

Product Description

nbn[™] Sky Muster[™] Plus Product Module

nbn[™] Sky Muster[™] Plus Interim Agreement



This document forms part of the nbn[™] Sky Muster[™] Plus Interim Agreement, which is a Standard Form of Access Agreement for the purposes of Part XIC of the Competition and Consumer Act 2010.

Product Description

nbnTM Sky MusterTM Plus Product Module

nbnTM Sky MusterTM Plus Interim Agreement

Version	Description	Effective Date
1.0	First issued version of nbn TM Sky Muster TM Plus Interim Agreement	Execution Date

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Environment

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Introduction

This **nbn**[™] Sky Muster Plus Product Description describes the **nbn**[™] Sky Muster[™] Plus Product. It forms part of the **nbn**[™] Sky Muster[™] Plus Interim Agreement.

Roadmap

A roadmap describing the structure of this document follows for the assistance of Customer.

Part A: The **nbn**[™] Sky Muster[™] Plus Product

Part A describes what the **nbn**[™] Sky Muster[™] Plus Product is.

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Part B: Required Product Components

Part B describes the core Product Components of **nbn**[™] Sky Muster[™] Plus which Customer must order.

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Part C: Plan Sub-features

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Part D: Optional Product Features

Part D describes the optional Product Features of **nbn**[™] Sky Muster[™] Plus which Customer may elect to order.

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Part E: General conditions of supply

Part E sets out general conditions which apply to the supply of **nbn**TM Sky MusterTM Plus to Customer.

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Part A: The nbn™ Sky Muster™ Plus Product

nbn™ Sky Muster™ Plus:

- is a Layer 3 and above service that carries traffic between a UNI used to serve a Premises and the nbn™ Upstream Network Boundary;
- is supplied by means of the SMP Network;
- enables Customer or its Downstream Service Providers to supply a Carriage Service or Content Service to a Premises of a residential End User, Public Interest End User or Small Business End User; and
- comprises required Product Components, which Customer must acquire as part of nbn™ Sky Muster™ Plus, and optional Product Features, which Customer may elect to acquire.

Type	Product Component / Product Feature
Product Components (required)	Plan; UNI
Product Feature (optional)	Plan Test Feature

Note: nbn supplies the Plan to Customer on the condition that Customer also acquires a UNI in conjunction with that Plan.

Part B: Required Product Components

Section 1 describes the Plans that Customer must order for each Premises where **nbn** supplies **nbn**TM Sky MusterTM Plus to Customer.

1. Plans

1.1 General Plan description

- (a) A **Plan** is an Ethernet-based Layer 3 and above virtual connection on the SMP Network, that carries End User traffic to and from a UNI used to serve a Premises.
- (b) Customer must order a Plan for each eligible Premises to which **nbn**TM Sky MusterTM Plus will be supplied.
- (c) The available Plans are described in section 1.2.
- (d) **nbn** will map one Plan to any UNI used to serve the relevant Premises and will not map more than one Plan to the same UNI.

1.2 Plans

The Plans are described by reference to the Plan Sub-features described in Part C: Plan Sub-features. Customer may select one of the Plans below in respect of each eligible Premises to which **nbn**TM Sky MusterTM Plus will be supplied:

- (a) **50GB+ Plan**, which comprises the following Plan Sub-features:

Plan Sub-feature		Configuration	
Access Rate		Downstream Mbps (PIR)	Upstream Mbps (PIR)
		25 (with Supplementary Burst)	5 (with Supplementary Burst)
Peak Period Included Data Allowance	50 GB ¹		
Off-peak Period Included Data Allowance	50 GB ¹		
Peak Period Shaping Rate		Downstream Kbps (PIR)	Upstream Kbps (PIR)
		512	256
Off-peak Period Shaping Rate		Downstream Kbps (PIR)	Upstream Kbps (PIR)
		2,048	512
IP Address Scheme	As set out in section 5.1		
nbn TM Upstream Network Boundary	Internet Point of Presence		
Excluded Data	Unmetered Data	<ul style="list-style-type: none"> Traffic Profile 1 Traffic Profile 2 	

	Time of Day Data	Traffic Profile	Shaped Periods	Time of Day Limit Rate
		Traffic Profile 3	7 pm to 11 pm daily	256 Kbps ²

Notes:

1. The Peak Period Included Data Allowance and Off-peak Period Included Data Allowance include both upload and download usage as set out in section 4.1(a).
2. To be read in conjunction with section 4.1(c).

