

## **Bitstream Service Description**

# ***Bitstream Service Product Description***

# Bitstream Service Description

## **1. Introduction**

This paper defines the service for “ADSL/ADSL2plus Bitstream” (hereafter referred to as Bitstream). Bitstream is defined as a broadband access product, which utilises ADSL/ADSL2plus<sup>1</sup> in the local loop, and which is then transported across the *eircom* network to an *eircom* ADSL/ADSL2plus Regional POP.

## **2. Product Description**

The Bitstream service allows a voice and an ADSL/ADSL2 service to be integrated over the same 2-wire copper pair. The copper pairs available for the *eircom* Bitstream service are all PSTN copper lines currently in service within the defined ADSL/ADSL2plus regional areas (currently simultaneous use of ADSL/ADSL2plus with ISDN or leased lines is not available). “In service” is further defined as an existing copper pair where *eircom* receives a PSTN line rental. The suitability of copper pairs will be dependent upon individual Pre-qualification results (*See Section 2.6 for further details.*). The *eircom* Bitstream service is not a ubiquitous service and will be rolled out on a phased basis. (*An up to date Deployment Plan can be obtained from the Access Seeker’s Wholesale Account Manager.*)

The points of demarcation for the *eircom* Bitstream service are the dual NTU/splitter in the subscriber’s premises and the handover point from *eircom* to the Access Seeker’s network (i.e., *eircom* ADSL/ADSL2plus Regional POPs within the defined ADSL/ADSL2plus regional areas). The Access Seekers will rent the Bitstream service from *eircom*. *eircom*’s Bitstream service may be defined as follows in terms of the physical and service elements required to deliver the service.

### **2.1 Physical**

The physical definition of the *eircom* Bitstream service is as follows:

- The *eircom* Bitstream service will be made available over copper pairs currently in-service within the defined ADSL/ADSL2plus regional areas, where current technology allows. “In service” is further defined as an existing copper pair where *eircom* receives a PSTN line rental. The suitability of the copper pairs will be dependent upon individual pre-qualification results.
- *eircom* is physically responsible from the *eircom* ADSL/ADSL2plus Regional POPs (within the defined ADSL/ADSL2plus regional areas) through to the defined service termination at the subscriber’s site. (*See Appendix 1 for the service termination point physical interface specifications.*)

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<sup>1</sup> ADSL/ADSL2plus is available in certain locations as defined in the DSL deployment plan.

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- The dual NTU/splitter is the Bitstream service termination point. (See Appendix 2 for parameters of the dual NTU/splitter interface.) *eircom* will own and maintain the dual NTU/splitter.
- Where required, the Access Seeker will install the dual NTU/splitter at the subscriber's site, according to standard *eircom* policies for installation of a NTU in a subscriber's premises.
- Backhaul from the *eircom* ADSL/ADSL2plus Regional POPs within the defined ADSL/ADSL2plus regional areas (i.e., *eircom* handover points) to the Access Seeker's nominated handover point is outside the Bitstream service. Details on *eircom*'s Bitstream Connection Service/Bitstream Ethernet Connection Service (BECS), of which Access Seekers may avail to connect from the Bitstream handover point to the Access Seeker's POP, may be found in the Bitstream Connection Service/Bitstream Ethernet Connection service product description. Access Seekers are responsible for ensuring that required backhaul is available prior to ordering the Bitstream Service.

