

Satellite broadband

Now anywhere in Europe

At performance and conditions comparable to ADSL offers

All Consumers want to know can be found in this flyer



Since 2011, satellite broadband technology has made a major progress in terms of technical and economic performance. Five years ago internet-by-satellite was expensive for consumers and did not offer good enough performance compared to traditional broadband solutions, but this is no longer true today. Satellite broadband now fully compares with ADSL broadband in terms of both performance and cost; whilst fibre offers superior performance, it is typically more expensive and not available to all users.

The aim of this FAQ flyer is to provide answers to basic questions and help you to decide whether satellite-broadband is right for you.

If you are a Consumer, all you want to know can be found in this flyer.

If you are a Public Administration please ask for the other flyer:

Satellite broadband for Public Administration.

Send us further questions at info@project-saber.eu

For further information go to <http://www.project-saber.eu>

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1. What is internet-by-satellite? Why should I adopt it? Who is it for?

- Internet-by-satellite, also referred to as satellite broadband, is a high speed internet connection made via communications satellites instead of a telephone landline or other terrestrials means. It provides a bi-directional connection, meaning the possibility to download and upload data between the internet and your computer.
- Internet-by-satellite is available now and everywhere in Europe: it is the only broadband solution for those who live in areas without or with slow terrestrial or wireless/mobile broadband access.
- It is an immediate gap filler, possibly whilst waiting for another solution (such as ADSL or fibre etc.).

2. Are internet-by-satellite solutions too complex? What kind of support material is needed?

- Internet-by-satellite solutions are not complex. They require an antenna (a white satellite TV-like dish, though slightly bigger at 70 cm diameter) connected to a modem inside the house (as for traditional solutions): this replaces the connection to the copper network through the phone line or to the fibre. There is no need for any specific software application on the Personal Computer.
- The positioning of the antenna is a bit more accurate than for a TV-antenna, so a guidance system (generally sound-based) is incorporated. The antenna can be installed by an average user.
- Legal authorization is not normally required for installing a satellite dish but it is recommended to check local legislation for possible similar restrictions in historic areas or areas of natural beauty. No specific procedure towards the Telecommunication administration is required to install the satellite dish (in other terms, no specific radio-equipment licence or fee is needed).

3. What are the quality and performance criteria for choosing a satellite broadband offer?

- Maximum monthly data allowance is in practice more important than speed.
For example, a monthly allowance of around 10 GB allows frequent internet usage, including downloading music, video clips and movies such as:
 - exchanging 5000 mails of 1 MB each
 - and downloading 500 documents of 1 MB each
 - and posting/downloading 150 photos of 1 MB each
 - and browsing the web 10 hours per day
 - and downloading 100 music pieces of 3 MB each
 - and streaming 20 video clips of 60 MB each
 - and posting about 1 hour of iPad videos
 - and downloading 4 Standard Definition movies (typically 700 MB each)
or 2 High Definition movies.

- Offers vary in terms of speed and data allowance, but are typically equivalent or even better than traditional ADSL broadband:
 - Up to 20 Mbps download and 6 Mbps upload
 - As with wireless technologies, most subscriptions are capped in term of monthly data use. A 10 GB monthly volume is often associated to a 20 Mbps download subscription (down to around 2 GB with speeds of 2 Mbps).

4. Is satellite broadband any good? Which applications does it allow?

- Downloading and uploading files is as fast and reliable with satellite broadband as with ADSL. Web surfing is the same as other solutions.
- Internet Service Providers (ISP, also referred to as “ Distributors”) offer 99.5% guarantee for the service (i.e internet connection). Some ISPs propose a minimum speed guarantee, providing the maximum data allowance is not exceeded.
- Triple play packages (Voice Over IP, VoIP) based on satellite solutions are now available: internet, TV and voice with the same internet dish (reversely, TV-only dish cannot be used for internet services). Satellite broadband also allows supporting video-conferencing.
The latency impact (0.5 second delay) is not considered as annoying by the users for the voice applications.

