SIN 407

Issue 1.5
October 2014

Suppliers' Information Note

For The BT Network

BT L-Band Relay

Service Description

This document does not form a part of any contract with BT customers or suppliers.

Users of this document should not rely solely on the information in this document, but should carry out their own tests to satisfy themselves that terminal equipment will work with the BT network.

BT reserves the right to amend or replace any or all of the information in this document.

BT shall have no liability in contract, tort or otherwise for any loss or damage, howsoever arising from use of, or reliance upon, the information in this document by any person.

Due to technological limitations a very small percentage of customer interfaces may not comply with some of the individual characteristics which may be defined in this document.

Publication of this Suppliers' Information Note does not give or imply any licence to any intellectual property rights belonging to British Telecommunications plc or others. It is your sole responsibility to obtain any licences, permissions or consents which may be necessary if you choose to act on the information supplied in the SIN.

This SIN is available in Portable Document Format (pdf) from: http://www.btplc.com/sinet/

Enquiries relating to this document should be directed to: sinet.helpdesk@bt.com

CONTENTS

FIGURES

TABLES

1. Introduction

This Suppliers Information Note (SIN) describes the BT L-Band Relay service and provides technical information for terminal equipment manufacturers, suppliers and developers.

2. Service outline

The BT L-Band Relay service provides unidirectional transmission over optical fibre of signals in the frequency range commonly known as 'L-band'. The overall service is depicted in Figure 1.

