

BROADCAST RANGE

DVB-T 300mW, 1W, 5W, 10W, 20W and 50W **GAP FILLERS**

Technical description

Gap filler equipments from the Broadcast range are developed to expand the DTT covering area where the direct signal from a transmitter is not correctly received.

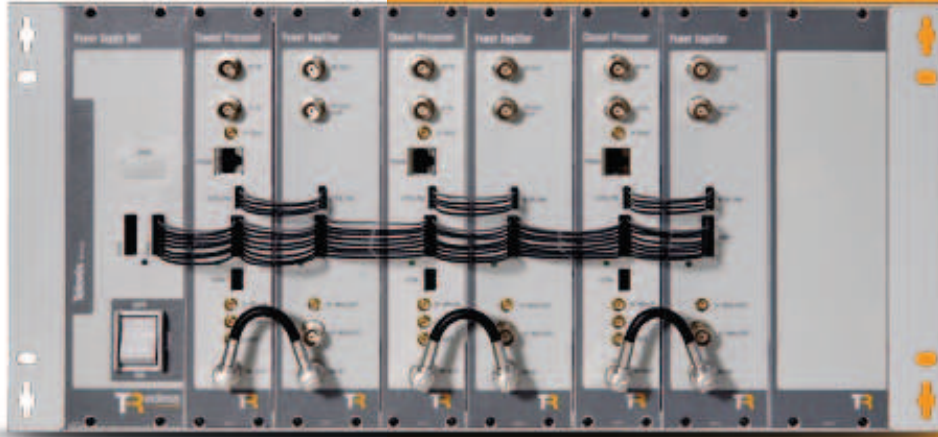
In Broadcast range there are six power options: 300mW, 1W, 5W, 10W, 20W and 50W. Equipments are placed into a 19" subrack and the complete system comprises one or two power supply units working in redundancy (optional). Each gap filler consists of DVB-T channel processor module and power amplifier.

A 19" subrack can house up to three 300mW, 1W or 5W gap fillers and up to two 10W, 20W or 50W ones. The multiplexing system can be integrated in a 19" subrack.

Main Characteristics

- Output power*: 300mW, 1W, 5W, 10W, 20W and 50W.
- Developed following the ETS 300 744 DVB-T standard.
- MFN and SFN compatible.
- Redundant ASI inputs.
- Very low phase noise oscillators with DDS technology.
- High rejection to adjacent channels.
- Optional echo canceller.
- LDMOS amplifiers.
- Frequency agility.
- Low consumption.
- Local management using an external programmer.
- Optional remote management (Ethernet, serial communication, GPRS/HSDPA, electrical relays interfaces).
- Electromagnetic compatibility and safety according to EC regulation norms.
- Optional power supply redundancy through the UCA.
- Independent switching off through the UCA.

* Output power level after filter combiner (2 dB losses)



Three 300mW, 1W or 5W modular DVB-T gap filler



Two 10W, 20W or 50W modular DVB-T gap filler

References	853021	853022	853023	851007	851008	851009	851013	851014	851015
Denomination	RXGB 1C-300mW	RXGB 2C-300mW	RXGB 3C-300mW	RXGB(VF) 1C-1W	RXGB(VF) 2C-1W	RXGB(VF) 3C-1W	RXGB(VF) 1C-5W	RXGB(VF) 2C-5W	RXGB(VF) 3C-5W
References with DAE	852026	852027	852028	852007	852008	852009	852013	852014	852015
VF (Forced ventilation)				851021	851022	851023	851018	851019	851020
Composition									
Power supply unit	1	1	1	1	1	1	1	1	1
Channel processor	1	2	3	1	2	3	1	2	3
Power amplifier	1	2	3	1	2	3	1	2	3
RF input									
Frequency range	1 UHF Channel (CCIR 8MHz)								
Input signal range	-70 to -20 dBm								
Noise figure	8 dB								
Return losses	20 dB								
Frequency image rejection	90 dB								
Adjacent channel rejection	80 dB								
Impedance	50 Ω								
Connector	BNC Female								
IF input									
Input signal range	-30 to -10 dBm								
Input central frequency	36'125 MHz								
Connector	BNC Female								
Local oscillators									
Phase noise	> 90 dBc/Hz @ 1KHz								
Frequency steps	1 Hz								
Frequency stability with temperature (-10 to 60°C)	± 1 x 10e-6 (-10 to 60°C) (standard) ± 5 x 10e-8 (-10 to 60°C) (optional)								
Frequency stability for a year	± 1 x 10e-6 (standard) ± 5 x 10e-8 (optional)								
RF output									
Frequency range	470 – 860 MHz								
Output power (after filter combiner)*	300mW			1W			5W		
Distance to the shoulders	>38 dB								
Power stability	± 0'5 dB								
Phase noise	> 90 dBc/Hz @ 1KHz (MFN mode) (In SFN mode is negligible)								
Return losses	>20 dB								
Spurious emissions out of channel	<-60 dBc								
Impedance	50 Ω								
Connector	BNC Female								
Power test output									
Coupling	27 ± 3 dB								
Connector	BNC Female								
External reference input (optional)									
Frequency	10 MHz								
Input level range	-10 to +10 dBm								
Connector	BNC Female								
IF test output									
Output level	-30 ± 3 dBm								
Connector	SMB Female								
Local oscillator test output									
Output level	-30 ± 3 dBm								
Connector	SMB Female								
General									
Control and monitoring	Ethernet, serial communication, GSM/GPRS, electrical relays								
Input voltage range	220 Vac ± 15%								
Consumption	31W	62W	93W	36W	72W	108W	90W	180W	270W
Temperature range	0 to 45°C								
Power factor	0'6								
Dimensions (width / height / depth)	19" / SHU / 250 mm								
Weight	6kg	7'5kg	10kg	6kg	7'5kg	10kg	6kg	8'5kg	13kg
Ventilation	Passive			Passive (active as option)			Active (passive as option)		
Echo canceller									
Gain margin (signal - echo)	-15dB								
Cancelation window	0 - 8 μs								
Output power adaptive regulation	Yes								

