Data Sheet

S-RPT

2/4-Wire SHDSL/SHDSL.bis Repeater

S-RPT with plastic Enclosure

S-RPT with Metal Enclosure

Managed repeater for SHDSL/SHDSL.bis range extension

- TC-PAM 16/32 coding
- Duplex data transmission over one or two symmetrical pairs at up to 2.048 Mbps (SHDSL)/5.7 Mbps (SHDSL.bis)
- Multiple configuration options
- Weatherproof metal enclosure for outdoor installation
- Remote power feeding

S-RPT is a compact 2/4-wire SHDSL/SHDSL.bis repeater, extending the range of data transmission over SHDSL/SHDSL.bis technologies. S-RPT can be chained to increase the transmission range.

Based on the latest DSL technology, S-RPT provides superior distance and speed using TC-PAM 16/32 encoding, which offers a narrower power spectrum than 2B1Q and other technologies.

The xDSL ports comply with ITU-T G.991.2 and ETSI TS 101524 standards, and operate at bit rates from 192 to 8192 kbps, depending on the modem and type of interface (2-wire/4-wire).

RAD
data communications
The Access Company

S-RPT

2/4-Wire SHDSL/SHDSL.bis Repeater

S-RPT is available in two different compact enclosure versions:

- Tabletop version for indoor use (2-wire only)
- Weatherproof housing, for outdoor installation (2-and 4-wire).

S-RPT operates with RAD's ASMi-52 ,ASMi-52L, ASMi-54, and ASMi-54L modems.

Each S-RPT repeater fully regenerates the received modem signal, so that a chain of multiple repeaters can be deployed on a single line, without introducing jitter or wander problems. For connection to central and remote modems, S-RPT provides unshielded interfaces terminated in RJ-45 connectors (plastic enclosure) or 8-pin terminal block (metal enclosure).

S-RPT has two xDSL interfaces: xDSL1 and xDSL2. Either of them can be a Network (N-side) or Customer (C-side) xDSL interface. The N-side xDSL interface operates in slave mode, while the C-side xDSL interface operates in master mode. The N-side faces the Central Office (CO), while the C-side faces the Customer Premises (CP).

S-RPT performs analog loop tests towards the Customer Premises Equipment (CPE), via direct management only, and digital loop tests towards the central SHDSL modem.

The unit is managed locally from an RS-232 terminal or through Telnet via the Ethernet port, or remotely via standard Embedded Operation Channel (EOC) commands from the Central Office (CO) SHDSL/SHDSL.bis equipments (ASMi-52, ASMi-52L, ASMi-54L).

Performance and alarm monitoring is available with Web browser via the Ethernet port.

Using standard EOC messages, the CO SHDSL equipment (ASMi-52, ASMi-52L, ASMi-54L) can display alarms and the number of S-RPTs installed on the line. It can also remotely initiate loopbacks toward the CO.

S-RPT can receive power locally using a 48 VDC power supply or remotely over the SHDSL line from a power feeding hub such as RAD's PFH-4.