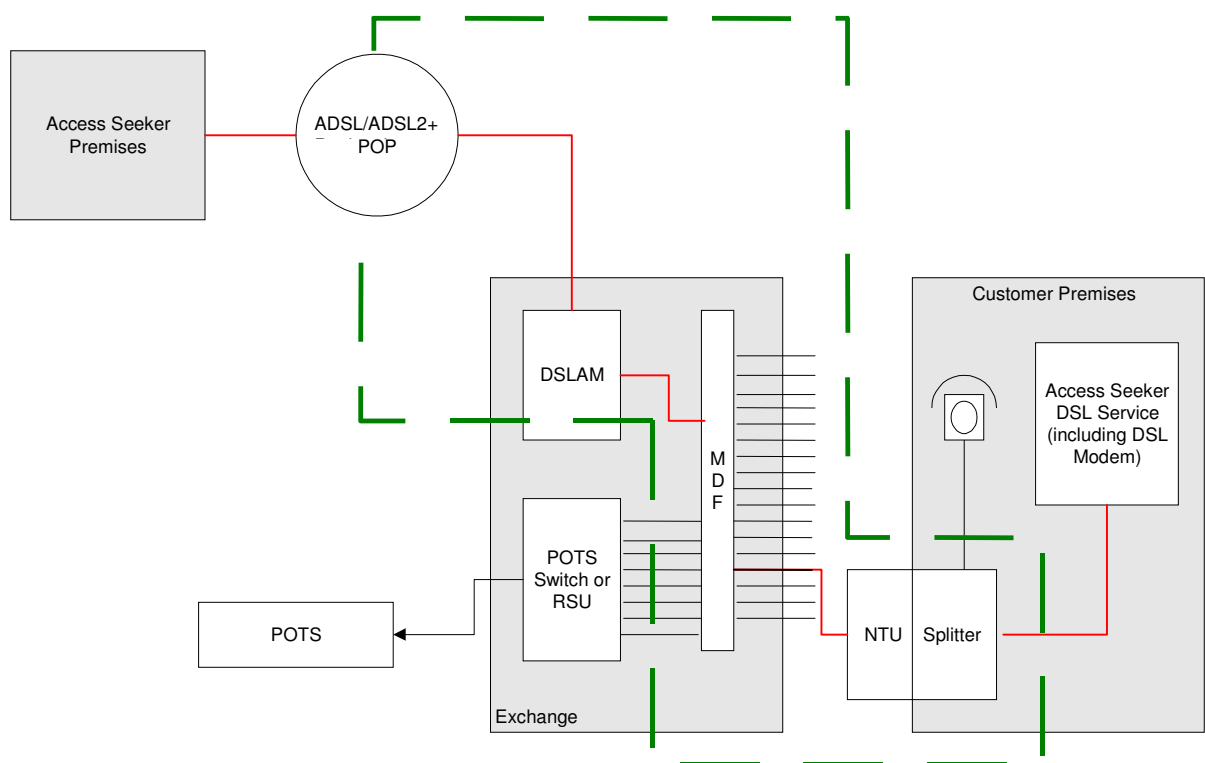


Figure 1: *eircom* Bitstream Service Physical Definition

The elements within the dotted line in the diagram above represent the physical definition of the Bitstream Service.

## Bitstream Service Description

- For the Bitstream Managed Backhaul (Bitstream MB) product a new VLAN is required on the Bitstream (Ethernet) Connection Service to carry the Bitstream MB traffic separately to the existing Bitstream IP traffic. This VLAN will form part of the existing Bitstream (Ethernet) Connection Service and will be governed by the Bitstream (Ethernet) Connection Service product description.
- **2.2 Service**

The service definition of Bitstream is as follows:

- *Forecasting*: process by which Access Seekers indicate requirements to *eircom* on a per port per exchange basis. *eircom* must review and agree the forecast with Access Seekers.
- *Order Handling and Provisioning*: process by which subscribers are activated onto the DSLAM ports and configured across the core transmission to the *eircom* ADSL/ADSL2plus regional POPs (within the defined ADSL/ADSL2plus regional areas).
- *Bitstream Port Transfer*: process by which a Gaining Access Seeker may move a Subscriber port from the Losing Access Seeker's network to the Gaining Access Seeker's network to a Bitstream product of the Gaining Access Seeker's choosing. Bitstream Port Transfer is not available with *eircom*'s Bitstream VC products (Bitstream Swift VC, Bitstream Express VC, Bitstream Sonic VC and Bitstream Comet VC).
- *eircom Provisioning Completion*: subscriber provisioning will be completed by the Required by Date as indicated by the Access Seeker in the Appointments Database.
- *Dual NTU/splitter Installation*: Where required, the Access Seeker will install the dual NTU/Splitter in accordance with the *eircom* Dual NTU/Splitter Installation Manual.
- *The Access Seeker* must be able to prove installation faults out of the network as per the *eircom* Dual NTU/Splitter Installation Manual and the Industry Process Manual. (See section 2.6 for a more detailed description of the order handling process.)
- *eircom* will commence billing from the Required by Date indicated by the Access Seeker in the Appointments Database.

## Bitstream Service Description

The Bitstream service topology is as follows:

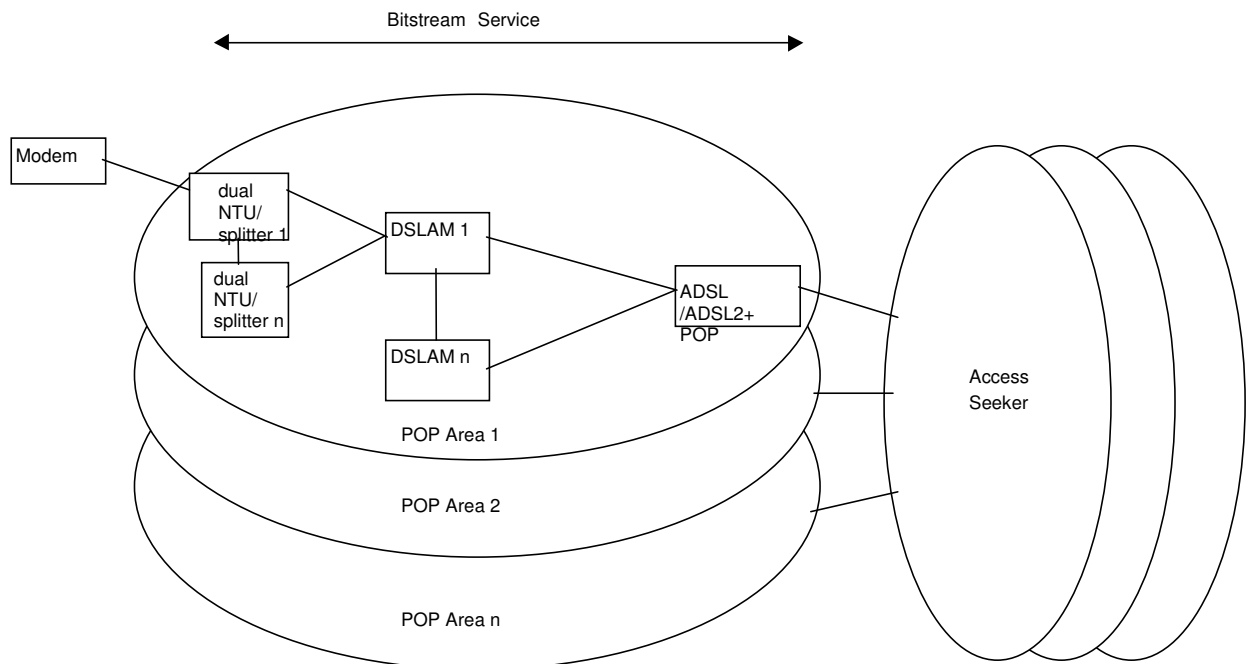


Figure 2: *eircom* Bitstream Service Topology

For the Bitstream 1M/256K and 512K/128K products (with ATM interface) each *eircom* ADSL/ADSL2plus Regional POP will service particular exchanges, as defined in the Deployment Plan. Access Seeker traffic will be handed over at each respective *eircom* ADSL/ADSL2plus Regional POP.

For the Bitstream “up to” 8M, “up to” 7M, 6M/512K, 4M/384K, “up to” 3M and 1M/128K Rate Adaptive (RA) products (with IP interface) each *eircom* ADSL/ADSL2plus Regional POP may service all exchanges within the ADSL/ADSL2plus rollout area, as defined in the Deployment Plan.

For the Bitstream “up to” 24M, 12M/2M and “up to” 12M/1M Rate Adaptive (RA) products (with IP interface) each *eircom* ADSL2plus Regional POP may service exchanges within the ADSL2plus rollout area, as defined in the Deployment Plan.

For the Bitstream VC products at 6M/512K, 4M/256K, 2M/256K and 1M/128K (with ATM interface on a VC basis), each *eircom* ADSL/ADSL2plus Regional POP may service all exchanges within the ADSL/ADSL2plus rollout area, as defined in the Deployment Plan.

For the Bitstream MB product each *eircom* NGN Regional POP may service all exchanges within the NGN rollout area, as defined in the Deployment Plan.

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### 2.3 Product Offerings

The *eircom* Bitstream service will consist of IP and ATM products, which are defined to the parameters listed below. *eircom* may introduce other products on a phased basis.

\* = This product is available in all ADSL2plus enabled exchanges only. For a list of all ADSL2plus exchanges please refer to the latest deployment plan.

\*\* = For the “up to” products please see the table “*profiles associated with “up to” products*” for associated profiles.

\*\*\* = This product is available in all NGN enabled exchanges only. For a list of all NGN exchanges please refer to the latest deployment plan.

Products Available up to 3 <sup>rd</sup> July 2011					
	Port Speed Downstream up to kbit/s	Port Speed Upstream up to kbit/s	Interface	Class of Service	Planning Ratio
<b><i>eircom</i> Bitstream 24mb Sprint IP(*)(**)</b>	“up to” 24576 RA	“up to” 1024 RA	IP	UBR	12:1 outside NGN Exchanges Uncongested within NGN Exchanges
<b><i>eircom</i> Bitstream 18mb Turbo IP Plus(*)</b>	“up to” 18432 RA	2048 RA	IP	UBR	12:1 outside NGN Exchanges Uncongested within NGN Exchanges
<b><i>eircom</i> Bitstream 12mb Arrow IP (*)(**)</b>	“up to” 12288 RA	“up to” 1024 RA	IP	UBR	12:1 outside NGN Exchanges Uncongested within NGN Exchanges
<b><i>eircom</i> Bitstream Swift IP(**)</b>	“up to” 8192 RA	“up to” 1120 RA	IP	UBR	12:1 outside NGN Exchanges Uncongested within NGN Exchanges
<b><i>eircom</i> Bitstream 24mb Zoom IP(*)(**)</b>	“up to” 24576 RA	“up to” 768 RA	IP	UBR	48:1
<b><i>eircom</i> Bitstream Rapid IP(**)</b>	“up to” 7168 RA	“up to” 384 RA	IP	UBR	48:1
<b><i>eircom</i> Bitstream Expand IP(**)</b>	“up to” 3072 RA	“up to” 384 RA	IP	UBR	48:1