* Output power level after filter combiner (2 dB losses). The output power at the amplifier's output connector is 501mW (27dBm) for the 300mW gap filler, 1'6W (32dBm) for the 1W gap filler and 7'9W (39dBm) for the 5W gap filler.

DVB-T 10W, 20W y 50W GAP FILLERS | REFERENCES AND SPECIFICATIONS

References	851016	851017	851024	851025		
Denomination	RXGB 1C-10W	RXGB 2C-10W	RXGB 1C-20W	RXGB 2C-20W	RXGB 1C-50W	RXGB 2C-50W
References with DAE	852016	852017	852024	852025		
Composition						
Power supply unit	1	2	1	2	1	2
Channel processor	1	2	1	2	1	2
Power amplifier	1	2	1	2	1	2
RF input						
Frequency range	1 UHF Channel (CCIR 8MHz)					
Input signal range	-70 to -20 dBm					
Noise figure	8 dB					
Return losses	20 dB					
Frequency image rejection	90 dB					
Adjacent channel rejection	80 dB					
Impedance	50 Ω					
Connector	BNC Female					
IF input						
Input signal range	-30 to -10 dBm					
Input central frequency	36'125 MHz					
Connector	BNC Female					
Local oscillators						
Phase noise	> 90 dBc/Hz @ 1KHz					
Frequency steps	1 Hz					
Frequency stability with temperature (-10 to 60°C)	± 1 x 10e-6 (-10 to 60°C) (standard) ± 5 x 10e-8 (-10 to 60°C) (optional)					
Frequency stability for a year	± 1 x 10e-6 (standard) ± 5 x 10e-8 (optional)					
RF output						
Frequency range	470 – 860 MHz					
Output Power (after filter combiner)*	10W		20W		50W	
Distance to the shoulders	>38 dB					
Power stability	± 0'5 dB					
Phase noise	> 90 dBc/Hz @ 1KHz (MFN mode) (In SFN mode is negligible)					
Return losses	>20 dB					
Spurious emissions out of channel	<-60 dBc					
Impedance	50 Ω					
Connector	BNCFemale			Type N Female		
Power test output						
Coupling	27 ± 3 dB					
Connector	BNC Female					
External reference input (optional)						
Frequency	10 MHz					
Input level range	-10 to +10 dBm					
Connector	BNC Female					
IF test output						
Output level	-30 ± 3 dBm					
Connector	SMB Female					
Local oscillator test output						
Output level	-30 ± 3 dBm					
Connector	SMB Female					
General						
Control and monitoring	Ethernet, RS232, GSM/GPRS, relays					
Input voltage range	220 Vac ± 15%					
Consumption	130W	260W	200W	400W	400W	800W
Temperature range	0 to 45°C					
Power factor	0'6					
Dimensions (width / height / depth)	19" / 5HU / 250 mm					
Weight	9kg	14'5kg	9kg	14'5kg	9kg	14'5kg
Ventilation	Active (forced ventilation)					
Echo canceller						
Gain margin (signal - echo)	-15 dB					
Cancellation window	0 - 8 μs					
Output power adaptive regulation	Yes					

* Output power level after filter combiner (2dB losses). The output power at the amplifier's output connector is 15'8W (42 dBm) for the 10W gap-filler, 31'6W (45 dBm) for the 20W gap-filler and 80W (49 dBm) for the 50W gap-filler.