5. What are satellite broadband limitations?

- Satellite broadband does not allow massive downloading and video streaming because of the limitation on the monthly volume allowance (typically 10 GB per month, allowing downloading several standard definition movies). Video streaming quality is not affected by the volume limitation.
- Satellite broadband is not well suited to online “fast twitch” or “first person shooter” interactive gaming because of longer delay (0.5s latency) than that of fixed broadband. It will work too slowly with buffered periods. Satellite broadband will work fine for “turn-based” games (e.g. chess).
- Internet-by-satellite works when it rains, even in heavy rains. New technologies are much less sensitive to rain than a few years ago because they allow maintaining the link while adapting the data rate to rain conditions. The performances are in line with availability specifications (better than 99,5%). In very high rainfall areas, the sizing of the dish is adapted to secure the link. Only heavy hail can generate short outages.
- Due to the shortage of IP addresses in some countries and to the Europe-wide coverage of satellites,

IP addresses provided for internet - by - satellite services might not always have the same nationality than the customer. In case of specific need for a national address, it is recommended to check in advance the availability with the Internet Service Provider.

6. How is data confidentiality ensured with a satellite broadband service?

- Several sophisticated mechanisms and encryption algorithms ensure a high security level during the “on-air” data transmission between the user premises and the satellite, and between the satellite and the internet backbone.
- Concretely, every modem connected to the satellite is protected thanks to a unique MAC (Media Access Control) address, i.e a unique identifier assigned for communications on networks. Beside, all data transmissions are fully encrypted in order to ensure confidentiality of the transmissions, as well as of the transmitted information.

7. Can I get broadband over a wireless (Wi-Fi) network in my home if I have satellite broadband subscription?

- Personal Wi-Fi networks can be supported by satellite-broadband solutions. Satellite broadband does not generate any interference with your wireless network.
- Anyone can set up a wireless network in their home so that they can go online from more than one PC or use their broadband in different rooms. Unless included in your Internet Service Provider package, you will need to purchase your own wireless router; these devices are available from most computer retailers.
- Also, several satellite-broadband systems can be installed close to each other.

8. Can I share one antenna with my neighbour?

- In the standard consumer offers, each dish can only be connected to one single modem. Specific architectures serving multiple users can be implemented on request but do not come at standard prices.

9. Are satellite broadband installations potentially dangerous for health?

- Satellite broadband presents absolutely no danger for health (neither dangerous radiations nor electro-magnetic pollution).

- The personal dish emits the signal to the satellite, i.e. up into space, with a power equivalent to that of a mobile phone. The signal received from the satellite is attenuated through the atmosphere and is thus one million times weaker than signals received by mobile phones.

10. Is satellite broadband cheap?

- Monthly subscriptions compare with equivalent performance ADSL offers. On the European market, subscription starts from 18 €/month for a download speed up to 2 Mbps and 2 GB of monthly volume. Offers allowing 20 Mbps download start from 30 €/month.
- Satellite broadband subscription prices increase with the data allowance. Bill-shocks (unexpected charges, e.g. when going beyond the data allowance) cannot happen with Satellite broadband contracts.
- As for terrestrial offers, prices vary a lot across Europe: for satellite broadband, these variations are due to an uneven density of Internet Service Providers across Europe and the existence – or not – of local government support for satellite broadband.

11. How do I subscribe to internet-by-satellite?

- Subscriptions can be obtained through local satellite Internet Service Providers. They operate independently from the satellite operators and offer their own commercial policies and subscription models.
- The European Thematic Network SABER issued in 2013 a review of the retail offers by 250 providers across 24 European countries. The list of service providers available across Europe can be found at www.broadbandforall.eu (click-on-your-country approach which embeds SABER input). All SABER outcomes can be obtained upon request at www.project-saber.eu

12. Is satellite broadband eligible for local government support?

- Many municipalities/regions run a Broadband Deployment plan: they reimburse the expenses or provide a voucher to get the Customer Premises Equipment (antenna and modem and its installation) for free.
- The average purchase price for a satellite complete equipment is 350 € (2013 prices).
- The option of monthly leasing also exists with most Internet Service Providers (typically an additional 5 to 8 €/month).

13. Have the satellite broadband services commercial offers stabilised?

Can I upgrade to a higher speed package at a later date?

- Upgrade of the subscription to another service level is possible at any time during the contract period with most Internet Service Providers without any additional equipment change or charge or onsite intervention.
- Downgrades are also available, usually after completion of a minimum contract period.

14. Is there a 24/7 customer service for satellite broadband?

- Satellite operators are available 24/7 for local Internet Service Providers.
- Local Internet Service Providers independently decide the customer support they provide, such as helplines or online support. Their choice is not limited by the satellite technology.

15. Will satellite broadband still exist in 10 or 20 years? Will it be performing better?

- The lifetime of the satellites in orbit today is about 15 years. Satellites are replaced over time by the satellite operators.
- Satellite technology continues to evolve and should allow speeds around 100 Mbps by 2020.