

COVERAGE SOLUTIONS FOR CRITICAL COMMUNICATIONS

Based on Software Defined Radio



AVOIDING COVERAGE GAPS IN TETRA NETWORKS



Phone: + 34 932237900

Fax: + 34 932237901

Adress: Camí de la Pellería nº 12, 08915 Polígono Industrial Bonavista Nord
Badalona, Barcelona, SPAIN

www.adtelecom.es

TETRA REPEATERS: Line RIT-ECHO

SOLUTIONS FOR THE EMERGENCY COMMUNICATIONS COVERAGE

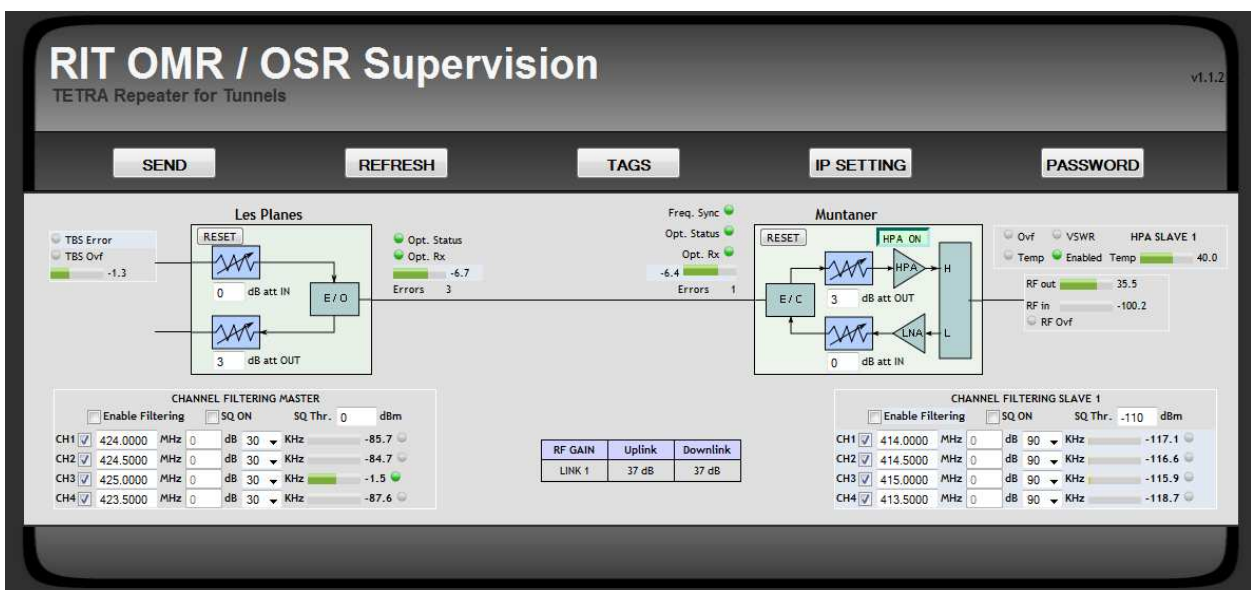
The line of products Smart Compact-RIT presents all the feature of higher range (channel filtering, gain control per slot, silencing when no traffic...) but with an output power of 18dBm. They are specially conceived for covering reduced areas, both for internal areas (buildings, tunnels, trade premises or basements) and external areas (shaded areas in streets or squares obstructed by buildings).



The main features are:

- Digital SDR (Software Defined Radio) Technology
- Silencing in the absence of communication.
- Time Slot Automatic Gain Control
- Channel filtering
- Coverage by means of a distributed amplifiers network.
- Processing capacity of 6 channels
- Remote monitoring via Ethernet or External GSM Modem.
- Integrated Web Server.
- Remote control by SNMP Protocol.
- Easy installation
- Low cost

Large areas can be covered using a distributed network of amplifiers that does not deafen the base station due to the mono-channel filtering and the slot silencing.



