standard fixed telephone line is also required in order to have a fixed broadband service whether or not you intend to use the fixed line telephone. Current monthly cost is £12.75 in addition to the broadband cost. Prices correct at 1 October 2012. All prices are exclusive of GST.

** The added usage charge is applied to all bandwidth outside the download limit associated with the subscribed service, however, JT does not charge for bandwidth used between midnight and 08.00. Bandwidth usage is calculated on both upload and download data.

Mobile Network Data Options

	Monthly Bandwidth Allowance						Additional Bandwidth	Pay As You Go
	1GB	3GB	5GB	10GB	20GB	Unlimited		
Airtel	£3.99	£7.99	£11.99	£15.99	£19.99	N/A	1p/MB	1p/MB
JT	£4.99	£9.99	£14.99	£19.99	£24.99	N/A	2p/MB	2p/MB
Sure	N/A	N/A	N/A	N/A	N/A	£15.00	N/A*	£1/day**

Table 3

* Fair usage policy of 500MB/day thereafter download speed reduced till the next day

** £1 charged on first daily connection then unlimited until midnight the same day

Prices correct at 1 October 2012. All prices are exclusive of GST.

Broadband Market in Jersey

There are approximately 33,000 fixed line broadband accounts in Jersey with about 80% currently with the incumbent operator, JT. There are two wholesale providers of the JT broadband service which currently only includes its ADSL products, these are Newtel and Sure (Cable & Wireless Jersey). Mobile broadband is also available from the three mobile operators, JT, Sure and Airtel-Vodafone. Newtel is at present migrating its own fixed line broadband customers to its new 3600MHz WiMax network.

JT is almost unique in Europe in that its entry level product is just 2Mb/s. Of the other small jurisdictions compared in Table 4 below, only Cyprus offers an entry level product with a speed below that of JT. The table only compares small jurisdictions as the economies of scale are more easily compared. As a consequence of the JT wholesale arrangements all other operators that take products from JT must also follow its entry level speed.

Currently most broadband services in Jersey are provided over copper using ADSL 2 which offers a maximum speed of 20Mb/s. However, JT is in the process of rolling out a fibre optic network that will eventually replace all the copper services. At the time of writing there is no clear indication on the provision and pricing of fibre based wholesale products for residential consumers. Both Newtel and Sure Jersey have business oriented fixed line stand alone fibre based networks in operation.

In the Table one operator, Andorra Telecom, already has a full fibre network and thus offers an entry level product of 200Mb/s. As a consequence of this order of magnitude difference Andorra Telecom is not included in the value comparison shown in Chart 1.

Of the other operators Gibraltar is unusual in providing uncontended ADSL services, this means that although its entry level speed is the same as in Jersey, the user experience will be considerably better as there will be less latency in the uplink to the Internet.

Many other operators included in the table are also rolling out fibre networks, including Manx Telecom in the Isle of Man, Kcom in Hull, Monaco Telecom and Go Malta. All these operators then offer a much faster entry level product starting at around 20Mb/s.

Operator	Headline Speed +		Cost	Limit	Above Limit	Free email	Line Rental	Total Cost	Mb/£
	Down Mb	Up Mb							
Manx Telecom	16	0.832	£19.45	15Gb	Speed downgrade	Yes	£10.5	£29.95	0.534
Kcom	24	1.0	£13.27	22Gb	Speed downgrade	Yes	£6.37	£19.64	1.222
Sure Guernsey	16	1.0	£24.99	None	None	Yes	£9.75	£34.74	0.461
JT Jersey	2	0.384	£17.99	10Gb	£0.30/Gb	No	£12.75	£30.74	0.065
Y:tel Jersey	4	1.00	£14.99	None	None	Yes	None	£14.99	0.267
Sure Jersey	2	0.384	£15.00	None	None	Yes	£12.75	£27.75	0.072
Go Malta	12	1.0	£9.41	150Gb	£0.20/Gb	Yes	£12.80	£22.21	0.540
Monaco Telecom	20	1.0	†	None	None	Yes	†	£31.98	0.625
Telekom Liechtenstein	8	0.800	£32.57	None	None	Yes	£16.85	£49.42	0.161
Cyprus Telecom	0.512	0.256	£12.63	None	None	Yes	£13.06	£25.69	0.019
Gibraltar Telecom	2*	0.512	£24.00	None	None	Yes	£8.00	£3200	0.06
Andorra Telecom	200**	200	†	120Gb	£0.80/Gb	Yes	†	£31.25	6.40

Table 4

Note: All price conversions at £1 = €1.25

+ The headline speed is that which the operator sets on its ADSL service, it is unlikely to be fully received by the user and will fall off with distance from the service point, operators will test your line before connection to indicate maximum available speed at your address.

* Uncontended bandwidth

** Fibre connections only now available in Andorra

† Only available bundled with fixed line calls

Although Table tries to compare equivalent products, some operators also include fixed line calling packages as part of the broadband service, although JT and Sure do not.

Chart 1 below shows the comparative value of broadband services expressed in Megabits per £ for each provider in the table above. The larger the bar on the chart, the better value for money.

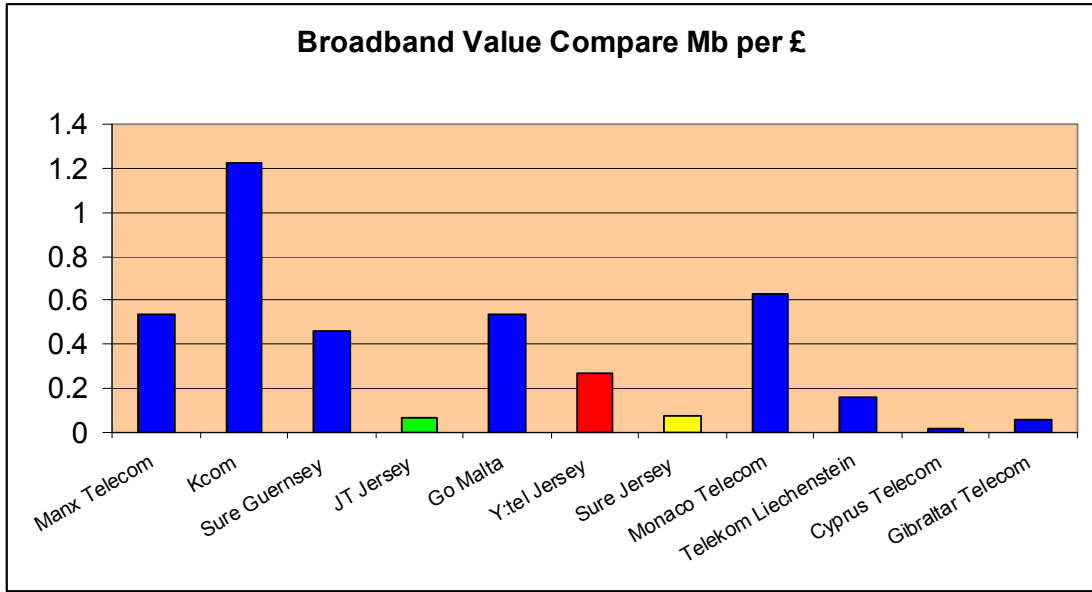


Chart 1