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Products Available up to 3 <sup>rd</sup> July 2011					
<b>eircom Bitstream Connect<sup>2</sup></b>	1024 RA	128 RA	IP	UBR	48:1
<b>eircom Bitstream Kronos<sup>3</sup></b>	1024 RA	128 RA	IP	UBR	48:1
<b>eircom Bitstream Comet VC Gold</b>	6144	512	ATM	VBR	5:1
<b>eircom Bitstream Comet VC Plus</b>	6144	512	ATM	VBR	10:1
<b>eircom Bitstream Comet VC</b>	6144	512	ATM	UBR	10:1
<b>eircom Bitstream Sonic VC Gold</b>	4096	256	ATM	VBR	10:1
<b>eircom Bitstream Sonic VC Plus</b>	4096	256	ATM	VBR	24:1
<b>eircom Bitstream Sonic VC</b>	4096	256	ATM	UBR	24:1
<b>eircom Bitstream Express VC Gold</b>	2048	256	ATM	VBR	10:1
<b>eircom Bitstream Express VC Plus</b>	2048	256	ATM	VBR	24:1
<b>eircom Bitstream Express VC</b>	2048	256	ATM	UBR	24:1
<b>eircom Bitstream Swift VC Gold</b>	1024	128	ATM	VBR	10:1
<b>eircom Bitstream Swift VC Plus</b>	1024	128	ATM	VBR	24:1
<b>eircom Bitstream Swift VC</b>	1024	128	ATM	UBR	24:1
<b>eircom Bitstream Express</b>	1024	256	ATM	UBR	24:1
<b>eircom Bitstream</b>	512	128	ATM	UBR	24:1

<sup>2</sup> Where an Access Seeker's Subscriber has ordered a 1M Bitstream RA product with an IP interface, but after order completion cannot get service, the Access Seeker may offer the option of changing the Subscriber's product speed profile to one of three possible lower speed profiles using the Mid-Band process. Details of these profiles and the process for availing of this service are outlined in the Bitstream Industry Process Manual, as published on [www.eircomwholesale.ie](http://www.eircomwholesale.ie). Where the Access Seeker's Subscriber chooses to avail of one of these alternative profiles and they are able to get a service, standard pricing will apply for the 1M Bitstream RA product as ordered. This process is available from 3<sup>rd</sup> January 2007.

<sup>3</sup> eircom Bitstream Kronos is a time based pay as you go Bitstream product. For details on pricing and usage allowances included please refer to the ADSL/ADSL2plus Bitstream Service Price List on the eircom Wholesale website at [www.eircomwholesale.ie](http://www.eircomwholesale.ie).

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### Products Available up to 3<sup>rd</sup> July 2011

Swift					
<b>eircom 8Mb Bitstream MB (**)</b> (***)	“up to“ 8192	“up to” 512	IP	UBR	Uncongested <sup>4</sup> -
<b>eircom 24Mb Bitstream MB (**)</b> (***)	“up to“ 24576	“up to” 762	IP	UBR	Uncongested <sup>5</sup> -

### Profiles associated with “up to” products

	Port Speed Downstream up to kbit/s	Port Speed Upstream up to kbit/s	Interface	Class of Service	Planning Ratio
<b>eircom Bitstream 24mb Sprint IP</b>	24M RA	1M RA	IP	UBR	12:1 outside NGN Exchanges Uncongested within NGN Exchanges
	20M RA	1M RA	IP	UBR	12:1 outside NGN Exchanges Uncongested within NGN Exchanges
	17M RA	1M RA	IP	UBR	12:1 outside NGN Exchanges Uncongested within NGN Exchanges
	15M RA	1M RA	IP	UBR	12:1 outside NGN Exchanges Uncongested within NGN Exchanges
	12M RA	1M RA	IP	UBR	12:1 outside NGN Exchanges Uncongested within NGN Exchanges
	10M RA	832 RA	IP	UBR	12:1 outside NGN Exchanges Uncongested within NGN Exchanges
	9M RA	832 RA	IP	UBR	12:1 outside NGN Exchanges Uncongested within NGN Exchanges
	8M RA	832 RA	IP	UBR	12:1 outside NGN Exchanges Uncongested within NGN Exchanges
<b>eircom Bitstream 18mb Turbo IP Plus</b>	18432 RA	2M RA	IP	UBR	12:1 outside NGN Exchanges Uncongested within NGN Exchanges

<sup>4</sup> eircom will capacity manage the VLAN between the DSLAM and eircom BRAS to ensure that the Bitstream MB service is uncongested.

<sup>5</sup> eircom will capacity manage the VLAN between the DSLAM and eircom BRAS to ensure that the Bitstream MB service is uncongested.