(b) **100GB+ Plan**, which comprises the following Plan Sub-features:

Plan Sub-feature		Configuration		
Access Rate		Downstream Mbps (PIR)	Upstream Mbps (PIR)	
		25 (with Supplementary Burst)	5 (with Supplementary Burst)	
Peak Period Included Data Allowance		100 GB ¹		
Off-peak Period Included Data Allowance		100 GB ¹		
Peak Period Shaping Rate		Downstream Kbps (PIR)	Upstream Kbps (PIR)	
		512	256	
Off-peak Period Shaping Rate		Downstream Kbps (PIR)	Upstream Kbps (PIR)	
		2,048	512	
IP Address Scheme		As set out in section 5.1		
nbn™ Upstream Network Boundary		Internet Point of Presence		
Excluded Data	Unmetered Data	<ul style="list-style-type: none"> • Traffic Profile 1 • Traffic Profile 2 		
	Time of Day Data	Traffic Profile	Shaped Periods	Time of Day Limit Rate
		Traffic Profile 3	7 pm to 11 pm daily	256 Kbps ²

Notes:

1. The Peak Period Included Data Allowance and Off-peak Period Included Data Allowance include both upload and download usage as set out in section 4.1(a).
2. To be read in conjunction with section 4.1(c).

(c) **150GB+ Plan**, which comprises the following Plan Sub-features:

Plan Sub-feature		Configuration		
Access Rate		Downstream Mbps (PIR)	Upstream Mbps (PIR)	
		25 (with Supplementary Burst)	5 (with Supplementary Burst)	
Peak Period Included Data Allowance	150 GB ¹			
Off-peak Period Included Data Allowance	150 GB ¹			
Peak Period Shaping Rate		Downstream Kbps (PIR)	Upstream Kbps (PIR)	
		512	256	
Off-peak Period Shaping Rate		Downstream Kbps (PIR)	Upstream Kbps (PIR)	
		2,048	512	
IP Address Scheme	As set out in section 5.1			
nbn TM Upstream Network Boundary	Internet Point of Presence			
Excluded Data	Unmetered Data	<ul style="list-style-type: none"> Traffic Profile 1 Traffic Profile 2 		
	Time of Day Data	Traffic Profile	Shaped Periods	Time of Day Limit Rate
		Traffic Profile 3	7 pm to 11 pm daily	256 Kbps ²

Notes:

1. The Peak Period Included Data Allowance and Off-peak Period Included Data Allowance include both upload and download usage as set out in section 4.1(a).
2. To be read in conjunction with section 4.1(c).

Section 2 describes the UNI that must be acquired in conjunction with the Plan for each Premises where **nbn** supplies **nbn**TM Sky MusterTM Plus to Customer.

2. User Network Interface (UNI)

2.1 UNI description

- (a) The **User Network Interface** or **UNI** is a physical port to which **nbn** supplies **nbn**TM Sky MusterTM Plus in respect of a Premises.
- (b) **nbn** will make one type of UNI available in respect of a Premises, the UNI-D:

Type of UNI	Port	Location of UNI port	Number of physical ports on NTD (if any)
UNI-D	Ethernet	NTD	4

- (c) An NTD supplied for **nbn**[™] Sky Muster[™] Plus may also be used for **nbn**[™] Ethernet (Satellite).
- (d) An NTD supplied for **nbn**[™] Ethernet (Satellite) may also be used for **nbn**[™] Sky Muster[™] Plus.
- (e) Access to and use of a UNI used to serve a Premises is subject to any availability rules determined by **nbn** from time to time.
- (f) The number of UNI-Ds available at a Premises served by the SMP Network depends on the number of NTDs installed at that Premises.
- (g) The UNI-D has an electrical interface and will not be made available with an optical interface.
- (h) Customer must acquire a UNI-D in conjunction with a Plan for each Premises at which **nbn**[™] Sky Muster[™] Plus will be supplied.

Part C: Plan Sub-features

Sections 3 to 5 describe the **nbn**[™] Sky Muster[™] Plus Plan Sub-features.

3. Plan Sub-features generally

The Plan Sub-features are:

- (a) supplied as part of Plans as set out in section 1; and
- (b) not orderable by Customer independently or in configurations other than those set out in section 1.

