



Dealer Training



SATELLITE INSTALLATION OVERVIEW

Signing up for satellite internet

- A customer can sign up for Satellite internet at a Dealership within their area.
- The sign-up process is as follows:
 - Client verification
 - Conclusion of contract
 - Payment
 - Remote Terminal installation
 - Commissioning
 - Operational tests
 - Installation report

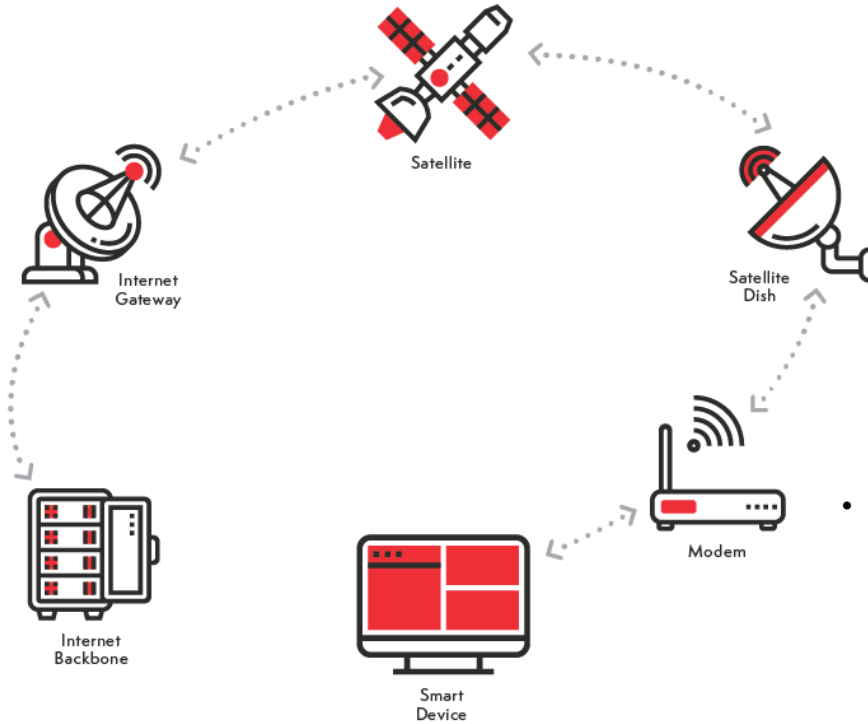


Signing up for satellite internet



- A certified local technician will be assigned to complete the installation.
- The Satellite Dish comes in a box which is about 12kg in weight, with all the standard equipment included.
- An appointment is made with the customer to gain access to the installation site, and within 3-4 hours the installation is completed.
- The most challenging part of the job is mounting and aiming the dish.

The role of the modem



- A Satellite Modem is the hardware that connects to the internet gateway via satellite. It has an ethernet port which a router or computer can be connected to.

The role of the router

- Routers pass your internet connection to all your home devices, computers and phones so that they can access the internet.
- It is recommended that the client use a Wi-Fi router.
- The minimum Wi-Fi spec for a router that needs to be utilised with our VSAT equipment is a 2.4/5 Ghz dual band. A sample router would be a Tenda AC6 AC1200 Smart Dual-Band Router.



Satellite broadband at home

- Satellite broadband internet is often the only option for people living in remote areas.
- Phase 3 Telecom installers will install a dish for these customers if the satellite beam covers the area, which is easy to confirm on the YahClick SOLIDitech System.
- Customers DO NOT need a telephone line for satellite internet. It is a bi-directional satellite system independent of telephone lines.
- Our satellite modem can connect to any smart device i.e., PC Mac or laptop provided the device has an ethernet port.

Installing a satellite dish

- To ensure suitability of a satellite dish installation, a “site survey” will be performed. This term refers to a description of the planning phase of the project.
- A site survey is very important to confirm Satellite coverage in the area. It is a fact-finding mission to inspect the site for installation support and, the professional installer analyses the location for potential issues.
- The installers would inspect the site for: an unobstructed line of site to the satellite, antenna placement inspection, modem placement inspection, determining the grounding placements, cable runs and taking any customer considerations into account.





Installations by certified installers



- Only certified professionally trained installers may install or service the satellite dish.
- Clients cannot perform installations themselves.
- YahClick provides Phase 3 Telecom installers with extensive Installer training on the use of a variety of diagnostic tools to complete a successful installation.

