Definition

The Enet Business Broadband product provides Retail Service Providers’ (RSPs) with the opportunity to significantly develop their SME and Retail market by providing internet connectivity from the End-User premises throughout Ireland.

With it an RSP can offer a range of broadband speeds using multiple Access Providers’ networks. This provides RSPs with access to several Access Service Provider (ASP) networks to ensure maximum geographic penetration.

Business Broadband is a Layer 3 service provided by Enet through our Aggregation Platform (known as Enet Connect). Partnering with Enet permits an RSP access to our Broadband Aggregation Portfolio which provides:

- Access to the open eir and SIRO’s FTTx networks (c.2 million locations) through a single integration point
- Reduced integration time and speed to market
- A common ordering and fault process irrespective of the FTTx access provider

This product provides a broadband internet connection with a Fixed IP address and Enet-provided CPE for self-installation. This is an end-to-end solution and is delivered using FTTH or FTTC Access Media types/Last Mile (herein referred to as FTTx) that Enet have available to its RSPs.

With this fully integrated product, the RSP avoids the need to own and manage a fibre network and involvement in multiple supplier relationships for access, interconnect, network and internet ISP services. This eliminates the need for the RSP to have up-front network investment to access this infrastructure.

Service Description

Business Broadband is a Layer 3 end-to-end internet solution and includes the following key elements:

- FTTx Access: FTTC or FTTH access for the last mile to the End-User premises
- Asymmetric Bandwidths: on FTTH 150Mb-1Gb downstream; on FTTC “up to” 100Mb downstream
- End-user Traffic will utilise the Enet Network
- Enet manages the provision and delivery of an internet service for the RSP
- Internet access supplied to Enet using our Tier 1 providers
- Single Fixed IP address
- Enet supplied CPE for self-install
- Internal Wiring options also available

An RSP can self-serve by using Enet Connect for

- Address Search Facility
- Eligibility requests queries all ASPs and return a suitable set of products
- Ordering
- Order Management and Tracking (with *.csv output)
- Fault Reporting, Handling and Diagnostics etc.

This document is for illustrative purposes only, detailed specifications will be agreed at the time of purchase.
The Business Broadband product is composed of the following key components:

1. **FTTx Access Line**
2. The logical connection is an IPoE session
3. **ASP supplied ONT/NTU-Master Socket**
4. Enet supplied CPE for self-install
5. An Ethernet Port on the Enet supplied CPE with an
6. RJ45 physical connection
7. The End-User equipment gets a single Fixed-IP Address assigned from Enet

The RSP is responsible for managing all aspects of the End-User delivery beyond the ONT/NTU-MasterSocket. This includes in-home equipment (CPE, RGW, modems) connection to and all cabling and equipment beyond the ONT / NTU-MasterSocket.

### Summary

<table>
<thead>
<tr>
<th></th>
<th>FTTH</th>
<th>FTTC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bandwidth</td>
<td>Asymmetrical 1Gb, 500Mb, 150Mb products</td>
<td>“Up to 100mb” Rate Adaptive Asymmetrical products</td>
</tr>
<tr>
<td>Access Network Technology</td>
<td>GPON</td>
<td>VDSL2</td>
</tr>
<tr>
<td>Splitter</td>
<td>Splitter: 1:32 (1:64 open eir IFN)</td>
<td>n/a: DSLAM</td>
</tr>
<tr>
<td>Maximum MTU</td>
<td>1950 (Siro &amp; open eir)</td>
<td>1500 (open eir)</td>
</tr>
<tr>
<td>ONT/NTU installation by Access Provider</td>
<td>Yes (ONT)</td>
<td>Yes (NTU-Mater Socket)</td>
</tr>
<tr>
<td>N:1 or 1:1 service?</td>
<td>N:1</td>
<td></td>
</tr>
<tr>
<td>Max. no. of MAC Addresses</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Connectivity</td>
<td>Single Unicast as standard and mandatory with Unicast bandwidth, downstream and upstream</td>
<td></td>
</tr>
<tr>
<td>Class of Service 802.1p</td>
<td>Default is Best Efforts “0”</td>
<td></td>
</tr>
<tr>
<td>Logical Connection</td>
<td>IPoE</td>
<td></td>
</tr>
<tr>
<td>Managed Service</td>
<td>Yes (but with reactive fault handling)</td>
<td></td>
</tr>
<tr>
<td>IP Addressing</td>
<td>One fixed IP address allocated by default</td>
<td></td>
</tr>
<tr>
<td>Enet supplied CPE</td>
<td>Yes: Ownership transfers to the RSP on delivery</td>
<td></td>
</tr>
<tr>
<td>Self-Installed</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Physical Interface</td>
<td>Ethernet Port</td>
<td></td>
</tr>
<tr>
<td>Connector type</td>
<td>RJ45</td>
<td></td>
</tr>
<tr>
<td>Physical Medium</td>
<td>G.993.2 (FTTC) / 1000Base T (FTTH)</td>
<td></td>
</tr>
<tr>
<td>Demarcation point</td>
<td>Customer facing Ethernet port*</td>
<td></td>
</tr>
<tr>
<td>Configuration</td>
<td>Specific to service and CPE: VLAN 10 and DHCP Enabled**</td>
<td></td>
</tr>
</tbody>
</table>