4. Bandwidth profiles and data inclusions

4.1 Bandwidth profiles and data inclusions generally

- (a) Subject to sections 4.1(b) to 4.1(f), throughout each calendar month, the bandwidth profile of each Plan will change based on:
 - (i) the time of day;
 - (ii) type of data being transferred; and
 - (iii) the aggregate data of that type transferred (including both uploads and downloads) up to a given point in the calendar month,

as follows:

Time of day	Data type being transferred	Aggregate data transferred in calendar month	Applicable bandwidth profile
Peak Period	Included Data	Up to Peak Period Included Data Allowance	Access Rate
		More than Peak Period Included Data Allowance	Peak Period Shaping Rate
	Excluded Data	N/A	Access Rate
Off-peak Period	Included Data	Up to Off-peak Period Included Data Allowance	Access Rate
		More than Off-peak Period Included Data Allowance	Off-peak Period Shaping Rate
	Excluded Data	N/A	Access Rate

- (b) Despite section 4.1(a) but subject to section 4.1(c), throughout each calendar month, the bandwidth profile of each Plan in respect of the following types of data (collectively, the **Excluded Data**), during the following times of day, will be as follows:

Data type being transferred	Time of day	Applicable bandwidth profile
Unmetered Data	12:00 am to 11:59 pm	Access Rate
Time of Day Data	Shaped Periods	Time of Day Limit Rate
	All times other than Shaped Periods	Access Rate

- (c) Despite section 4.1(b), during the Term, unless and until otherwise notified by **nbn** by giving 1 month's notice to Customer, the bandwidth profile in respect of Traffic Profile 3 will be the applicable Access Rate at all times of day, including during Shaped Periods.
- (d) For clarity, the following types of data will not count towards any Peak Period Included Data Allowance or Off-peak Period Included Data Allowance:
 - (i) Unmetered Data; and
 - (ii) Time of Day Data.
- (e) Each bandwidth profile in section 4.1(a) and 4.1(b) specifies the maximum data throughput that the SMP Network is designed to make available to Customer at the UNI in respect of a Plan during the time that bandwidth profile applies, and not the minimum data throughput.
- (f) If a Plan is Activated part way through a calendar month, the Peak Period Included Data Allowance and Off-peak Period Included Data Allowance for that Plan for the remainder of that calendar month will be calculated on a pro-rata basis by reference to the number of days remaining in that calendar month.

4.2 Access Rates

- (a) In respect of the Access Rate for a Plan, **Supplementary Burst** refers to the ability for data transfers under that bandwidth profile to exceed the specified Peak Information Rate.
- (b) Data transfers subject to an Access Rate with Supplementary Burst may or may not burst above the applicable PIR in any given period.
- (c) An Ordered Product may only transfer data at its PIR once during a 24 hour period, and only if the Ordered Product has not exceeded either of its Peak Period Included Data Allowance or its Off-peak Period Included Data Allowance in that 24 hour period.

4.3 Traffic Profiles for Excluded Data

- (a) The Traffic Profiles for Excluded Data are:
 - (i) **Traffic Profile 1**, which means such traffic as determined by **nbn** from time to time, which may include some traffic related to browsing text and static images (but not audio or video content, peer to peer traffic, traffic via VPN, or cloud file storage or sharing) on the web;
 - (ii) **Traffic Profile 2**, which means such traffic as determined by **nbn** from time to time, which may include some traffic related to email and webmail use (but not traffic via VPN); and
 - (iii) **Traffic Profile 3**, which means such traffic as determined by **nbn** from time to time, which may include some traffic related to operating system updates for personal computers and mobile phones (but not traffic via VPN).
- (b) Details of specific traffic included in each Traffic Profile from time to time are available to Customer on request in accordance with standard processes as determined by **nbn** from time to time.

5. IP Address Scheme

5.1 Public 1:1 NAT

- (a) **nbn** will allocate:

- (i) a private IP address to each item of Customer Equipment or End User Equipment attached to a UNI-D; and
 - (ii) an internet-accessible public IP address to each Plan for which the **nbn**[™] Upstream Network Boundary is the Internet Point of Presence.
- (b) **nbn** will link the private IP addresses allocated under section 5.1(a)(i) with the public IP address allocated under section 5.1(a)(ii) using Static Network Address Translation (NAT).
- (c) **nbn** may change public IP address allocated under section 5.1(b) at its discretion:
 - (i) from time to time; or
 - (ii) without limiting section 5.1(c)(i), upon request by Customer.

