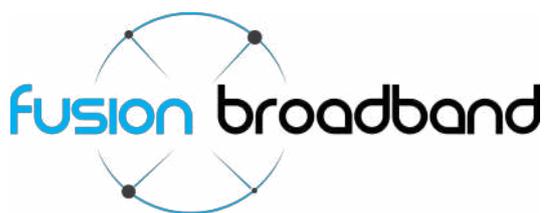# Fusion Broadband Bonding
Installation Guide

Bonded Premium
nanoBonder
nanoBonder Lite

Fusion Broadband Installation Guide

Thank you for choosing Fusion Broadband.

Installation is quite simple provided you follow the steps in this document.

Inside the box you have been delivered there are a number of items:

- Fusion Bonding System
    - Fusion Bonded Premium; or
    - nanoBonder
- ADSL Modems (if ordered through Fusion Broadband)
- A Service ID Form
- Various cables and power adaptors.

The Fusion Bonding system is the most critical item and depending on which bonding platform you have ordered (Premium or nano) there may be minor differences to the way the device is installed. These mainly relate to the location of the device (rack or desktop) and the number of cables to be connected.

The Bonding system has been pre-configured to your requirements. There are no SW settings to be concerned with; you cannot interface with the device at all.

Each device has a number of Ethernet ports as per below:

Bonded Premium

Port Label	Used for:	Goes to:
LAN	Your WAN/Internet port	The Ethernet WAN port of your router
WAN 1	Bonded Connection 1	Broadband modem 1
WAN 2	Bonded Connection 2	Broadband modem 2
WAN 3	Bonded Connection 3	Broadband modem 3
WAN 4	Bonded Connection 4	Broadband modem 4
WAN 5	Bonded Connection 5	Broadband modem 5

You may not use all the WAN ports. You will only use the number of WAN ports according to the number of lines you are bonding. For example, if you are bonding three lines, you will only use WAN 1, WAN 2 and WAN 3.

There is a 'Console' Ethernet port. This cannot be used as it has been deactivated. The two USB ports are also not used.

nanoBonder

Port Label	Used for:	Goes to:
LAN	Your WAN/Internet port	The Ethernet WAN port of your router
WAN 1	Bonded Connection 1	Broadband modem 1
WAN 2	Bonded Connection 2	Broadband modem 2

Installation

Now you have all the required pieces, installation should take no more than 20 minutes. The instructions below describe what you need to do and in the correct order.

Refer to the diagrams on the following page for further assistance.

Step 1: Install the Bonding System (Bonder)

Locate the Bonder in a well ventilated area. Keep in mind that the system needs to be physically near your router as well as your ADSL connections.

Step 2: Install the ADSL modems

Install each of the broadband modems, these have two connections on the back, one for your ADSL (telephone) line (plug this in) and the other for an Ethernet cable. Note: If you are not bonding an ADSL service, a modem may not be required.

IMPORTANT: If you have supplied your own modems, please be sure that they have been configured into Full Bridge Mode. The modems supplied by Fusion Broadband come pre-configured in Full Bridge Mode; there is no need to make any changes with these modems.

Step 3:Connect the modems and Bonding system together

Plug in the Ethernet cable into the modem and the other end into the Bonder starting with WAN 1 according to the Fusion Service ID Form we issued with your Bonder.

IMPORTANT: Each modem need to be plugged into the correct port as shown on the Service ID Form.

Step 4: Connect your router to the Bonding system

Plug in your router to the Bonder - remember to use the LAN port on the Bonder.

Step 5: Power Up!

Turn on the Bonder and each of the modems. Typically the modems will take a few minutes to come up and run through their diagnostic tests. Once everything is running you should see several lights on your modems: Power, Ethernet, DSL, Internet (which will usually flash on and off). It can take up to 5 minutes for the Bonder to initiate the PPP sessions through your modems.

Step 6: Configure your router

With your bonding system you would have received a document called '*Fusion Service ID form*' this form has the details of your new WAN IP address and DNS servers. You will need to enter these into your router. If you have PCs connected to your router you may have to change the DNS settings on each PC if it is not set to automatically get it from your router.

Troubleshooting

A: The most common problem is that your modem is not in the correct port on the Bonder – double check this using the Service ID Form as your guide.

