BSR 3604

High Power, band selective, TETRA Repeater

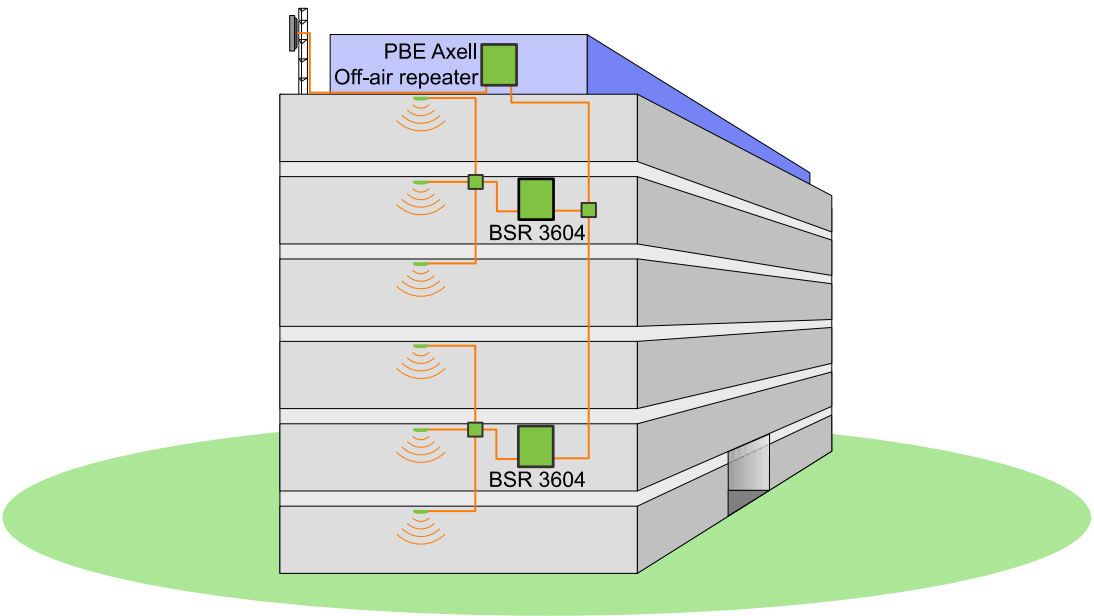
Key features

- Up to 55 dB Gain
- Large coverage footprint due to high output power and gain
- Optimized for low noise figure
- Remote management via Ethernet network connection with option for GSM/GPRS modem
- The unique combination of high output power and highly linear power amplifiers ensures good coverage with uniformly excellent signal quality.
- IP65 enclosure version for indoor or outdoor deployment.
- IP20, 4U, rack-mount version.

The BSR 3604 Band Selective Repeaters operate in the 380 to 470 MHz TETRA bands and are designed for use in Trunked Radio Systems to distribute the RF signal throughout the area to be covered. Others bands are available upon request up to 520 MHz

The BSR 3604 offers quick and easy coverage deployment for in-building applications such as railway stations, parking garages, power plants, shopping centres or other types of confined areas.

The BSR 3604 is used as part of a system where an off-air repeater is used in combination with the BSR 3604. The signal received by the off-air repeater is fed via coaxial cable to BSR 3604 units which are distributed throughout the building or area to be covered. The signals are then distributed from the BSR 3604 units via leaky feeder or distributed antenna system, thus providing sufficient coverage inside the building. The BSR 3604 unit provides high output power and amplifies the signals with a gain of up to 55 dB.



Technical specification

RF Parameters			
General frequency ranges available (others upon request up to 520 MHz)	Downlink	Uplink	Bandwidth
	390 MHz to 395 MHz	380 MHz to 385 MHz	5 MHz
	390 MHz to 396.5 MHz	380 MHz to 386.5 MHz	6.5 MHz
	390 MHz to 397 MHz	380 MHz to 387 MHz	7 MHz
	395 MHz to 400 MHz	385 MHz to 390 MHz	5 MHz
	420 MHz to 425 MHz	410 MHz to 415 MHz	5 MHz
	423 MHz to 430 MHz	413 MHz to 420 MHz	7 MHz
	425 MHz to 430 MHz	415 MHz to 420 MHz	5 MHz
	460 MHz to 465 MHz	450 MHz to 455 MHz	5 MHz
	465 MHz to 470 MHz	455 MHz to 460 MHz	5 MHz
Number of frequency bands	1 duplexed		
Operator bandwidth adjustment	Adjustable 100 kHz to 5 MHz in 25 kHz steps		
Duplex distance (in one band)	10 MHz		
Impedance	50 Ω		
Composite output power (UL)	0 dBm		
Downlink Output power/carrier	1 carrier: +36 dBm 2 carriers: +33 dBm 3-4 carriers: +30 dBm 8 carriers: +27 dBm		
Max. Uplink Gain	55 dB		
Max. Downlink Gain	55 dB; adjustable 30 dB in 1 dB steps		
Noise Figure (UL)	< 5 dB typical at maximum gain		
Group delay	<2 µs at band centre for 5 MHz filter , <7 µs at band edge		
ALC	Implemented		
Spurious Emissions from RF port	< -36 dBm		
Intermodulation products	< -60 dBc (according to TS 101-789-1)		
External connections	**Wall mount**	**Rack mount**	
RF Ports	7/16 DIN Female	N type female	
Local Maintenance Terminal	RS232/USB		
External Alarms	Four external alarm inputs (NC or NO configurable)		
Summary alarm relay output	Dry contact		
Remote Connection	Ethernet, IP-based via GSM/EDGE GSM-R, UMTS or SMS alarms		
Power requirements	**Wall mount**	**Rack mount**	
Power input connection	Internal terminal	IEC /XLR	
Voltage supply options	230 V ac 50 Hz or 115 V ac 60 Hz or -48 V dc		
Power Consumption	<150 W, typical		
Mechanical and Environmental	**Wall mount**	**Rack mount**	
Dimensions (H x W x D)	540 mm x 382 mm x 198 mm	4U x 19" x 450 mm	
Enclosure	Aluminium (IP65)	Aluminium (IP20)	
Weight	25 kg approx.	<20 kg	
Cooling	Convection		
Operating Temperature	-25 to +55ºC		
Storage Temperature	-30 to +70ºC		
MTBF	>100,000 hrs		
Humidity	0 to 95% RHNC		
Compliance			
Complies with RED	Safety	EN 62368-1, EN 50385	
	EMC	EN 301 489-1, EN 301 489-5	
	Radio	EN 302 561	