Part D: Optional Product Features

Sections 6 describes optional Product Features available for **nbn**[™] Sky Muster[™] Plus.

6. Plan Test Service

- (a) The Plan Test Service is an Ordered Product that allows Customers to conduct testing of Plans.
- (b) **nbn**'s supply of the Plan Test Service comprises:
 - (i) a Plan and an associated UNI-D; and
 - (ii) the Installation of Connecting Equipment, if not already installed.
- (c) Customers may order:
 - (i) up to a maximum of two Plan Test Services in total; but
 - (ii) in respect of any given Beam, a maximum of one Plan Test Service.
- (d) **nbn** will only supply the Plan Test Service if:
 - (i) the Customer has successfully onboarded, or is in the process of onboarding, for **nbn**[™] Sky Muster[™] Plus; and
 - (ii) **nbn** determines, acting reasonably, that the Customer requires the Plan Test Service to successfully supply **nbn**[™] Sky Muster[™] Plus to its End Users.
- (e) **nbn** may, at its discretion:
 - (i) supply a Plan Test Service to a Premises which would not otherwise be eligible for a Plan under the standard processes determined by **nbn** from time to time; and
 - (ii) require Customer to select an alternative location if Customer requests the supply of a Plan Test Service at a location:
 - (A) at which it would be difficult for **nbn** to Install the Connecting Equipment or expensive to do so;
 - (B) which is served by a Beam which **nbn** determines is, or is likely to become, subject to capacity constraints; or
 - (C) which would require **nbn** to supply more than one Plan Test Service to Customer using a given Beam.
- (f) **nbn** will not conduct, or assist Customer to conduct, any testing in connection with the Plan Test Service except to the extent of supplying the Plan Test Service and Installing the Connecting Equipment for the Plan Test Service under this section 6.

Part E: General conditions of supply

*Section 7 sets out Customer obligations in relation to the downstream supply of services to which **nbn**TM Sky MusterTM Plus is an input.*

7. Downstream supply

7.1 Priority Assistance and CSG Services

Customer must not use **nbn**TM Sky MusterTM Plus as an input into the supply of:

- (a) a Downstream Priority Assistance Service; or
- (b) a Downstream CSG Service.

7.2 End User Equipment and installation activities

- (a) Customer is responsible for supplying and installing all End User Equipment required for the supply of **nbn**TM Sky MusterTM Plus.

*Section 8 sets out some general obligations of **nbn** and Customer that apply in relation to the end-to-end supply of **nbn**TM Sky MusterTM Plus.*

8. **nbn**TM Sky MusterTM Plus exclusions and Customer responsibilities

- (a) Customer is responsible for ordering appropriate Plans for each **nbn**TM Sky MusterTM Plus Product to meet its own requirements in respect of the supply of Customer Products to its Downstream Service Providers and Contracted End Users.
- (b) **nbn**TM Sky MusterTM Plus does not include:
 - (i) facilities access;
 - (ii) any interconnection with the SMP Network at the **nbn**TM Upstream Network Boundary;
 - (iii) Customer Equipment or End User Equipment (including cabling from the NTD to Customer or End User Equipment);
 - (iv) any content or applications;
 - (v) any other end user equipment, such as modems, personal computers, network attached storage solutions, central splitters, in-line splitters and any equipment necessary to receive or interact with multicast data;
 - (vi) any network fault or performance monitoring probe or device supplied by **nbn** in relation to the SMP Network;
 - (vii) any equipment (including Lines) upstream of the **nbn**TM Upstream Network Boundary, excluding any **nbn**TM Equipment; or
 - (viii) any form of internet filtering.

*Section 9 describes the structure of the SMP Network and the boundaries of **nbn**TM Sky MusterTM Plus.*

9. SMP Network architecture and **nbn**TM Sky MusterTM Plus boundaries

9.1 SMP Network architecture

In the SMP Network, each Premises at which **nbn**TM Sky MusterTM Plus is available is located within a Beam.

9.2 **nbn**TM Sky MusterTM Plus boundaries

nbnTM Sky MusterTM Plus carries traffic in respect of a Premises over the SMP Network between the following boundaries:

- (a) the UNI used to serve that Premises; and
- (b) the **nbn**TM Upstream Network Boundary.

9.3 Power Outages

nbn may not be able to supply **nbn**TM Sky MusterTM Plus in the event of a Power Outage affecting:

- (a) an NTD or any other **nbn**TM Equipment located at a Premises served by the SMP Network; or
- (b) any other active equipment that forms part of the SMP Network.