Installing a satellite dish - variables

There are important variables to take into account when doing an installation ... for example:

- Antennas must be mounted in a controlled area, such as roofs or high wall installations that are not accessible to the general public & they cannot be mounted on surfaces such as chimneys, trees, telephone posts, fences or free-standing wooden posts.
- Satellite dishes should not be mounted near windows or walkways which could result in personal injury.
- It is important to remember that ground installations will cost a customer extra, because alternate arrangements will need to be made for ground digging.

- Think of Internet speed like water pressure in a tap. If you are only getting a trickle, you may be able to brush your teeth and fill the kettle, but it certainly wouldn't be worth your while to try and water your garden. Or put the washing machine on.
- Just as strong water pressure delivers a higher volume of water in a shorter period, a faster Internet connection will deliver more information in a shorter time.
- So, while you could try and water your garden with trickle pressure, it would take all day.
- It's the same with the Internet. You could try and stream your favourite Netflix series one frame at a time, but the constant buffering would make the experience frustrating.

Internet speed cont.



- The speed (velocity) is the time it takes to do something.
- Upload speed is based on the rate data is delivered to the network.
- Download speed is the rate at which we receive data over the network.
- The higher the speed, the faster the information arrives on your computer from the internet.
- Understanding internet speed is important because it is about ensuring that customers subscribe to a service that has the speed that gives them the Internet experience they want.

'Ping' speed testing

- A ping measures the round trip for messages sent from the originating host to a destination computer that is echoed back to the source.
- A ping is not a reliable test for connectivity or speed.
- A Satellite is based in a geostationary orbit approximately 36,000 km above the equator. Due to this distance it will take approximately 600 milliseconds for a ping test.
- A ping is classified as a low priority command by networks, meaning that all other applications will be processed before the ping command.
- As there is no acceleration applied to the ping command, this can sometimes cause increased ping times or even a 'time out' – making it an undependable speed test.

Customer self-care portal test

- Sites like Ookla or Oakley do NOT give accurate speed test results. These sites use java technology that use the entire network around them, not specifically the satellite link that is installed with the customer, so the results will not be accurate.
- For an accurate speed test: YahClick Customer Selfcare Portal
- The YahClick Customer Self-Care Portal is a dedicated portal for Service Partner customers. Once they become subscribers, they will have access to this portal, where they can do accurate speed tests to test the response of their service directly to the satellite gateway.



- Online gaming is not our target market and it is important to note that **gaming does not work** over satellite internet services due to transmission latency.
- Therefore, Xbox, PlayStation type Consoles and time-sensitive applications that require fractions-of-a-second user inputs (such as multi-player “twitch” games or real-time equities trading) are not supported by Satellite Internet Solutions.
- You will however be able to download games and do game updates and use the streaming video and music services offered through your gaming system.
- “Turn-based” games, such as casino games, strategy games, and chess, will work fine, as will popular Facebook games like Candy Crush.

Speed vs latency vs bandwidth

- Speed measures the rate at which traffic moves within a network.
- Bandwidth is the measure of how much traffic a broadband connection can cope with at once.
- It's the highest speed an Internet connection is capable of transmitting.
- Just as the size of the tap you have is a determining factor in your water pressure capacity, so bandwidth determines your internet speed capacity.
- There is a half second delay with Satellite internet service caused by distance that data needs to travel up to the Satellite and back again. This is referred to as Latency.
- A low latency number means the network is running well and your connection to another computer is fast.
- A higher latency number means there is a delay somewhere in that link.

- Transmission Latency is the time it takes for a signal to make a round-trip journey from your smart device and back.
- Ping is a method of measuring latency....
 - 10 to 20 milliseconds for superfast broadband.
 - 40 milliseconds for ADSL broadband.
 - 60 milliseconds for mobile broadband.
 - 650 milliseconds Average round trip for satellite broadband.
 - A voice call is only effected when the delay exceed 800 milliseconds.

Speed vs customer need

- Different households and businesses can have drastically different internet speed needs.
- A single person who uses the internet only to access social media won't need as much internet speed as a business of five, video conferencing.
- It is all about matching your customers' needs to the right YahClick internet speed package.



High speed broadband

- YahClick is a game-changing satellite broadband service in an age where connectivity is central to progress and prosperity ... a fast, affordable & reliable internet connection makes a world of difference.
- YahClick provide high-speed broadband best effort service and speeds cannot always be guaranteed.
- Radio signals may sometimes be affected by weather, however there are mechanisms in place to mitigate this.



Ongoing support for installations

- Phase 3 Telecom provides the first line of support to installers that encounter issues during installations.
- Installer issues will be escalated via the NOC within the given process.





The End