

Product Description

nbn[™] Smart Places Product Module

Wholesale Broadband Agreement





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Version	Description	Effective Date
4.0	First issued version of nbn ™ Smart Places Product Description	Later of nbn ™ Smart Places Commercial Launch Date and the Execution Date

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Environment

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Introduction

This **nbn**TM Smart Places Product Description describes the **nbn**TM Smart Places Product. It forms part of the **nbn**TM Smart Places Product Module.

Roadmap

A roadmap describing the structure of this **nbn**TM Smart Places Product Description follows for the assistance of RSP.

Part A: The **nbn**TM Smart Places Product

Part A describes what the **nbn**TM Smart Places Product is.

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Part B: Required Product Components

Part B describes the four core Product Components of **nbn**TM Smart Places which RSP must order.

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Part C describes the optional Product Features of **nbn**TM Smart Places which RSP may elect to order.

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Part D: General conditions of supply

Part D sets out general conditions which apply to the supply of **nbn**TM Smart Places to RSP.

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Part A: The **nbn**[™] Smart Places Product

The **nbn**[™] Smart Places Product:

- is an Ethernet-based Layer 2 virtual connection that carries traffic between a UNI used to serve a Smart Location and a POI;
- is supplied by means of the Fibre Network;
- enables RSP or its Downstream Service Providers to supply a Carriage Service or Content Service to a Smart Location; and
- comprises 4 Product Components, which RSP must acquire as part of **nbn**[™] Smart Places, and a number of optional Product Features, which RSP may elect to acquire.

Type	Product Component / Product Feature
Product Components (required)	NNI; CVC; AVC; UNI
Product Features (optional)	Enhanced Fault Rectification Service
	NNI Link

The AVC and UNI Product Components are supplied as a bundle. **nbn** supplies the AVC to RSP on condition that RSP also acquires a UNI in conjunction with that AVC.

Part B: Required Product Components

*Section 1 describes the NNI and CVC. RSP must order an NNI and CVC for each CSA where **nbn** supplies **nbn**[™] Smart Places to RSP. RSP connects its network to the **nbn**[™] Network at the POI where the NNI is located. The size of the CVC that RSP requires is at the discretion of RSP (subject to the [nbn[™] Smart Places Fair Use Policy](#)).*

1. Network-Network Interface (NNI) and Connectivity Virtual Circuit (CVC)

- (a) The NNI and CVC Product Components of **nbn**[™] Smart Places are identical to the NNI and CVC Product Components of **nbn**[™] Ethernet and are available for supply on the same terms and conditions as apply to the NNI and CVC Product Components of **nbn**[™] Ethernet (respectively).
- (b) An NNI or CVC supplied in respect of:
 - (i) **nbn**[™] Ethernet supplied by means of any access technology other than **nbn**[™] Ethernet (Satellite) will be made available in respect of **nbn**[™] Smart Places; and
 - (ii) **nbn**[™] Smart Places will be made available in respect of **nbn**[™] Ethernet supplied by means of any access technology other than **nbn**[™] Ethernet (Satellite).

*Section 2 describes the AVC. RSP must order an AVC for each Smart Location where **nbn** supplies **nbn**[™] Smart Places to RSP.*

2. Access Virtual Circuit (AVC)

2.1 AVC description

- (a) An **Access Virtual Circuit** or **AVC** is an Ethernet-based Layer 2 virtual connection that carries RSP traffic to and from a UNI used to serve a Smart Location.
- (b) RSP must order an AVC for each Smart Location to which **nbn**[™] Smart Places will be supplied.
- (c) Subject to sections 2.2 to 2.3, **nbn** will configure the AVC to carry data in traffic class 4 (**AVC TC-4**) and RSP may elect to partition the AVC to additionally carry data in traffic class 2 (**AVC TC-2**).
- (d) RSP must order an AVC TC-4, and may additionally elect to order one AVC TC-2, in any of the bandwidth profiles set out in sections 2.2 and 2.3, subject to section 4.1.3 of, and Appendix A to, the [nbn[™] Smart Places Technical Specification](#).
- (e) For each AVC traffic class RSP orders in respect of a Smart Location in a CSA, RSP must order a CVC in the same traffic class in respect of that CSA.
- (f) **nbn** will map one AVC TC-4 to any UNI used to serve the relevant Smart Location and will not map more than one AVC TC-4 to the same UNI.

