

D-CSR 3604

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

Key features

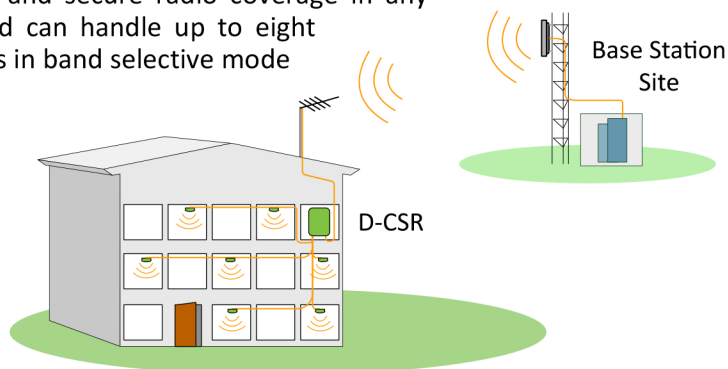
- Large repeater coverage footprint due to high output power and gain.
- Dual aspect – programmable band or channel selective mode.
- Very low propagation delay leading to higher security, resilience, and availability of information.
- Easy system implementation with built-in commissioning tools.
- Timeslot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



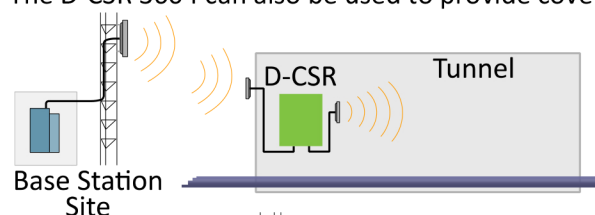
The D-CSR 3604 provides quick, cost-effective, and secure radio coverage in any TETRA, TETRAPOL and many UHF networks and can handle up to eight carriers in channel selective mode or 2 sub-bands in band selective mode within the 5 MHz band.

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.

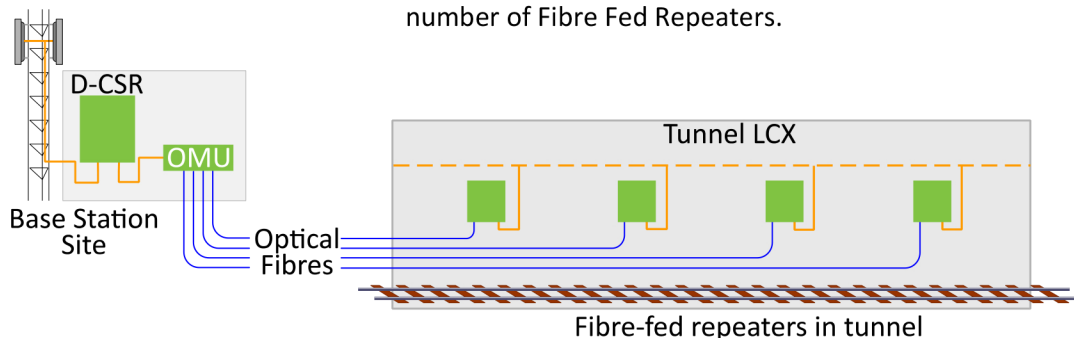
The wireless interface permits the operator to remotely configure RF parameters as well as monitor alarms on a continuous basis. Supervision is available over various wireless modems



The D-CSR 3604 can also be used to provide coverage in shorter tunnels.



Longer tunnels can be covered by connecting the repeater to a PBE Axell Optical Master Unit (OMU) that feeds a number of Fibre Fed Repeaters.



Technical specification

RF 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 μs (14 μs high selectivity)		
Group delay (Band selective mode)		<2 μs at band centre for 5 MHz filter; <7 μs at band edge		
ALC (Channel selective mode)		Timeslot based per channel		
ALC (Band selective mode)		RMS based with frame peak hold		
Squelch (Channel selective mode) (*)		Settable		
(*) The squelch is set to -108 dBm, which ensures correct operation for most repeater system scenarios. It will open approximately 3 dB below the static sensitivity in the repeater cell thus it will be open to any mobile on the cell border.				
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 or Ethernet Circuit Switched via GSM/EDGE (850/900/1800/1900), GSM-R or PSTN		
Power requirements				
Voltage		230 V ac 50Hz or 120 V ac 60Hz or -48 V dc		
Power consumption		180 W, typical		
External connection				
RF Ports		7/16 DIN female or 4.3/10 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		
Compliance				
Complies with	Safety	EN 62368-1, EN 50385		
	EMC	EN 301 489-1, EN 301 489-5		
	Radio	EN 302 561		

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