

# 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).



# 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.

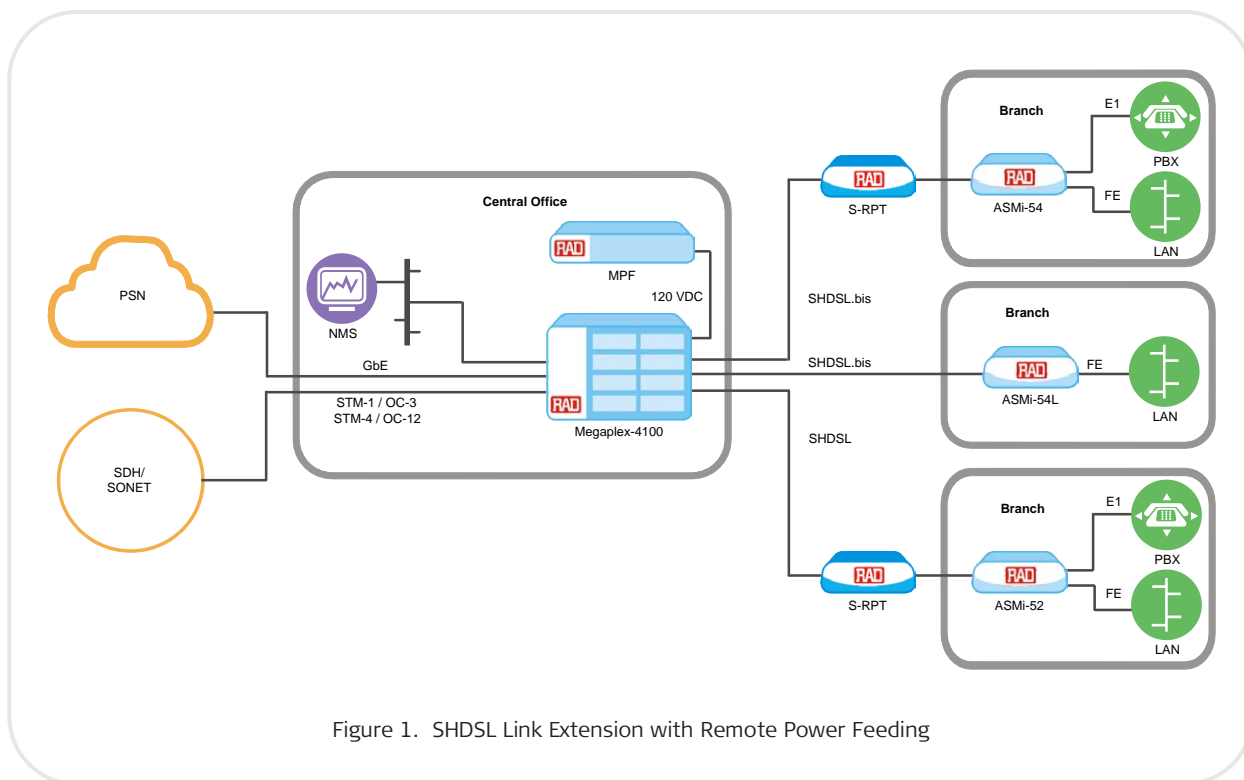


Figure 1. SHDSL Link Extension with Remote Power Feeding

## 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

## S-RPT

### 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

**International Headquarters**  
24 Raoul Wallenberg Street  
Tel Aviv 69719, Israel  
Tel. 972-3-6458181  
Fax 972-3-6498250, 6474436  
E-mail market@rad.com

**North America Headquarters**  
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