2.2 AVC TC-4

- (a) The AVC TC-4 bandwidth profiles are:

AVC TC-4 downstream Mbps (PIR)	AVC TC-4 upstream Mbps (PIR)
25	10
50	20
100	40
250	100
500	200
1000*	400

* **Note:** Inherent limitations of **nbn**TM Smart Places in relation to service frame overhead means the effective Layer 2 Peak Information Rate will be limited to, depending on the Frame Size, up to a maximum of 970Mbps (at 2,000 Byte Frame Size). See section 2.2.2.1 of the [nbnTM Smart Places Technical Specification](#).

2.3 AVC TC-2

- (a) The AVC TC-2 bandwidth profiles are:

AVC TC-2 symmetrical Mbps (CIR)
5
10
20
50

- (b) The AVC TC-2 Data Transfer Rate will be included in the overall AVC TC-4 Data Transfer Rate.

Section 3 describes the UNI which must be ordered in conjunction with the AVC for each Smart Location where **nbn** supplies **nbn**TM Smart Places to RSP.

3. User Network Interface (UNI)

- (a) The **User Network Interface** or **UNI** is a physical port to which **nbn** supplies **nbn**TM Smart Places in respect of a Smart Location.
- (b) Access to and use of a UNI used to serve a Smart Location is subject to any availability rules set out in the [nbnTM Smart Places Operations Manual](#).
- (c) **nbn** will make a UNI available in respect of a Smart Location as follows:

Type of UNI	Port	Number of available ports	Location of UNI port	nbn TM Downstream Network Boundary
UNI-SFP	Ethernet	1	SFP-NTD	UNI

- (d) The UNI-SFP has an electrical interface and will not be made available with an optical interface.

Part B: Required Product Components

- (e) It is a condition of supply of an AVC TC-4 Product Component of **nbn**[™] Smart Places Product that RSP also acquire a UNI-SFP in conjunction with that AVC TC-4 for each Smart Location at which **nbn**[™] Smart Places will be supplied.

Part C: Optional Product Features

*Section 4 describes the optional Enhanced Fault Rectification Service available for **nbn**TM Smart Places*

4. Enhanced Fault Rectification Service

- (a) The **Enhanced Fault Rectification Service** is an optional Product Feature of **nbn**TM Smart Places which provides RSP with enhanced Service Levels for the rectification of End User Faults which affect an **nbn**TM Smart Places Ordered Product.
- (b) **nbn** offers the following Enhanced Fault Rectification Service options:

Option
Enhanced-12
Enhanced-12 (24/7)
Enhanced-8
Enhanced-8 (24/7)

- (c) Details of these Enhanced Fault Rectification Service Level options are set out at section 5.1 of the [nbnTM Smart Places Service Levels Schedule](#).

Section 5 describes the NNI Link which is an optional feature

5. NNI Link

- (a) The NNI Link Product Feature of **nbn**TM Smart Places is identical to the NNI Link Product Feature of **nbn**TM Ethernet and is available for supply on the same terms and conditions as apply to the NNI Link Product Feature of **nbn**TM Ethernet.
- (b) An NNI Link supplied in respect of:
 - (i) **nbn**TM Ethernet will be made available in respect of **nbn**TM Smart Places; and
 - (ii) **nbn**TM Smart Places will be made available in respect of **nbn**TM Ethernet supplied by means of any access technology other than **nbn**TM Ethernet (Satellite).

