

National
Broadband
Network



NBN Co Fixed Wireless Product Fact Sheet

NBN Co Fixed Wireless Access Technology

The NBN Co Wireless Network extends the reach of the NBN Co Ethernet Bitstream Service (NEBS/NBN Ethernet) beyond the fixed line footprint. NBN Ethernet over the NBN Co Fixed Wireless Network provides high-speed, reliable broadband through a professionally installed service designed to give surety of performance to Service Providers and their customers.



NBNCo
Bringing broadband to life

Why expand your coverage with NBN Co over Fixed Wireless?

NBN Co Fixed Wireless is improving the lives of your customers by bringing the broadband benefits to areas that have no access to high-speed broadband, not just the Australian bush.

HIGH SPEED BROADBAND

With a layer 2 25 Mbps downstream, 5 Mbps upstream service you can provide higher, more consistent speeds to customers that were previously limited to mobile broadband or ADSL speeds.

These high speed broadband connections will enable value-added services, such as voice, to be added to Internet offerings, increasing the quality of service and the value to your customers.

RELIABILITY

When compared with mobile broadband services, users of the NBN Co Fixed Wireless service experience more consistent speed, availability and reliability.

Compared to ADSL services, consistently higher upload speeds of up to 5 Mbps are a clear advantage to your customers when uploading photos, videos or live streaming.

PREDICTABILITY

Because we manage and optimise the number of connections per base station, the availability of the NBN Co service is more predictable than mobile broadband services.

Compared to a mobile broadband service, we have fewer types of connected devices, making it easier to provide a high quality broadband service.

PROFESSIONAL INSTALLATION

NBN Co provides a professional signal strength test before installation of the NBN Co Fixed Wireless antenna at your customer's premises. The radio signal survey must be positive in order for the equipment to be installed.

This is free of charge from NBN Co and provides assurance that the end-user's service will perform to the high standards required.

How does NBN Co Fixed Wireless work?

NBN Co Fixed Wireless provides a wireless access link from your customers premises to a wireless base station connected to the NBN Co network. This link is the

final step in providing the NBN Ethernet from your connection at the NBN point of interconnection (POI), all the way through to your customer's premises.

Access Virtual Circuit

The NBN Co Fixed Wireless Access Virtual Circuit (AVC) is the wireless link for delivery of the NBN Ethernet. The service is provided to the UNI-D on the wireless network termination device (W-NTD) installed at the customer premises. Each W-NTD has four UNI-D ports, which can support up to four simultaneous retail services.

The Connectivity Virtual Circuit and Network to Network Interfaces are components of the NBN Ethernet shared between the fibre and fixed wireless services.

Consistently higher upload speeds are a clear advantage to your customers.

WHAT IS THE DIFFERENCE BETWEEN FIXED WIRELESS & MOBILE WIRELESS?

NBN's fixed wireless network, which uses advanced technology commonly referred to as LTE or 4G, is engineered to deliver services to a fixed number of premises within each coverage area.

This means that the bandwidth per household is designed to be more consistent than mobile wireless, even in peak times of use.

Unlike a mobile broadband service where speeds may be more affected by the number of people, the speed available in a fixed wireless network is designed to remain relatively steady.



FIXED WIRELESS

Single type of device with a fixed number of connections operating at a fixed cell boundary



MOBILE WIRELESS

Variable numbers and types of devices, operating at variable cell boundaries

Coverage areas

To be able to receive the NBN Co Fixed Wireless service, your customer's premise must be within the NBN Co wireless coverage area and have a line of sight between the closest or most appropriate NBN Co Fixed Wireless base station. If that is the case, and the strength of the wireless signal is strong enough to provide a wireless service, the customer service will be professionally installed and the Internet service can be activated by you.

PRICING

Pricing of the NBN Co Fixed Wireless service is based on separate monthly charges for the following components:

- NNI*
- CVC*
- AVC

* Can be shared with fibre.

WIRELESS ACCESS VIRTUAL CIRCUIT

The wireless Access Virtual Circuit is priced the same as the fibre equivalent, being \$24.00 per month for 12 / 1 Megabits per second, and \$27.00 per month for 25 / 5 Megabits per second, as set out below:

Mbps (Megabits per second) downstream / upstream	Monthly Recurring Charge per Access Virtual Circuit
12 / 1	\$24
25 / 5	\$27

Figure 1: Wireless Access Virtual Circuit Pricing

Ordering

You are able to order NBN Co Fixed Wireless services provided you have on-boarded for wireless. This process provides access to the NBN Co Service Portal where services can be ordered. The NBN Co Business to Business (B2B) Interface also provides service providers the ability to order NBN Co Fixed Wireless services where available.

In addition to the standard process for ordering and installation of NBN Ethernet, NBN Co Fixed Wireless services involve a service qualification process that takes place at the end user's premises. This service qualification is a signal strength test and will be conducted as part of the

standard installation process. If the signal strength test passes, the installation can continue. If a signal of insufficient strength is received, possibly due to tree cover or other line-of-sight obstructions, the installation will not proceed and a service will not be supplied.

ROLLOUT AND AVAILABILITY

The NBN Co Fixed Wireless coverage areas are regularly updated on the NBN Co website and provided in both the monthly ready for service rollout plan and the historical footprint lists provided regularly to you.

The NBN Co Business to Business (B2B) Interface also provides service providers the ability to order NBN Co Fixed Wireless services...

End User Connections

The Service Levels for Standard Connections from the time of Order

Acknowledgement for NBN Ethernet orders are;

Location of Premises	NBN Co Fibre Network (Business Days)				NBN Co Wireless Network (Business Days)		
	Service Class 0	Service Class 1	Service Class 2	Service Class 3	Service Class 4	Service Class 5	Service Class 6
Urban Area	N/A	14	9	1	N/A	9	1
Major Rural Area or Minor Rural Area	N/A	19	14	1	N/A	14	1
Remote Area	N/A	19	19	1	N/A	19	1

Technical Summary

Wherever it is practical, the NBN Co Fixed Wireless service has been designed to follow the same construct as NBN Ethernet supplied by means of NBN Fibre to the Premise (FTTP).

To this effect, the connectivity elements of NBN Ethernet (NNI, CVC) are shared between the fixed wireless and fibre services, but there are variations between the fixed wireless and FTTP AVCs. See table below.

Capability	Fibre	Fixed Wireless
Ethernet frame maximum terminating unit (MTU) size	2000 bytes	1948 bytes
TC-4 speed tiers	12/1 25/5 25/10 50/20 100/40	12/1 25/5
TC-1 speed tiers	0.15 Mbps symmetrical 0.3 Mbps symmetrical 0.5 Mbps symmetrical 1.0 Mbps symmetrical 5.0 Mbps symmetrical	0.15 Mbps symmetrical
TC-1 frame delay	6 msec	40 msec
TC-1 frame delay variation	3 msec	6 msec
TC-1 frame loss	0.1%	0.4%
UNI-data	4	4
UNI-voice	2	0

Next steps

If you would like to discuss NBN Co Fixed Wireless further or understand how to go about ordering NBN Ethernet supplied by means of the NBN Co Wireless Network, please contact your NBN Co account manager or email sales@nbnco.com.au

FURTHER READING

This document should be read in conjunction with:

- [1] Product Technical Specification for the NBN Ethernet
- [2] NBN Co Wholesale Broadband Agreement
- [3] Integrated roadmap

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