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Profiles associated with “up to” products					
	Port Speed Downstream up to kbit/s	Port Speed Upstream up to kbit/s	Interface	Class of Service	Planning Ratio
	15360 RA	2M RA	IP	UBR	12:1 outside NGN Exchanges Uncongested within NGN Exchanges
	12288 RA	2M RA	IP	UBR	12:1 outside NGN Exchanges Uncongested within NGN Exchanges
<b>eircom Bitstream 12mb Arrow IP</b>	12288 RA	1M RA	IP	UBR	12:1 outside NGN Exchanges Uncongested within NGN Exchanges
	10240 RA	832 RA	IP	UBR	12:1 outside NGN Exchanges Uncongested within NGN Exchanges
	9216 RA	832 RA	IP	UBR	12:1 outside NGN Exchanges Uncongested within NGN Exchanges
	8192 RA	832 RA	IP	UBR	12:1 outside NGN Exchanges Uncongested within NGN Exchanges
<b>eircom Bitstream Swift IP</b>	8192RA	1120RA	IP	UBR	12:1 outside NGN Exchanges Uncongested within NGN Exchanges
	8192RA	1024RA	IP	UBR	12:1 outside NGN Exchanges Uncongested within NGN Exchanges
	8192RA	800RA	IP	UBR	12:1 outside NGN Exchanges Uncongested within NGN Exchanges
	7616 RA	672 RA	IP	UBR	12:1 outside NGN Exchanges Uncongested within NGN Exchanges
	6144 RA	512 RA	IP	UBR	12:1 outside NGN Exchanges Uncongested within NGN Exchanges
	5120 RA	512 RA	IP	UBR	12:1 outside NGN Exchanges Uncongested within NGN Exchanges
	4096 RA	384 RA	IP	UBR	12:1 outside NGN Exchanges Uncongested within NGN Exchanges
	3072 RA	384 RA	IP	UBR	12:1 outside NGN Exchanges Uncongested within NGN Exchanges
<b>eircom Bitstream 24mb Zoom IP</b>	24M RA	768 RA	IP	UBR	48:1
	20M RA	768 RA	IP	UBR	48:1
	17M RA	768 RA	IP	UBR	48:1
	15M RA	768 RA	IP	UBR	48:1
	12M RA	672 RA	IP	UBR	48:1

## Bitstream Service Description

Profiles associated with “up to” products					
	Port Speed Downstream up to kbit/s	Port Speed Upstream up to kbit/s	Interface	Class of Service	Planning Ratio
	10M RA	672 RA	IP	UBR	48:1
	9M RA	672 RA	IP	UBR	48:1
<b>eircom Bitstream Expand IP</b>	3072 RA	384 RA	IP	UBR	48:1
	2048 RA	256 RA	IP	UBR	48:1
<b>eircom 8Mb Bitstream MB</b>	8192	512	IP	UBR	Uncongested
	7168	512	IP	UBR	Uncongested
	6144	512	IP	UBR	Uncongested
	5120	512	IP	UBR	Uncongested
	4096	384	IP	UBR	Uncongested
	3072	384	IP	UBR	Uncongested
	2048	256	IP	UBR	Uncongested
	1024	128	IP	UBR	Uncongested
<b>eircom 24Mb Bitstream MB</b>	24576	768	IP	UBR	Uncongested
	20480	768	IP	UBR	Uncongested
	17408	768	IP	UBR	Uncongested
	15360	768	IP	UBR	Uncongested
	12288	672	IP	UBR	Uncongested
	10240	672	IP	UBR	Uncongested
	9216	672	IP	UBR	Uncongested

Products Available from 4 <sup>th</sup> July 2011					
	Port Speed Downstream up to kbit/s	Port Speed Upstream up to kbit/s	Interface	Class of Service	Planning Ratio
<b>eircom Bitstream 24mb Sprint IP(*)(**)</b>	“up to” 24576 RA	“up to” 1024 RA	IP	UBR	12:1 outside NGN Exchanges Uncongested within NGN Exchanges
<b>eircom Bitstream 18mb Turbo IP Plus(*)</b>	“up to” 18432 RA	2048 RA	IP	UBR	12:1 outside NGN Exchanges Uncongested within NGN Exchanges
<b>eircom Bitstream 12mb Arrow IP (*)(**)</b>	“up to” 12288 RA	“up to” 1024 RA	IP	UBR	12:1 outside NGN Exchanges Uncongested within NGN Exchanges
<b>eircom Bitstream Swift IP(**)</b>	“up to” 12288 RA	“up to” 1120 RA	IP	UBR	12:1 outside NGN Exchanges Uncongested within NGN Exchanges
<b>eircom Bitstream 24mb Zoom IP(*)(**)</b>	“up to” 24576 RA	“up to” 768 RA	IP	UBR	48:1

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### Products Available from 4<sup>th</sup> July 2011

	Port Speed Downstream up to kbit/s	Port Speed Upstream up to kbit/s	Interface	Class of Service	Planning Ratio
<b>eircom Bitstream Rapid IP(**)</b>	"up to" 7168 RA	"up to" 384 RA	IP	UBR	48:1
<b>eircom Bitstream Expand IP(**)</b>	"up to" 3072 RA	"up to" 384 RA	IP	UBR	48:1

### Products Available from 4<sup>th</sup> July 2011

<b>eircom Bitstream Connect<sup>6</sup></b>	1024 RA	128 RA	IP	UBR	48:1
<b>eircom Bitstream Kronos<sup>7</sup></b>	1024 RA	128 RA	IP	UBR	48:1
<b>eircom Bitstream Comet VC Gold</b>	6144	512	ATM	VBR	5:1
<b>eircom Bitstream Comet VC Plus</b>	6144	512	ATM	VBR	10:1
<b>eircom Bitstream Comet VC</b>	6144	512	ATM	UBR	10:1
<b>eircom Bitstream Sonic VC Gold</b>	4096	256	ATM	VBR	10:1
<b>eircom Bitstream Sonic VC Plus</b>	4096	256	ATM	VBR	24:1
<b>eircom Bitstream Sonic VC</b>	4096	256	ATM	UBR	24:1
<b>eircom Bitstream Express VC Gold</b>	2048	256	ATM	VBR	10:1
<b>eircom Bitstream Express VC Plus</b>	2048	256	ATM	VBR	24:1
<b>eircom Bitstream Express VC</b>	2048	256	ATM	UBR	24:1
<b>eircom Bitstream</b>	1024	128	ATM	VBR	10:1