RIT OMR / OSR Supervision
TETRA Repeater for Tunnels v1.1.2

SEND REFRESH TAGS IP SETTING PASSWORD

Les Planes

- TBS Error: -1.3
- TBS Ovf: -1.3
- Opt. Status: -6.7
- Opt. Rx: -6.7
- Errors: 3
- 0 dB att IN
- 3 dB att OUT

Muntaner

- Freq. Sync: -6.4
- Opt. Status: -6.4
- Opt. Rx: -6.4
- Errors: 1
- HPA ON
- 0 dB att IN
- 3 dB att OUT

CHANNEL FILTERING MASTER

| Channel | Frequency (MHz) | Gain (dB) | Bandwidth (KHz) | Attenuation (dBm) |
|---------|-----------------|-----------|-----------------|-------------------|
| CH1 | 424.0000 | 0 | 30 | -85.7 |
| CH2 | 424.5000 | 0 | 30 | -84.7 |
| CH3 | 425.0000 | 0 | 30 | -1.5 |
| CH4 | 423.5000 | 0 | 30 | -87.6 |

CHANNEL FILTERING SLAVE 1

| Channel | Frequency (MHz) | Gain (dB) | Bandwidth (KHz) | Attenuation (dBm) |
|---------|-----------------|-----------|-----------------|-------------------|
| CH1 | 414.0000 | 0 | 90 | -117.1 |
| CH2 | 414.5000 | 0 | 90 | -116.6 |
| CH3 | 415.0000 | 0 | 90 | -115.9 |
| CH4 | 413.5000 | 0 | 90 | -118.7 |

RF GAIN

| Link | Uplink (dB) | Downlink (dB) |
|--------|-------------|---------------|
| LINK 1 | 37 | 37 |