*Any internal wiring, beyond the one-metre cable included with the Enet supplied CPE, does not form part of the service and once installed is owned and managed by the RSP / End-User.

** Customers connect to Port 4. Wi-Fi is disabled as part of the service.

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Service Delivery

Eligibility test
The RSP must run an eligibility test to determine:
- what products the End-User can avail of (FTTH and/or FTTC)
- which ASPs can provide the FTTx service

An RSP can move straight from a valid eligibility result to an order. The delivery process commences once an order has been placed.

The eligibility test result indicates the work required on the order. A line may be active, in-situ (inactive) or require a new connection. The eligibility test result is dependent on what the underlying ASP has previously delivered at that location:
- SIRO in-situ or Transfer connections typically have the required end-user premises’ build work completed and can be electronically enabled.
- open eir is more complex. Users should refer to the Process Manual, particularly the Acceptance notification detail confirming the appointment type.
- Other orders may require an end-user appointment by the ASP.

Appointment
The Aggregation Platform will indicate to the RSP if an end-user appointment is required. An ASP technician may need to visit the RSP’s end-user premises to make an FTTx connection both to and inside the premises. The end-user will need to be in attendance for this. The End-User must be advised that build work may be required at their premises, particularly for FTTH which requires installation of a passive external box and passive and active internal devices.

Service Types
FTTH: the access service is from the Optical Network Terminal (ONT) at the End-User premises via fibre to a splitter in the access network and on to an Optical Line Terminal (OLT) at the Colo or remote end.

FTTC: the access service is from the NTU-Master socket at the End-User premises via a copper pair to the cabinet DSLAM. Services are aggregated here before connecting via fibre to the Colo.

Enet Responsibilities
Enet is responsible for:
- Guiding and assisting RSPs during the Onboarding process (including the Enet Connect platform)
- Assisting RSP queries with our Order Support team
- Working with our ASP partners to ensure service provision from the End-User’s premises
- Provision of an internet service including a single Fixed public IP Address
- Supplying the Enet CPE; shipped for End-User self-installation
- Effective Service Assurance through our NOC and Support Team
- Fault resolution up to the Enet supplied CPE (excluding any internal wiring beyond the ASP NTU / ONT)
- 2nd line support for RSP fault issues
- The operation and maintenance of the services purchased by the End-User

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RSP Responsibilities

The RSP is responsible for:

- Supporting effective Onboarding by providing relevant points of contact
- Completing the VPN set-up to ensure access to *Enet Connect*
- Acting as the first point-of-contact for any End-User enquiries
- Owning the relationship with the End-User, including FTTx install appointment date(s)
- Performing eligibility requests via *Enet Connect*
- Selection and management of the inflight order via *Enet Connect*
- Arranging the installation or reconnection of devices beyond the ONT (Enet supplied CPE, end-users’ computers and other devices)
- Shaping the traffic in line with the purchased traffic profile
- Ensuring power for the Enet supplied CPE (and the ASP supplied ONT, if using FTTH)
- Initial troubleshooting and logging service faults/incidents on *Enet Connect*
- 1st line support using *Enet Connect* diagnostics
- Ordering internal wiring requests at initial order entry. Wiring is done by the ASP, not by Enet
- The correct labelling and recording of the location of the ONT or NTU-Master Socket during ASP installation

Glossary

- **ASP**: Access Service Provider
- **DHCP**: Dynamic Host Configuration Protocol
- **GPON**: Gigabit Passive Optic Network
- **ISP**: Internet Service Provider
- **IPAM**: IP Address Management
- **MTU**: Maximum Transmission Unit
- **MAC**: Media Access Control
- **NTU**: Network Terminating Unit
- **ONT**: Optical Network Termination
- **OLT**: Optical Line Terminal
- **RGW**: Retail GateWay / Residential GateWay
- **S-VLAN**: Service-Virtual Local Area Network
- **VDSL**: Very fast Digital Subscriber Line

Further Information

Contact your Enet Account Manager or contact us at:
Telephone: + 353 (0)61 274000
Webpage: www.Enet.ie

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