<sup>6</sup> Where an Access Seeker's Subscriber has ordered a 1M Bitstream RA product with an IP interface, but after order completion cannot get service, the Access Seeker may offer the option of changing the Subscriber's product speed profile to one of three possible lower speed profiles using the Mid-Band process. Details of these profiles and the process for availing of this service are outlined in the Bitstream Industry Process Manual, as published on [www.eircomwholesale.ie](http://www.eircomwholesale.ie). Where the Access Seeker's Subscriber chooses to avail of one of these alternative profiles and they are able to get a service, standard pricing will apply for the 1M Bitstream RA product as ordered. This process is available from 3<sup>rd</sup> January 2007.

<sup>7</sup> eircom Bitstream Kronos is a time based pay as you go Bitstream product. For details on pricing and usage allowances included please refer to the ADSL/ADSL2plus Bitstream Service Price List on the eircom Wholesale website at [www.eircomwholesale.ie](http://www.eircomwholesale.ie).

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### Products Available from 4<sup>th</sup> July 2011

<b>Swift VC Gold</b>					
<b>eircom Bitstream Swift VC Plus</b>	1024	128	ATM	VBR	24:1
<b>eircom Bitstream Swift VC</b>	1024	128	ATM	UBR	24:1
<b>eircom Bitstream Express</b>	1024	256	ATM	UBR	24:1
<b>eircom Bitstream Swift</b>	512	128	ATM	UBR	24:1
<b>eircom 8Mb Bitstream MB (**)</b> (***)	“up to“ 8192	“up to“ 512	IP	UBR	Uncongested <sup>8</sup> -
<b>eircom 24Mb Bitstream MB (**)</b> (***)	“up to“ 24576	“up to“ 762	IP	UBR	Uncongested <sup>9</sup> -

### Profiles associated with “up to” products

	Port Speed Downstream up to kbit/s	Port Speed Upstream up to kbit/s	Interface	Class of Service	Planning Ratio
<b>eircom Bitstream 24mb Sprint IP</b>	24M RA	1M RA	IP	UBR	12:1 outside NGN Exchanges Uncongested within NGN Exchanges
	20M RA	1M RA	IP	UBR	12:1 outside NGN Exchanges Uncongested within NGN Exchanges
	17M RA	1M RA	IP	UBR	12:1 outside NGN Exchanges Uncongested within NGN Exchanges
	15M RA	1M RA	IP	UBR	12:1 outside NGN Exchanges Uncongested within NGN Exchanges
	12M RA	1M RA	IP	UBR	12:1 outside NGN Exchanges Uncongested within NGN Exchanges
	10M RA	832 RA	IP	UBR	12:1 outside NGN Exchanges Uncongested within NGN Exchanges
	9M RA	832 RA	IP	UBR	12:1 outside NGN Exchanges

<sup>8</sup> eircom will capacity manage the VLAN between the DSLAM and eircom BRAS to ensure that the Bitstream MB service is uncongested.

<sup>9</sup> eircom will capacity manage the VLAN between the DSLAM and eircom BRAS to ensure that the Bitstream MB service is uncongested.

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Profiles associated with “up to” products					
	Port Speed Downstream up to kbit/s	Port Speed Upstream up to kbit/s	Interface	Class of Service	Planning Ratio
					Uncongested within NGN Exchanges
	8M RA	832 RA	IP	UBR	12:1 outside NGN Exchanges Uncongested within NGN Exchanges
<b>eircom Bitstream 18mb Turbo IP Plus</b>	18432 RA	2M RA	IP	UBR	12:1 outside NGN Exchanges Uncongested within NGN Exchanges
	15360 RA	2M RA	IP	UBR	12:1 outside NGN Exchanges Uncongested within NGN Exchanges
	12288 RA	2M RA	IP	UBR	12:1 outside NGN Exchanges Uncongested within NGN Exchanges
<b>eircom Bitstream 12mb Arrow IP</b>	12288 RA	1M RA	IP	UBR	12:1 outside NGN Exchanges Uncongested within NGN Exchanges
	10240 RA	832 RA	IP	UBR	12:1 outside NGN Exchanges Uncongested within NGN Exchanges
	9216 RA	832 RA	IP	UBR	12:1 outside NGN Exchanges Uncongested within NGN Exchanges
	8192 RA	832 RA	IP	UBR	12:1 outside NGN Exchanges Uncongested within NGN Exchanges
<b>eircom Bitstream Swift IP</b>	12288 RA	1120RA	IP	UBR	12:1 outside NGN Exchanges Uncongested within NGN Exchanges
	8192RA	1120RA	IP	UBR	12:1 outside NGN Exchanges Uncongested within NGN Exchanges
	8192RA	1024RA	IP	UBR	12:1 outside NGN Exchanges Uncongested within NGN Exchanges
	8192RA	800RA	IP	UBR	12:1 outside NGN Exchanges Uncongested within NGN Exchanges
	7616 RA	672 RA	IP	UBR	12:1 outside NGN Exchanges Uncongested within NGN Exchanges
	6144 RA	512 RA	IP	UBR	12:1 outside NGN Exchanges Uncongested within NGN Exchanges
	5120 RA	512 RA	IP	UBR	12:1 outside NGN Exchanges Uncongested within NGN Exchanges