*Section 10 describes factors relevant to the speeds, performance and availability of **nbn**TM Sky MusterTM Plus.*

10. Speeds, performance and availability

10.1 Speeds and performance of Ordered Products

- (a) References to download and upload speeds in this **nbn**TM Sky MusterTM Plus Product Description are to Layer 3 speeds and are references to the maximum data throughput that the SMP Network is designed to make available to Customer at the UNI in respect of the relevant Premises, not the minimum data throughput.
- (b) The speeds and performance (including stability) of Ordered Products actually experienced by Customer, Downstream Service Providers, Contracted End Users and other End Users will vary and depend upon a number of factors including:
 - (i) the equipment used by Customer, Downstream Service Providers, Contracted End Users and other End Users (which can also affect the speeds experienced at the UNIs for a relevant Premises in respect of Products supplied to End Users and end users of Other Customers);
 - (ii) the nature and quality of the Customer Product or Downstream Product acquired by Downstream Service Providers and Contracted End Users;
 - (iii) the number of simultaneous End Users being served by the **nbn**TM Network;
 - (iv) interference caused by the equipment or network of any third party;

- (v) the nature, quality and length of the connection to, and signal reception (including any interference with in building cabling, line-of-sight interference, weather, wireless signals, Satellite Limitations or prevailing radio conditions) at or affecting, the relevant Premises.

10.2 Line Rate

Customer must consider, and acknowledges, that:

- (a) if a UNI-D negotiates with any attached device downstream of the UNI-D to operate over a Line Rate that is insufficient to deliver an applicable bandwidth profile, traffic loss may occur at the UNI-D; and
- (b) **nbn**'s ability to deliver bandwidth profiles included in Plans selected by Customer will be affected by actual Line Rates achieved in operation.

10.3 NTD throughput limits

- (a) If the aggregate PIR bandwidth profiles of ordered products, including both **nbn**TM Ethernet (Satellite) ordered products and **nbn**TM Sky MusterTM Plus ordered products, supplied to the same NTD exceed the NTD maximum aggregate throughput set out below (in section 10.3(b)), the ordered products supplied to that NTD may not achieve maximum peak data throughput simultaneously.
- (b) The maximum aggregate throughput for an NTD in respect of all UNIs on an NTD are:

Downstream (Mbps)	Upstream (Mbps)
60	20

- (c) Customer must ensure that End Users are aware of the potential for the maximum aggregate throughput of NTDs to affect the ability of multiple Ordered Products supplied using the same NTD to achieve maximum peak data throughput simultaneously.

Note: The maximum aggregate NTD throughputs set out in this section 10.3 apply in respect of all ordered products supplied by **nbn** to Customer and all Other Customers. Limitations apply to the number of **nbn**TM Sky MusterTM Plus ordered products which **nbn** makes available in respect of a Premises as set out in sections 10.4 and 10.5.

10.4 Availability of supply of Product

Notwithstanding anything else in this **nbn**TM Sky MusterTM Plus Product Description, the supply of **nbn**TM Sky MusterTM Plus by **nbn** to Customer is subject to the availability of each of the **nbn**TM Sky MusterTM Plus Product Components, Plan Sub-features and Product Features at the time at which Customer places an order.

10.5 SMP Network capacity management

In respect of **nbn**TM Sky MusterTM Plus:

- (a) except as otherwise notified by **nbn** in accordance with standard processes determined by **nbn** from time to time, Customer must not place, and **nbn** may decline, an **nbn**TM Sky MusterTM Plus order in respect of a Premises if the supply of the ordered Plan would result in **nbn** supplying to all **nbn** customers in respect of that Premises either:
 - (i) more than one Plan; or
 - (ii) a Plan in addition to any **nbn**TM Ethernet ordered product;

- (b) Customer must suspend or terminate any Customer Product that Customer becomes aware is being used by a Downstream Service Provider or End User in connection with the bonding of two or more UNIs (even if **nbn** is only supplying one of the UNIs to Customer and the other UNI(s) to an Other Customer);
- (c) **nbn** may decline an order or modification (as applicable) which would require additional Beam capacity to be supplied during any period in which a Beam is at or near maximum capacity; and
- (d) **nbn** may deprioritise data transfers or reduce the maximum data transfer rate of any Plan contributing disproportionately to Beam capacity utilisation.