



LLU Backhaul 1 GB and 10 GB Product Description



Version Control

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1.0		Rebranded	October 2015
V2.0	Final	This document is based on V1.0 Implementation of Standardised Change Control.	07/06/2017

This document follows change control procedure:

Proposed is defined as a document status when the approved document is uploaded to Proposals Section of open eir Website.

Final is defined as a document status when the approved document is uploaded to the relevant section of the open eir Website following the publication period.

For information:

- Historical Document History Table located at end of Document.
- Publish means the action of uploading a document to the website regardless of status or location.
- **If there are changes to the document between ‘Proposed’ and ‘Final’, change control operates.**



Table of Contents

1	Introduction.....	5
1.1	LLU Backhaul Overview	5
1.2	In-Building Handover (IBH).....	5
1.3	Customer Sited Handover (CSH).....	6
1.4	Key Features and Availability	7
2	Commercial.....	7
2.1	Pricing	7
2.2	Terms and Conditions	7
2.3	Service Responsibility.....	7
2.1.1	Open eir Responsibility	7
3	Service Management.....	8
3.1	Ordering, Provisioning and Fault Management.....	8
3.2	Ordering the Service.....	9
3.2.1	Delivery Timelines.....	9
3.2.2	Confirmation of Delivery	9
3.2.3	Other orders –cancel and cease	9
3.2.4	Fault Management.....	9
4	Supporting Documentation.....	10
	Version Control History	11



Table of Figures

Figure 1: In-Building Handover	6
Figure 2: LLU backhaul Customer Sited handover	6
Figure 3: Process, people and systems overview	8

List of Tables

No table of figures entries found.

1 Introduction

The purpose of this document is to provide a description of the open eir LLU Backhaul product.

This document is subject to review and will be re-issued to reflect changes as new developments are introduced which shall be communicated in accordance with agreed practices. Any specific technology mentioned in this document is current as at date of issue and is for guidance purposes only. open eir reserves the right to adapt the technology used to deliver the LLU Backhaul Product.

This document is without prejudice to any future position that may be adopted by open eir in respect of LLU Backhaul. It should be read in conjunction with the relevant associated open eir Wholesale documents (where appropriate, reference offer, process manual and SLA).

1.1 LLU Backhaul Overview

LLU Backhaul enables an Operator to provide connectivity from their co-location footprint utilised for LLU services in open eir unbundled exchanges to their nominated point of handover (POH). This product may be provided as part of a new exchange setup or connectivity from an exchange where an Operator has an existing licence for a co-location footprint for the purposes of LLU.

This product will provide dedicated 1/10Gbs connectivity between an Operator's LLU footprint within the relevant open eir exchange and an Operator's nominated point of handover. LLU backhaul may be delivered in the following ways.

LLU backhaul (in building) connecting an Operator's LLU physical co-location at one open eir exchange to their LLU physical co-location at a second open eir exchange. In this case an Operator must have physical collocation licences in respect of both open eir exchanges.

LLU backhaul (customer sited) connecting an Operator's LLU physical co-location at one open eir exchange to their nominated customer sited point of handover.

1.2 In-Building Handover (IBH)

IBH LLU backhaul connects an Operator's LLU physical co-location at one open eir exchange (A-end) to their LLU co-location at a second exchange (B-end) creating a dedicated 1/10Gb/s connection between the two sites.

The Operator will be connected directly to the open eir network from an optical patch panel, located in the Operator footprint, via an Optical Distribution Frame at both A-end and B-end exchange sites. An SFP (LX only) for 1Gbs or an XFP (LR only) for 10Gbs LLU backhaul will be installed on the open eir network facing an Operator.

The physical Co-location operational processes that support the interactions between open eir and an Operator for the delivery of serviced accommodation in an open eir exchange are outlined in the "Process Manual for open eir Physical Co-location Service.

The physical network termination point is the physical port on the patch panel located in the Operator co-location footprint at both the A-end and B-end exchange sites.

See diagram below.