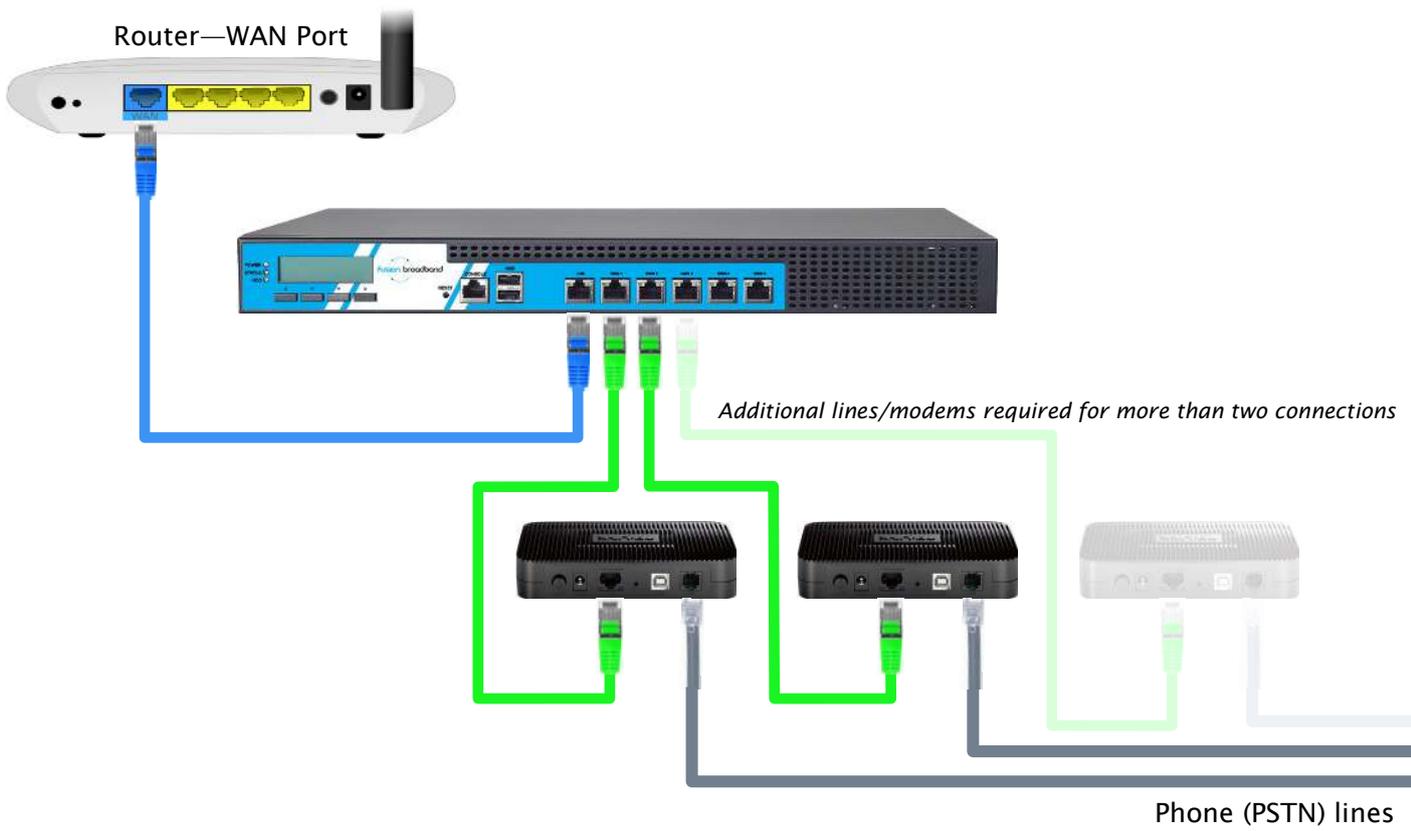B: Check the lights on your modem.

On a successful connection you will see (*Power* – power is getting to the modem, *Ethernet* – your modem is connected to the Bonder, *DSL* – your modem has detected a DSL signal, *Internet* – this will be flashing if the Bonder has successfully established a connection to the ADSL line).

C: Check the operation of your ADSL line. This can be done easily by configuring your modem to connect independently to the ADSL line (the same way you would if you did not have a Bonder). Plug a PC directly into the modem and verify that you have internet connectivity. Once you have this change the settings to take the modem back to 'Full Bridge Mode'.

D: If you see that any of the modems have flashing Internet lights and that the Ethernet WAN port lights on the Bonder are flashing, this means that the Bonder is connected. The next step would be to verify the settings on your router. Check your WAN IP address is correct as well as the DSN server IP addresses as advised on the Service ID Form.

E: To verify that you have full connectivity directly connect a laptop to the Bonding system using your specific WAN details (be sure to set a static IP address and the correct DNS IP addresses). Once you have verified this check the configuration details on your router.

Typical Fusion Bonded Premium Configuration

Router—WAN Port

Additional lines/modems required for more than two connections

Phone (PSTN) lines

Typical Fusion nanoBonder Configuration

Router with WAN port

Fusion Broadband nanoBonder

Current Modem

Modem 2

ADSL/Broadband lines