HPA SLAVE 1

- Ovf: 35.5
- Temp: 40.0
- RF out: 35.5
- RF in: -100.2
- RF Ovf: -100.2

TETRA REPEATERS: Line RIT-ECHO

SOLUTIONS FOR THE EMERGENCY COMMUNICATIONS COVERAGE

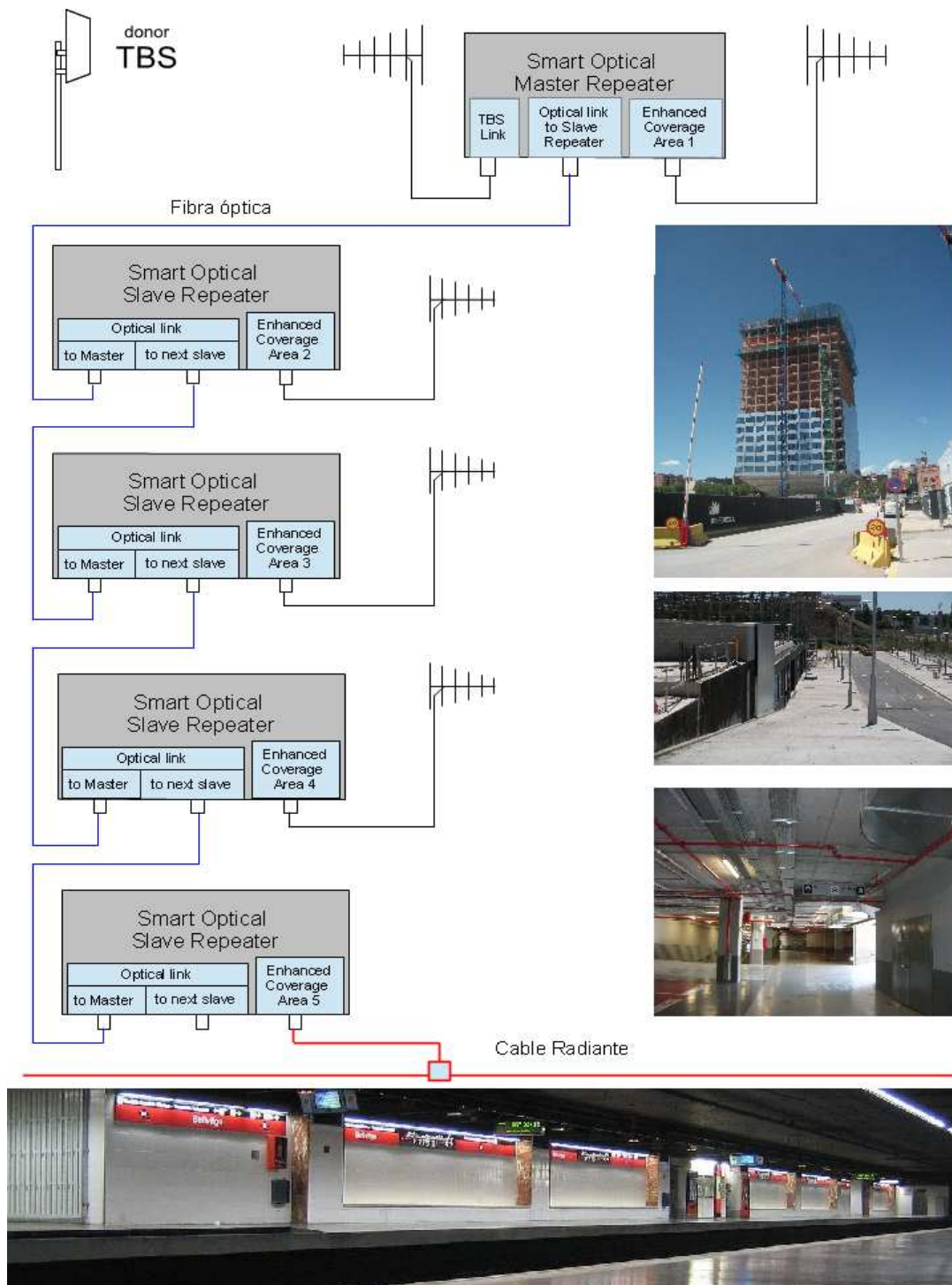
| SPECIFICATIONS | | | |
|--|--------------------|-------------------------------|---------|
| Frequency bands | <i>Uplink Band</i> | <i>Downlink Band</i> | |
| | 380—385 MHz | 390—395 MHz | |
| | 385—390 MHz | 395—400 MHz | |
| | 410—415 MHz | 420—425 MHz | |
| | 415—420 MHz | 425—430 MHz | |
| | 450—455 MHz | 460—465 MHz | |
| | 455—460 MHz | 465—470 MHz | |
| Duplex distance between carrier frequencies | | 5 MHz | |
| Number of channels | | From 1 to 6 channels | |
| Bandwidth of the channel filter | | 90 kHz, 45KHz and 30KHz, OFF | |
| Delay | Without filter | 3.5us | |
| | 90KHz | 12us | |
| | 45KHz | 20us | |
| | 30KHz | 27us | |
| Gain | | Configurable from 60 to 80 dB | |
| Antenna to antenna (RX-TX) isolation | | >60 dB | |
| Maximum input power | | -20 dBm | |
| Output repeater power (downlink) according to ETSI TS 101789-1 | | 1 channel | +18 dBm |
| | | 2 channels | +15 dBm |
| | | 4 channels | +12 dBm |
| | | 6 channels | +10 dBm |
| Output repeater power (uplink) according to ETSI TS 101789-1 | | 1 channel | +18 dBm |
| | | 2 channels | +15 dBm |
| | | 4 channels | +12 dBm |
| | | 6 channels | +10 dBm |
| Spurious emission level | | < -36 dBm | |
| Noise figure | | <7 dB | |
| Remote control system | | WEB Server, SNMP agent | |
| Local maintenance | | USB, Ethernet | |
| Working temperature range | | -25°C to +55°C | |
| Cooling | | Convection | |
| Power Supply | | 90 - 240 VAC 50Hz/60 Hz | |
| Consumption | | < 25 W | |
| Protection | | IP65 | |
| Dimensions | | 300 x 250 x 150 mm | |
| Weight | | 5 Kg | |

SOLUTIONS FOR THE EMERGENCY COMMUNICATIONS COVERAGE

TETRA REPEATERS: Line RIT-ECHO

SOLUTIONS FOR THE EMERGENCY COMMUNICATIONS COVERAGE

CONNECTION DIAGRAM: Coverage through distributed amplifiers.



AD TELECOM
www.adtelecom.es

COVERAGE SOLUTION FOR CRITICAL COMMUNICATIONS
Phone: +34 932237900
Fax: +34 932237901
Camí de la Pellería 12, Polígono Industrial Bonavista Nord
08915 Badalona, Barcelona, SPAIN

SOLUTIONS FOR THE EMERGENCY COMMUNICATIONS COVERAGE