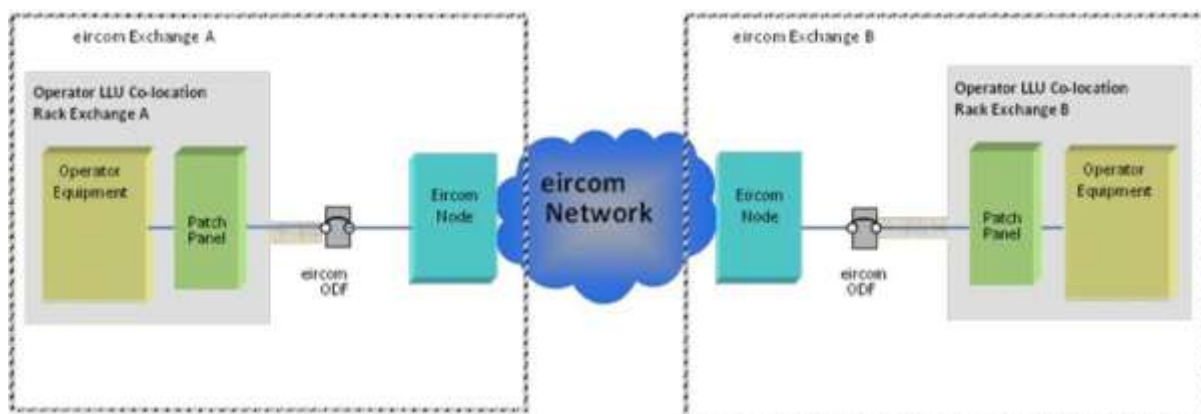


Figure 1: In-Building Handover

1.3 Customer Sited Handover (CSH)

CSH LLU backhaul connects an Operator’s LLU physical co-location footprint at one open eir exchange to their nominated customer sited point of handover, creating a dedicated 1/10 GB/s connection between the two sites.

The Operator will be connected directly to the open eir network from an optical patch panel, located in the Operator footprint, via an ODF at the A-end site.

The Operator will be connected directly to the open eir network via an open eir owned NTU located in the Operator’s premise at the B-end site.

The physical Co-location operational processes that support the interactions between open eir and an Operator for the delivery of serviced accommodation in an open eir exchange are outlined in the “Process Manual for open eir Physical Co-location Service.

An open eir NTU with a dual power supply of -48V DC will be installed at the Operator’s handover site. The physical network termination point will be at the physical port on the NTU. An SFP (SX or LX) for 1Gbs or an XFP (LR only) for 10Gbs LLU backhaul will be installed in the customer facing port at the customer handover site. See diagram below.

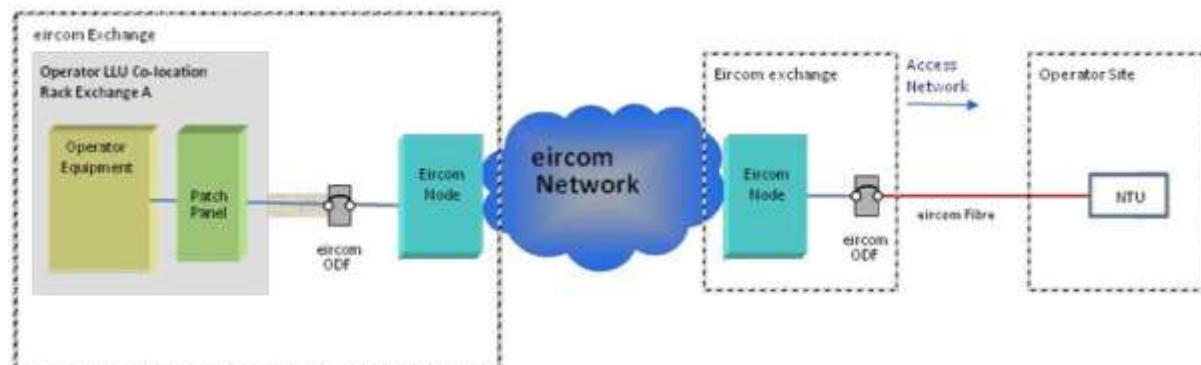


Figure 2: LLU backhaul Customer Sited handover

1.4 Key Features and Availability

- Dedicated connection
- Capable of supporting 1/10Gbs □ Uncontended offering
- Up to 25km radial distance between any two locations¹

