

D-CSR 3604

Digital channel and band selective repeater for public safety
EMEA & APAC

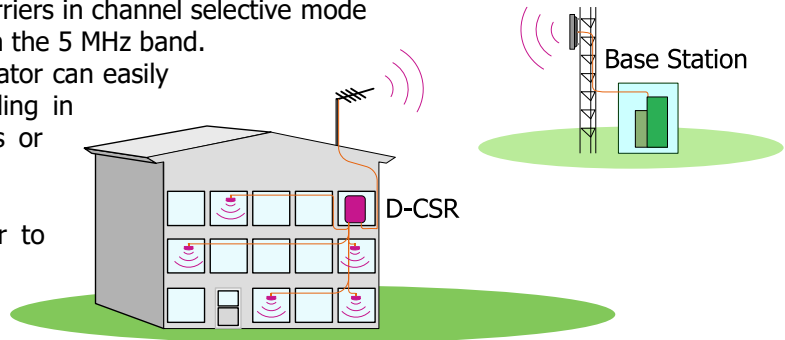
Key features

- Large repeater coverage footprint due to high output power and gain.
- Dual aspect – programmable band or channel selective mode.
- Very low propagation delay leading to higher security, resilience and availability of information.
- Easy system implementation with built-in commissioning tools.
- Time-slot based ALC minimizes noise contribution.
- Supervision available over various wireless modems.
- Built in spectrum analyser.



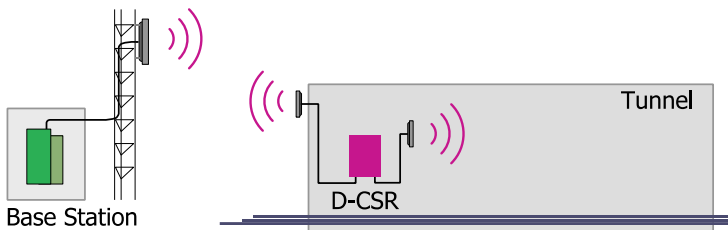
The D-CSR 3604 provides quick, cost-effective and secure radio coverage in any TETRA, TETRAPOL and many UHF networks and can handle up to eight carriers in channel selective mode or 2 sub-bands in band selective mode within the 5 MHz band.

Through the use of the D-CSR 3604 an operator can easily expand a base station's service area by filling in coverage holes caused by terrain, buildings or tunnels.

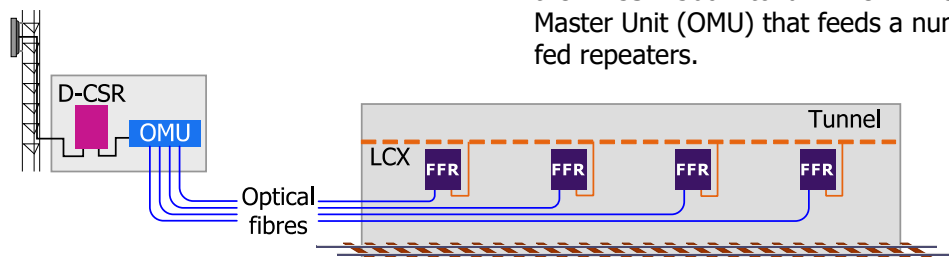


The wireless interface permits the operator to remotely configure RF parameters as well as monitor alarms on a continuous basis. Supervision is available over various wireless modems

The D-CSR 3604 can also be used as an off-air repeater to provide coverage in shorter tunnels.



Longer tunnels can be covered by connecting the D-CSR 3604 to an Axell Wireless Optical Master Unit (OMU) that feeds a number of fibre fed repeaters.



Technical specification

Electrical specifications	Downlink	Uplink	Bandwidth
General frequency ranges available: Other frequency bands and duplex options available upon request within the 330 MHz to 520 MHz public safety band.	390 MHz to 395 MHz	380 MHz to 385 MHz	5 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
	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
	390 MHz to 397 MHz	380 MHz to 387 MHz	7 MHz
	423 MHz to 430 MHz	413 MHz to 420 MHz	7 MHz
	390 MHz to 396.5 MHz	380 MHz to 386.5 MHz	6.5 MHz
Duplex Spacing	10 MHz		
Number of channels (channel selective mode)	Up to 8		
Channel frequency (channel selective mode)	Any TETRA channel. Options: 60 kHz (high selectivity), 90 kHz (low delay)		
Filter options (Band selective mode) up to 4 sub-bands	100 kHz to 5 MHz in 25 kHz steps		
Impedance	50 Ω		
Noise figure	4.5 dB at maximum gain		
Group delay (Channel selective mode)	<12 μ s (14 μ s high selectivity)		
Group delay (Band selective mode)	<2 μ s at band centre for 5 MHz filter; <7 μ s at band edge		
ALC (Channel selective mode)	Time-slot based per channel		
ALC (Band selective mode)	RMS based with frame peak hold		
Squelch (Channel selective mode) (*)	Settable		
Output power/carrier	+36 dBm (1 carrier) +33 dBm (2 carriers) +30 dBm (4 carriers) +27 dBm (8 carriers)		
Gain	55 dB to 85 dB in 1 dB steps		
Third order intercept	+68 dBm, typical		
Spurious emissions from RF port	< -36 dBm		
Intermodulation products	-60 dBc (according to ETSI TS 101-789-1)		
Remote control and alarm supervision	IP-based via GSM/EDGE (850/900/1800/1900), GSM-R, UMTS, TETRA or Ethernet		
	Circuit Switched via GSM/EDGE(850/900/1800/1900), GSM-R or PSTN		
Power requirements	230VAC 50Hz or 110VAC 60Hz or -48 VDC		
Power consumption	180 W, typical		
External connection			
RF Ports	7/16 DIN Female		
External alarm inputs	4		
Alarm relay output	Dry contact		
Mechanical and Environmental specification			
Dimensions (H x W x D) (**)	540 mm x 382 mm x 198 mm		
Enclosure	Aluminium (IP65)		
Weight	22 kg		
Cooling	Convection		
Mounting	Wall mounted		
Operating Temperature	-25°C to + 50°C		
Storage	-30°C to + 70°C		
Humidity	0 to 95% RHNC		
Complies with	Safety	EN 60950-1, EN 50385	
	EMC	EN 301 489-1, EN 301 489-5	
	Radio	EN 302 561	

(*) The squelch is set to -108 dBm, which ensures correct operation for most repeater system scenarios. It will open approximately 3dB below the static sensitivity in the repeater cell thus it will be open to any mobile on the cell border.

(**) Note: Case size for 7 MHz B/W options is approx. 115 mm deeper

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E&OE, specification subject to revision without notice.