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Profiles associated with “up to” products					
	Port Speed Downstream up to kbit/s	Port Speed Upstream up to kbit/s	Interface	Class of Service	Planning Ratio
	4096 RA	384 RA	IP	UBR	12:1 outside NGN Exchanges Uncongested within NGN Exchanges
	3072 RA	384 RA	IP	UBR	12:1 outside NGN Exchanges Uncongested within NGN Exchanges
<b>eircom Bitstream 24mb Zoom IP</b>	24M RA	768 RA	IP	UBR	48:1
	20M RA	768 RA	IP	UBR	48:1
	17M RA	768 RA	IP	UBR	48:1
	15M RA	768 RA	IP	UBR	48:1
	12M RA	672 RA	IP	UBR	48:1
	10M RA	672 RA	IP	UBR	48:1
	9M RA	672 RA	IP	UBR	48:1
<b>eircom Bitstream Expand IP</b>	3072 RA	384 RA	IP	UBR	48:1
	2048 RA	256 RA	IP	UBR	48:1
<b>eircom 8Mb Bitstream MB</b>	8192	512	IP	UBR	Uncongested
	7168	512	IP	UBR	Uncongested
	6144	512	IP	UBR	Uncongested
	5120	512	IP	UBR	Uncongested
	4096	384	IP	UBR	Uncongested
	3072	384	IP	UBR	Uncongested
	2048	256	IP	UBR	Uncongested
	1024	128	IP	UBR	Uncongested
<b>eircom 24Mb Bitstream MB</b>	24576	768	IP	UBR	Uncongested
	20480	768	IP	UBR	Uncongested
	17408	768	IP	UBR	Uncongested
	15360	768	IP	UBR	Uncongested
	12288	672	IP	UBR	Uncongested
	10240	672	IP	UBR	Uncongested
	9216	672	IP	UBR	Uncongested

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### 2.4 PVCs per Subscriber/DSLAM Port

*eircom* will assign one VC per DSLAM port.

### 2.5 *eircom*'s Local Loop

*eircom* plant is primarily a combination of 0.4 MM and 0.5 MM copper plant. There is a small quantity of 0.32 MM and 0.6 MM copper plant. Actual cable gauge per customer will not be known. Further capabilities of DMT can be observed in the Issue 2, Category 2, ITU Technical Requirement G.992.5 and Testing under ETSI specification ETR328.

<b>Buried/Overhead Cables (Typical Losses)</b>	
Type of Cable Conductor Diameter	Attenuation Insertion @ 300 kHz dB/km ADSL/ADSL2plus
C.T. 1031 0.4 MM	14
With Conductors 0.5 MM	12
C.T. 1031/1033 0.6 MM	10

### 2.6 Order Handling Process

The Access Seeker will follow these steps in submitting an order:

- Access Seeker logs onto the, *eircom* Bitstream service order management system, Unified Gateway (UG) via the web/internet. (*eircom* will provide the URL address and a unique ID and log on).
- Access Seeker enters subscriber's full telephone number (including STD code).
- The UG provides a metallic pair indicator (reference number, Green/Amber /Red indicator).

*The UG pre-qual survey is a process whereby:*

- *An indication is provided as to the suitability of the metallic pair to support the eircom Bitstream Service at a particular point in time (i.e. "snapshot" in time).*
- *It is simply an estimate based on available technology and equipment at a particular point in time. It confers no responsibility or liability on eircom, with respect to actual physical capability of the line.*
- *The UG pre-qual will be made available to Access Seekers to obtain an indication as to whether a particular metallic pair is potentially suitable to support ADSL/ADSL2plus.*

- The Access Seeker can submit an order for service using the Unified Gateway by entering a Provide order. The Unified Gateway will show the products available to the Access Seeker based on the pre-qualification result. The Access Seeker has the option to select a specific appointment

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date or the UG will automatically select the next available appointment slot based on the delivery SLA.

### **2.7 Service Installation and Testing**

The Access Seeker will install and test the dual NTU/Splitter in line with the *eircom* Dual NTU/Splitter Installation Manual. The Access Seeker will be responsible for installing their own modem and testing their end to end service from the subscriber's premises to the Access Seeker's own node.

