



Channel Selective Repeater for GSM & EDGE The Gap-filler that goes the extra mile

Coverage gaps detected when optimising a network can easily and cost-effectively be covered by deploying a gap-filler. Avitec's gap-filler, the Channel Selective Repeater has higher output power and lower noise figure than any other manufacturer.

The Channel Selective Repeater can also be used to generate cost-effective coverage in an indoor environment, typically a building or tunnel. A seamless and continuous coverage is thereby achieved.

In other words, Avitec's gap-filler offers the largest coverage available on the market. Thereby, the number of gap-fillers needed is significantly reduced. Through the unique design of Avitec's medium power repeater, there are substantial cost-savings to be made. Both the capital and the operational expenditures are reduced as an effect of deploying a gap-filler that "goes the extra mile".

Main Benefits

- **High output power**
- **Low noise figure** leading to higher base station sensitivity
- **Advanced and user-friendly** remote control and supervision

CSR922	Channel Selective GSM900 Repeater equipped with 2 channels
CSR924	Channel Selective GSM900 Repeater equipped with 4 channels
CSR1822	Channel Selective GSM1800 Repeater equipped with 2 channels
CSR1824	Channel Selective GSM1800 Repeater equipped with 4 channels
CSR1922	Channel Selective GSM1900 Repeater equipped with 2 channels
CSR1924	Channel Selective GSM1900 Repeater equipped with 4 channels
CSR922-R	Channel Selective GSM-R Repeater equipped with 2 channels
CSR924-R	Channel Selective GSM-R Repeater equipped with 4 channels

Electrical Specification

Frequency range	900 MHz E-GSM900	900 MHz P-GSM900	900 MHz R-GSM	1800 MHz	1900 MHz
Uplink UL	880 - 915	890 - 915	876 - 880	1710 - 1785	1850 - 1910
Downlink DL	925 - 960	935 - 960	921 - 925	1805 - 1880	1930 - 1990

Number of channels	2 - 4
Channel programming	In 200 kHz Channel spacing
Selectivity	> 60 dB @ 400 kHz > 70 dB @ 600 kHz
Ripple in passband	< 2 dB

Noise figure

2 Channels	2.5 dB typical, < 3 dB at max gain
4 Channels	3 dB typical, < 3.5 dB at max gain
Maximum input level, non destructive	+ 10 dBm
Propagation delay	5.8 μ s typical

Output power per carrier UL & DL	2 Channels	4 Channels
GSM/GMSK	+37 dBm	+34 dBm
EDGE/8-PSK	+34 dBm	+31 dBm

Modulation Accuracy	2 Channels	4 Channels
GSM/GMSK	< 2.5° RMS and < 10° peak at +37 dBm	< 2.5° RMS and < 10° peak at +34 dBm
EDGE/8-PSK	< 3.5 % EVM RMS at +34 dBm	< 3.5 % EVM RMS at +31 dBm

Intermodulation (2 carriers at +37 dBm, 600 kHz spacing)	< - 36 dBm at 900 MHz < - 30 dBm at 1800 MHz and 1900 MHz
Gain	60 - 90 dB, adjustable, in 1 dB steps
System impedance	50 Ω
Antenna connectors	DIN 7/16 Female
Electrical ratings	110/230 V AC, 50/60 Hz (alt. - 48 VDC)

Power Consumption (typical, traffic dependent)

Frequency	2 Channels	4 Channels
900 MHz	160 W	270 W
1800 & 1900 MHz	200 W	340 W

Mechanical

Dimensions (2 Channels)	540 x 350 x 150 mm
Dimensions (4 Channels)	540 x 350 x 220 mm
Weight (2 Channels)	22 kg
Weight (4 Channels)	33 kg
Enclosure	Aluminium (IP 65)

Environmental

EMC	See compliance below
Operating Temperature	- 25 to + 55 ° C
Storage	- 30 to + 70 ° C
Humidity	ETSI EN 300 019-2-4 (see compliance below)
MTBF	> 100000 hrs
Complies with	R & TTE Directive including: ETS EN 301 502 (ETS EN 300 609-4/GSM 11.26) ETS EN 301 498-8 EN 60 950

2 Channels



4 Channels



All data is subject to change without prior notice.