Part D: General conditions of supply

*Section 6 sets out obligations of RSP in relation to downstream supply of services to which **nbn**TM Smart Places is an input.*

6. Downstream Supply

6.1 Priority Assistance

RSP must not use **nbn**TM Smart Places as an input into the supply of a Downstream Priority Assistance Service.

6.2 End User Equipment and installation activities

RSP is responsible for supplying and installing all Customer Premises Equipment and any other End User Equipment required for the supply of **nbn**TM Smart Places.

*Section 7 sets out some general obligations of **nbn** and RSP which apply in relation to the end-to-end supply of services to which **nbn**TM Smart Places is an input.*

7. Interconnection and network supply chain

7.1 Interconnection and network supply chain

RSP is responsible for:

- (a) ordering sufficient capacity across the relevant Product Components and Product Features of **nbn**TM Smart Places to meet its own capacity requirements in respect of the supply of RSP Products to its Downstream Service Providers and Contracted End Users; and
- (b) separately acquiring, operating and maintaining all connections made to the RSP-side of the NNI.

7.2 **nbn**TM Smart Places Exclusions

nbnTM Smart Places does not include:

- (a) facilities access;
- (b) any backhaul transmission, Cross Connections or cabling from the RSP-side of the NNI;
- (c) any content or applications, including IP transit, Internet gateway connection, any other RSP equipment, BGP routing, soft switching infrastructure and all international connectivity associated with the supply of **nbn**TM Smart Places;
- (d) Customer Premises Equipment and any other RSP Equipment and End User Equipment (including cabling); or
- (e) any other end user equipment, such as modems, personal computers, network attached storage solutions.

*Section 8 describes the structure of the Smart Places Network, and the boundaries of **nbn**TM Smart Places.*

8. **nbn**TM Smart Places boundaries

8.1 **nbn**TM Smart Places boundaries

nbnTM Smart Places carries traffic in respect of a Smart Location over the Fibre Network, between the following boundaries:

- (a) the UNI used to serve that Smart Location; and
- (b) the NNI that serves the Smart Location.

8.2 Power Outages – Smart Places network

nbn may not be able to supply an **nbn**TM Smart Places Ordered Product in the event of a Power Outage affecting an SFP-NTD.

*Section 9 describes factors that are relevant to the speed, performance and availability of **nbn**TM Smart Places.*

9. Speeds, performance and availability

9.1 Speeds and performance of Ordered Products

- (a) References to download and upload speeds (PIR, CIR and Information Rate) in this **nbn**TM Smart Places Product Description are to Layer 2 speeds and are references to the maximum data throughput that the **nbn**TM Network is designed to make available to RSP at the **nbn**TM Downstream Network Boundary in respect of the relevant Smart Location.
- (b) The speeds and performance (including stability) of Ordered Products actually experienced by RSP, Downstream Service Providers, Contracted End Users and other End Users will vary and depend upon a number of factors including:
 - (i) the contention ratios that are determined by RSP;
 - (ii) the equipment that is used by RSP, Downstream Service Providers, Contracted End Users and other End Users;
 - (iii) the nature and quality of the RSP Product or Downstream Product acquired by Downstream Service Providers and Contracted End Users; and
 - (iv) in the case of PIR, the number of simultaneous end users being served by the **nbn**TM Network.

9.2 Line Rate and Information Rate

RSP must consider, and acknowledges, that if:

- (a) RSP configures a UNI-SFP; or
- (b) a UNI-SFP negotiates with any attached device upstream of the NNI or downstream of the UNI-SFP,

to operate over a Line Rate which is insufficient to deliver the ordered AVC capacity, traffic loss may occur at the UNI.

9.3 Availability of supply of Product

Notwithstanding anything else in this **nbn**[™] Smart Places Product Description, the supply of **nbn**[™] Smart Places by **nbn** to RSP is subject to the availability of each of the **nbn**[™] Smart Places Product Components and Product Features at the time at which RSP places an order.