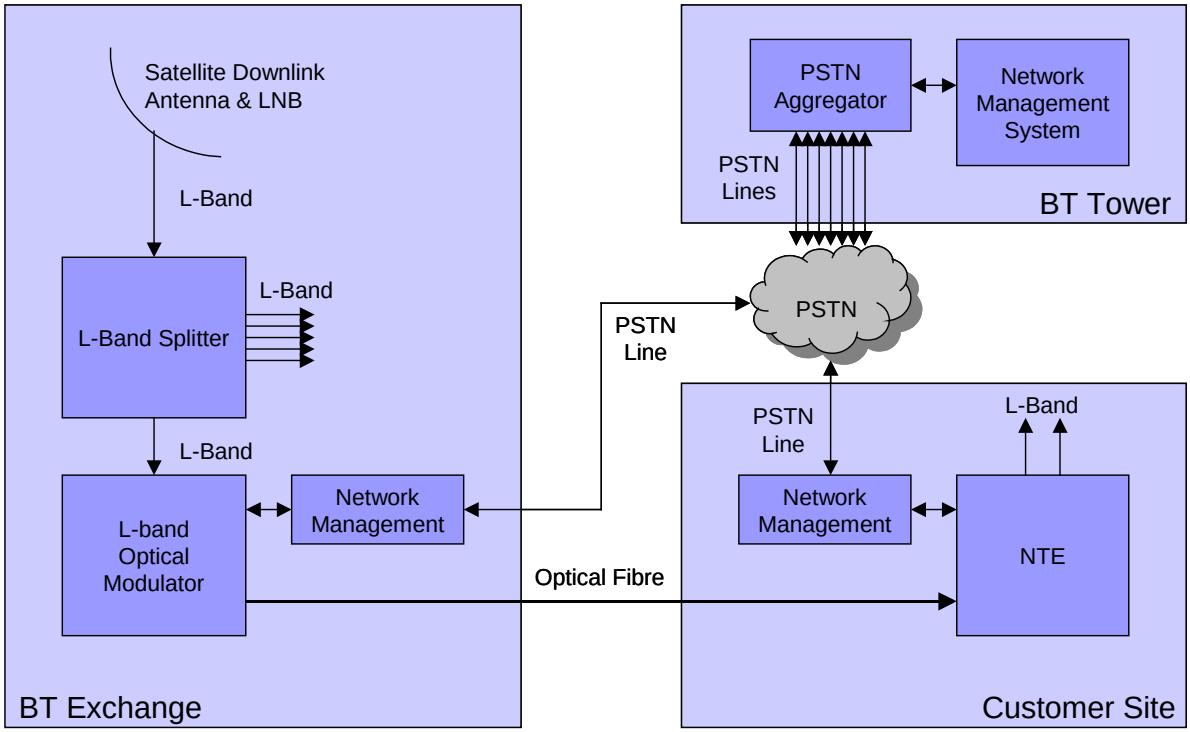

Figure 1 System Diagram

Signals are received from a satellite by means of a satellite dish located at a BT Exchange. A single electrical feed of signals contained within the L-band range of frequencies (one band, one polarity) is taken from the dish Low Noise Block (LNB). This is then split (if necessary depending on the number of customer sites served), and fed into an optical modulator, which will then transmit the signals via optical fibre to the customer site. At the customer site the Network Terminating Equipment (NTE), which contains an optical demodulator, converts the optical signals back to electrical. L-band frequency electrical signals are then presented to the customer for connection to their satellite receive equipment. Two identical outputs are provided for convenience. Network Management equipment at both the BT Exchange and customer site are used to remote monitor and manage the service, using analogue PSTN lines to relay the management data to the Service Management Centre at the BT Tower in London.

3. Service availability

The service is no longer available for new supply within BT's licensed area in the UK. The service provides a circuit between a customer site and a BT Exchange within a 10km radial distance. Which has had planning permission & way-leaves.

4. Technical specification

4.1 Interface presentation

The following interface is provided by the Network Terminating Equipment (NTE):

Electrical presentation	Physical presentation
950-2150MHz ('L-band') -55 to -30dBm	75 ohm F-type female

Table 1 NTE Interface

4.2 Network Terminating Equipment (NTE) Requirements

The service requires the customer to provide accommodation (including space, power, security and environmental control) for the terminating equipment.

It is the customer's responsibility to provide a source of mains power for the NTE. One mains supply 13A AC socket, compliant to BS1363, is required no further than two metres away from the NTE location.

BT will require space at the Customer Premises to install the Network Terminating Equipment (NTE) and Network Management Unit (NMU). Both the NTE and NMU are designed to be wall-mounted, but may be accommodated on a flat shelf in a 19in cabinet if preferred. The two units must be no further than one metre apart. Cabinets and shelving should be provided by the customer. The NTE has dimensions [400W x 280H x 100D mm] and a mass of 6 kg, and the NMU has dimensions [120W x 240H x 75D mm] and a mass of 4 kg.

In addition, wall space will be required for a Fibre Termination box. This must be located within one metre of the NTE, and has dimensions [182W x 138H x 33D mm]. If a 19in cabinet location is specified, then BT will install a fibre tray instead of a fibre box. This is a standard 19in rackmount unit, 2RU in height, 300mm deep, with a mass of 2kg.

Finally, wall space will be required for a BT Telephone line box. This has dimensions [84W x 84H x 36D mm], and must be located no more than two metres from the NMU.

5. Further Information

For further information please go to: http://www.broadcast.bt.com/contact-us.html

If you have enquiries relating to this document then please email: sinet.helpdesk@bt.com

6. Glossary

F-Type	Industry standard coaxial connector
L-Band	Common name for the frequency band between 950-2150MHz
NTE	Network Terminating Equipment
NMU	Network Management Unit
TCSC	Tower Customer Service Centre
LNB	Low Noise Block
PSTN	Public Switched Telephone Network
SIN	Suppliers' Information Note

7. History

Issue 1.0	15 October 2002	First Publication.
Issue 1.1	18 October 2002	Updated Fig 1, added network management text to section 2, corrected “L-band” to “L-Band”.
Issue 1.2	16 September 2003	Approval Requirements statement removed, information available via SINet Useful Contacts page.
Issue 1.3	9 May 2008	Inserted new references for further information
Issue 1.4	11 September 2013	Section 3 updated to advise that the service is no longer available for new supply
Issue 1.5	October 2014	Change SINet site references from http://www.sinet.bt.com to http://www.btplc.com/sinet/

-END-