### **2.8 Service Parameters**

ADSL/ADSL2plus modems and planning limits are based on:

- Category II of the ITU TECHNICAL RECOMMENDATION G.992.1: Annex-A for ASYMMETRICAL DIGITAL SUBSCRIBER LINE (ADSL) TRANSCEIVER and G.992.5 Annex-A for SYMMETRICAL DIGITAL SUBSCRIBER LINE (ADSL2plus) TRANSCEIVER.
- ETSI (European Telecommunications Standards Institute) recommendations on Noise Models as noted in ETSI Specification - ETR328.

### **2.9 Access Regions**

The Bitstream service is not a ubiquitous service. The service will be rolled out on a regional basis within specific exchanges. The Bitstream regions are defined by the Bitstream service exchanges within those regions. The Bitstream MB product will be available at NGN enabled exchanges only. For details on regions and exchanges currently available, Access Seekers should contact their Wholesale Account Manager for a current Deployment Plan.

### **2.10 *eircom* ADSL and ADSL2plus Regional POPs**

The *eircom* ADSL/ADSL2plus Regional POPs are defined as the *eircom* Bitstream service handover points (within the ADSL/ADSL2plus geographically defined region) to the Access Seeker.

Connectivity between the *eircom* ADSL/ADSL2plus Regional POPs (within the ADSL/ADSL2plus geographically defined region) and the Access Seeker is outside of the definition of the Bitstream service.

## **3. Services Responsibilities**

*eircom* will have responsibility for the provision, repair, and maintenance of the *eircom* Bitstream service from the dual NTU/splitter to the *eircom* handover points (i.e., *eircom* ADSL/ADSL2plusRegional POPs), excluding installation of the dual NTU/splitter.

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The Access Seekers are responsible for the installation of the dual NTU/splitter and their services that operate over the *eircom* Bitstream service, as well as any equipment an Access Seeker attaches to the *eircom* Bitstream service (outside the service termination points).

The Access Seeker should ensure that the installation of their DSL service does not disrupt the integrity of the *eircom* services. If the Access Seeker's subscriber is dissatisfied with the quality of the *eircom* services, during or as a consequence of the installation of the Access Seeker's services and the dual NTU/splitter, the Access Seeker shall correct the service problems within an agreed reasonable timeframe or restore the installation to its original status.

The Access Seeker must prove installation failures out of their network as per the *eircom* Dual/NTU Splitter Installation Manual and the Industry Process Manual.

### **4. Service Management**

#### **4.1. Forecasting**

Refer to the Forecasting chapter of the *Industry Process Manual*.

#### **4.2. Order Handling**

Refer to the Order Handling chapter of the *Industry Process Manual*.

#### **4.5. Maintenance**

Refer to the Maintenance and Repair chapter of the *Industry Process Manual*.

#### **4.6. Billing Interfaces**

Refer to the Billing chapter of the *Industry Process Manual*.

#### **4.7. Service Levels**

Refer to the *eircom* Service Level Agreement for the Service Delivery and Service Assurance of the *eircom* ADSL/ADSL2plus Bitstream Service.

### **5. Price**

Prices are published on the *eircom* website, and a full list of prices may be found on the [www.eircomwholesale.ie](http://www.eircomwholesale.ie) website. The pricing of the *eircom* Bitstream service will be reviewed on an annual basis to reflect any changes in the service or products.

### **6. Terms and Conditions**

When purchasing *eircom*'s ADSL/ADSL2plus Bitstream Service, Access Seekers may select one of two contract options: a minimum term per Bitstream port or no minimum term but a cease fee per Bitstream port. Both contract options for the Bitstream Service are published on the website at [www.eircomwholesale.ie](http://www.eircomwholesale.ie).

Access Seekers must choose to sign one of these contracts only, and all Bitstream ports purchased by the Access Seeker will be subject to the same Terms and Conditions.

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### **Appendix I: Physical Interface at Service Termination Point**

Proposed physical interface options at the service termination point at the subscriber's premises is as follows:

ADSL Bitstream Service will comply with DMT in the Issue 2, Category II, ITU Technical Requirement G992.1 and testing under ETSI specification ETR328. ADSL2plus Bitstream service will comply with G.992.5 Annex-A

*eircom* network interface standards, with which subscriber modems should comply, are covered in Category II of the June, 1999 ITU Technical Requirement G.992.1 for ADSL and G.992.5 for ADSL2plus ((Note that *eircom* currently utilises Alcatel ASAM 7300's for ADSL and Alcatel ISAM 7302's for ADSL2plus.

*eircom* is not responsible for any Access Seeker's subscriber's CPE or internal wiring beyond the dual NTU/splitter.

### **Appendix II: Parameters of the *eircom* NTU interface**

**Network Termination Units** will be the NTU 2001 with associated ADSL/ADSL2plus splitter. This provides RJ11 and RJ45 sockets. The *eircom* NTU has been tested according to ETSI TR-101-728 (URL: [www.etsi.org](http://www.etsi.org)). The NTU is subject to changes and Access Seekers will be notified of any changes.

Access Seeker installation of the dual NTU/splitter must conform to standard *eircom* policies for installation of an NTU in a subscriber's premises. (Refer to the *eircom* Dual NTU/Splitter Installation Manual).