2 Commercial

2.1 Pricing

Prices for LLU Backhaul product will be published on the open eir website at www.openeir.ie

2.2 Terms and Conditions

Terms and conditions are published on the open eir website at www.openeir.ie

2.3 Service Responsibility

2.3.1 Open eir Responsibility

open eir has responsibility for the provision, repair and maintenance of the LLU Backhaul from the open eir network to the Point of Handover (POH).

2.3.2 Operator Responsibility

An Operator is responsible for connectivity between the POH and their own equipment, and for any end-to-end testing of their service.

An Operator must ensure that a suitable environment is provided, to ensure that adequate space, power, environmental conditions and general facilities are available to allow open eir to deliver a LLU Backhaul service. When required, an Operator must enable access to the handover location for open eir to install and support the service.

An Operator is responsible for any Operator services that use the LLU Backhaul product. An Operator must review and manage their bandwidth requirements, and request additional LLU Backhaul in a timely manner.

¹ Provision of services beyond 25km will be assessed on a case by case basis

3 Service Management

There are a number of processes that support this product from the initial forecasting and quotation through to billing as outlined in figure 3

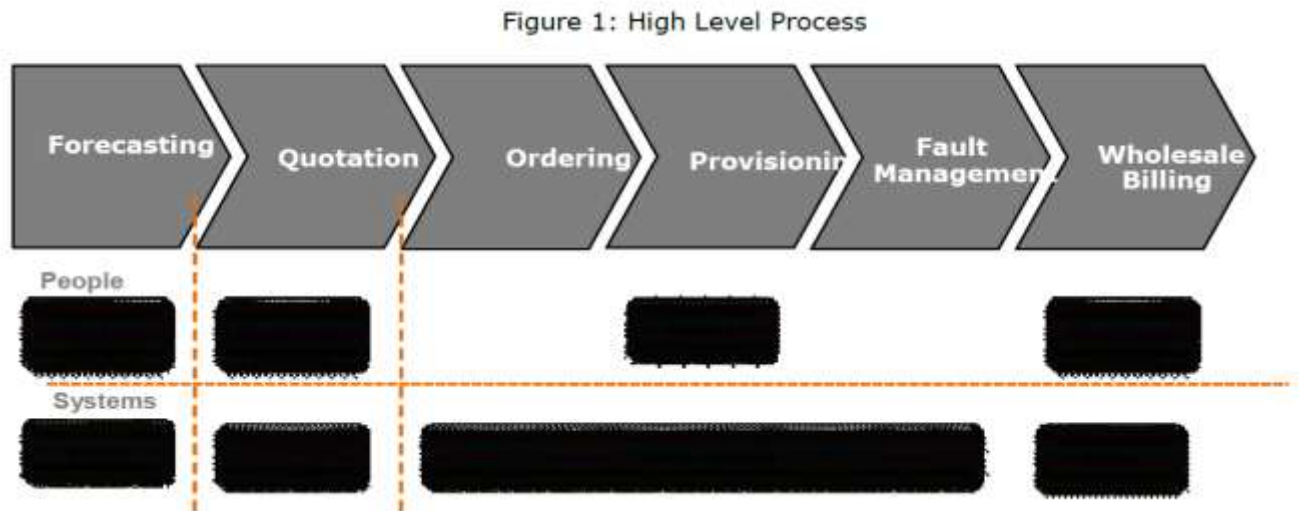


Figure 3: Process, people and systems overview

Prior to requesting the service an Operator may find product information on the open eir Wholesale website, www.openeir.ie or discuss their requirements with their Customer Relationship Manager.