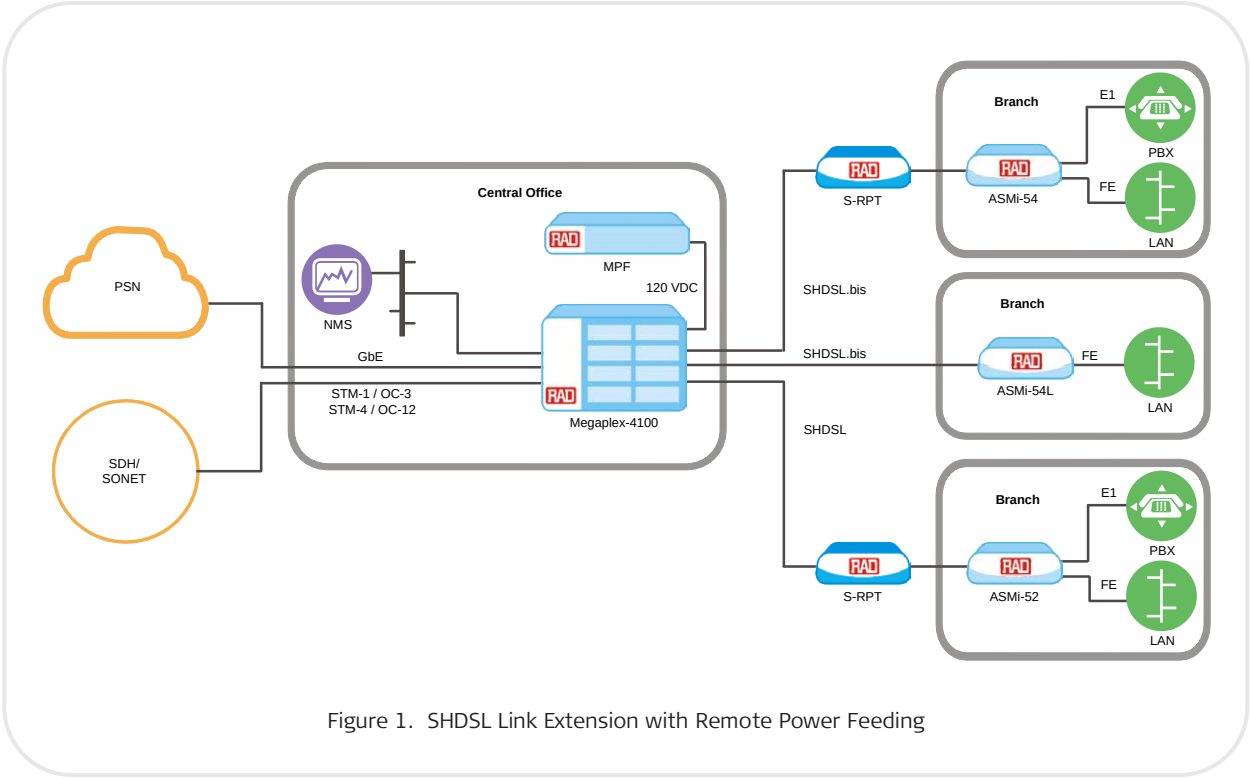

Figure 1. SHDSL Link Extension with Remote Power Feeding

Specifications

LINE INTERFACE

Line Type
Symmetrical PSD
2/4-wires unconditioned dedicated line (twisted pair)

Compliance
ITU-T G.991.2, ETSI TS 101524

Line Coding
16/32 TC-PAM

Line Rate
4-wire: 384 to 8192 kbps
2-wire: 192 to 5696 kbps

Impedance
135Ω

xDSL Connectors
Plastic enclosure: 2 x RJ-45
Metal enclosure: 8-pin terminal block

CONTROL PORT

Interface
V.24/RS-232

Type
DCE

Format
8 bit, no parity, 1 stop bit, no linefeed with carriage return
XON/XOFF enabled

Data Rate
9.6, 19.2, 115.2 kbps

Connector
Plastic enclosure: 9-pin, D-type, female (EIA/TIA 574)
Metal enclosure: 8-pin, RJ-45

INDICATORS

Front Panel (plastic enclosure)**/Interior** (metal enclosure)

DSL 1 (green/red) –
Green: both sides of the line (N-side, C-side) are active
Red: one or both side of the line (N-side , C-side) are inactive

DSL 2 (green/red, operates in 4-wire versions only) –
Green: both sides of the line (N-side, C-side) are active
Red: one or both sides of the line (N-side, C-side) are inactive

ETH (green) –
Management link is On

Rear Panel (2-wire plastic enclosure only)

xDSL 1,2 (green/red) -
Green: Line is active
Red: Line is inactive.

Ethernet (green/yellow) -
Green: management link is On
Yellow: activity on management link

MANAGEMENT

Local Management
Direct connection of ASCII local terminal or terminal emulation
Telnet via ETH port

Remote Management
EOC messages from the CO (ASMi-52, ASMi-52L, ASMi-54L)

POWER

Local
Plastic enclosure: 48 VDC (36 to 72 VDC) over a 4-pin Molex mini-fit, safety approved connector

Metal enclosure: 48 VDC (36 to 72 VDC) over a 2-pin terminal block

Remote
38 to 200 VDC over xDSL line

GENERAL

Physical
Plastic enclosure:
Height: 50 mm (2.0 in)
Width: 220 mm (8.7 in)
Depth: 155 mm (6.1 in)
Weight: 0.5 kg (1.1 lb)

Metal enclosure:
Height: 65 mm (2.6 in)
Width: 310 mm (12.2 in)
Depth: 166 mm (6.5 in)
Weight: 3 kg (6.6 lb)

Environment
Temperature: -5° to 45°C (23° to 113°F)
Humidity: 5% to 85%, non-condensing

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2/4-Wire SHDSL/SHDSL.bis Repeater

Ordering

S-RPT
2-wire SHDSL/SHDSL.bis repeater, plastic enclosure

S-RPT-4W
4-wire SHDSL/SHDSL.bis repeater, metal enclosure

SUPPLIED ACCESSORIES

AC to 48 VDC power adapter (European orders only)

CBL-RJ45-DB9/S-RPT
Control cable for metal enclosure

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