

S-RPT

SHDSL Repeater



- TC-PAM 16 coding
- Duplex data transmission over one symmetrical pair at 2.048 Mbps
- Multiple configuration options
- IP67 weatherproofed metal enclosure for outdoor installation
- Remote power feeding

Managed repeater
for SHDSL range
extension

S-RPT is a compact 2/4-wire SHDSL repeater, offering a solution for extending the range of data transmission over copper pair between two standard SHDSL modems.

S-RPT is based on the latest DSL line technology to provide superior distance and speed using TC-PAM 16, which offers a narrower power spectrum than 2B1Q and other technologies. A single repeater extends the transmission range of two SHDSL modems. Additional repeaters can be chained to increase the distance even more.



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Each S-RPT repeater fully regenerates the received modem signal, so that a chain of many repeaters can be deployed on a single line, without introducing jitter and wander problems. For connection to the central and remote modems, S-RPT provides 4-wire unshielded interfaces terminated in RJ-45 connectors.

S-RPT has two xDSL interfaces: the Network (N-side) xDSL interface, which operates in slave mode, and the Customer (C-side) xDSL interface, which operates in master mode. The N-side interface operates towards the Central Office (CO), while the C-side operates towards the Customer Premises (CP).

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

Management is performed locally from an RS-232 terminal or through Telnet via Ethernet port, or remotely via standard Embedded Operation Channel (EOC) commands from the Central Office (CO) SHDSL equipment (ASMi-52).

Using standard EOC messages, the CO SHDSL equipment (ASMi-52) 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 using a power feeding hub such as RAD's PFH-4.

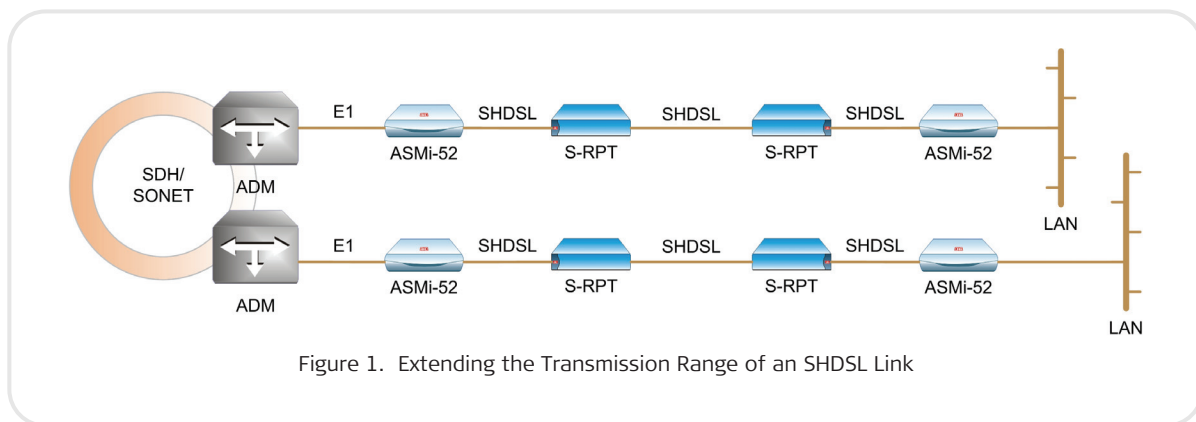


Figure 1. Extending the Transmission Range of an SHDSL Link

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 TC-PAM

Line Rate

384 to 4096 kbps with steps of
n x 64 kbps for each 2-wires

Range

(26 AWG, noise-free, with one repeater
on a line between two ASMi-52 modems)

Rate	Range	
	[km]	[miles]
512	24.4	15.2
1024	17	10.6
2048	13.4	8.3

Impedance

135Ω

Connector

RJ-45

CONTROL PORT

Interface

V.24/RS-232

Type

DCE

Format

7 or 8 bits; odd, even, or no parity

Data Rate

9.6, 19.2, 115.2 kbps

Connector

9-pin, D-type, female

INDICATORS

PWR (green) –

On: power supply is on

NE (green/red) –

Green: the near line towards the
central modem is active

Red: the near line towards the central
modem is inactive

FE (green/red) –

Green: the far line towards the remote
modem is active

Red: the far line towards the remote
modem is inactive

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

GENERAL

Power Supply

Local:

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

Remote:

38 to 200 VDC over xDSL line

Physical

Plastic enclosure (2-wire only):

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 (IP67) (2-wire and
4-wire):

Height: 105 mm (4.1 in)

Width: 310 mm (12.2 in)

Depth: 170 mm (6.7 in)

Weight: 3 kg (6.6 lb)

Environment

Temperature: 5° to 45°C (41° to 113°F)

Humidity: 5% to 85%, non-condensing



Figure 2. PFH-4 Feeding Power Remotely to S-RPT

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Ordering

S-RPT

2-wire, plastic enclosure

S-RPT/IP67

2-wire, metal enclosure

S-RPT-4W

4-wire, metal enclosure

SUPPLIED ACCESSORIES

48 VDC power supply (European orders only)

CBL-RJ45-DB9/S-RPT

Control cable

International Headquarters

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data communications

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