Ordering, Provisioning and Maintenance processes are supported by the Unified Gateway and the open eir Wholesale Customer Service Centre. After provision of the LLU Backhaul any queries regarding billing should be directed to an Operator’s Customer Relationship Manager.

Each of these processes is outlined in further detail below.

3.1 Ordering, Provisioning and Fault Management

The Ordering, Provisioning and Maintenance processes will be supported by the Unified Gateway (UG) which will be used to log orders and report faults for the product via the UG web GUI.

The UG is an order management and fault handling system designed to be the primary interface between open eir and an Operator.

Operators will be able to enter all the necessary data via structured GUI screens for both ordering and fault reporting. Once all the data has been entered the order or fault can be submitted. The UG will process and validate the relevant orders and faults and will provide appropriate notifications in response. Order status updates through to completion will be provided from the Wholesale SLA Manager (WSLAM) and via the Unified Gateway.

Any notifications from WSLAM, that includes connection or rental charges are estimates, and are not contractually binding on open eir or an Operator. Open eir will assess an order at



Order Validation and categorise the order as either Standard or Non-Standard. If an order is categorised as Non-Standard, open eir may issue a quotation subject to a full site survey.

Fault status updates will be provided back to an Operator and can be viewed via the UG order and fault tracking screens.

3.2 Ordering the Service

3.2.1 Delivery Timelines

LLU backhaul orders are delivered using fibre which is subject to survey and availability. The lead-time associated with these orders may be classified in some cases as Standard or Non-Standard with a defined lead-time.

In cases where the fibre delivery will be treated as Non-Standard then open eir will assess this order and provide a forecasted due delivery date. The forecast due date is based on the time to provide each element of the service.

3.2.2 Confirmation of Delivery

An order is deemed to be complete on provision of the LLU Backhaul order, which establishes the service between the nominated handover location and the NTU in the Operator co-location space. On completion of the order an Operator shall receive a Delivery Notification.

This order status throughout the life of the order will also be available for an Operator to track on the UG.

3.2.3 Other orders –cancel and cease

If an Operator wishes to cancel a LLU Backhaul order before it is delivered, this order must be placed prior to installation of the service commencing.

Where a Site Survey and fibre cabling is undertaken on request of an Operator for IBH, open eir will charge associated labour rates and costs incurred. These charges will apply as part of the site preparation and will apply should the LLU Backhaul order be cancelled.

The Operator may also request a cease order on an LLU Backhaul providing all associated end customer traffic has either been moved or ceased prior to this. Please refer to process manual for further detail on cancel and cease order process.

3.2.4 Fault Management

Please refer the Process Manual for further details on fault handling.

a) Logging a fault

A valid fault for this service is logged via the Unified Gateway after an Operator has proven the fault out of their network. The Operator should log the fault against the LLU Backhaul reference number.

b) Fault handling process

Please refer to the Process Manual for the fault handling process for this service. The status of a fault can be tracked throughout its lifecycle via the UG web GUI by an Operator. Only those faults relating to an Operator will be visible to them.



Service shall be deemed to have been restored when the fault condition is resolved on the open eir network and service availability is restored. Notification will be provided to open eir via an Operator.

3.3 Billing

There are connection and rental charges associated with the LLU Backhaul. Once the order is completed and the LLU Backhaul is commissioned, billing shall commence in the next billing cycle. Billing shall be carried out on a monthly basis in advance and the service shall be identified on the bill.

In the event that an Operator has a query regarding the bill they should contact their Wholesale Customer Relationship Manager.

4 Supporting Documentation

Further information on open eir Wholesale processes and supporting information may be found at www.openeir.ie

Wholesale LLU Backhaul 1 GB/s & 10 GB/s Inter-Operator Process Manual LLU Backhaul SLA



Version Control History

Version	Status	Update	Effective Date
1.0			2 nd .Dec. 2011
1.0		Rebranded	October 2015
V2.0	Final	This document is based on V1.0 Implementation of Standardised Change Control.	07/06/2017