

D-CSR 2704

Digital, channel and band selective TETRA repeater for EMEA and APAC

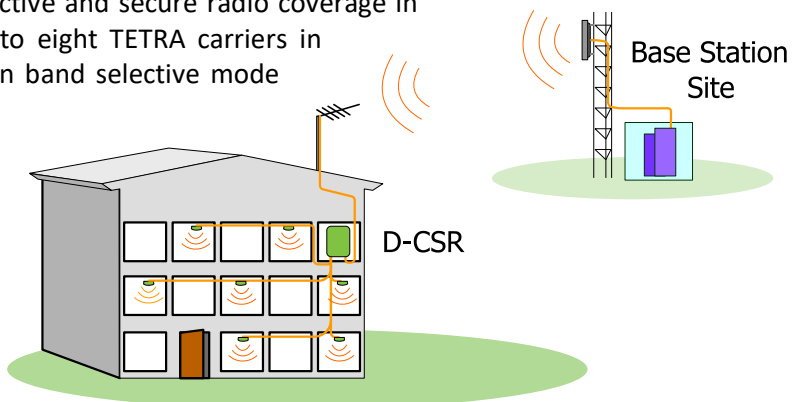
Key features

- Efficient repeater coverage footprint due to high output power and gain
- Dual personalities – 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



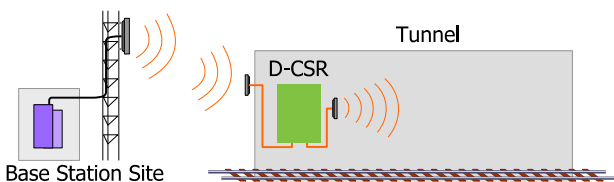
The D-CSR 2704 provides quick, cost-effective and secure radio coverage in any TETRA network and can handle up to eight TETRA carriers in channel selective mode or 2 sub-bands in band selective mode within the 5 MHz band.

Through the use of the D-CSR 2704 an operator can easily expand a base station's service area by filling in coverage holes caused by terrain, buildings or tunnels.

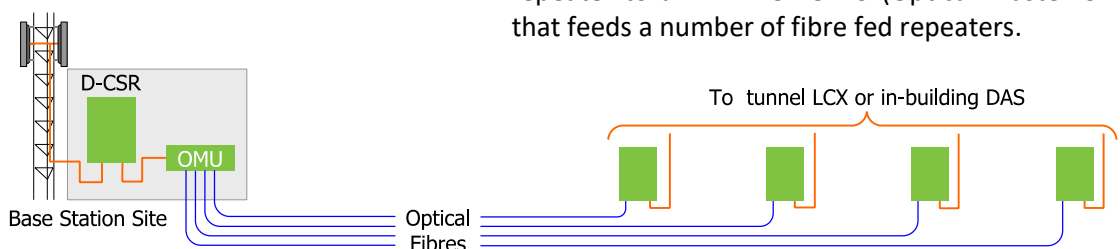


The wireless interface permits the operator to remotely configure RF parameters as well as monitor alarms on a continuous basis. Supervision is available over various wireless modems.

The D-CSR 2704 can also be used to provide coverage in shorter tunnels.



Longer tunnels can be covered by connecting the repeater to a PBE Axell OMU (Optical Master Unit) 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 within the 330 MHz to 520 MHz public safety band upon request.		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
Duplex Spacing		10 MHz		
Channel Selective mode	Number of channels	Up to 8		
	Channel frequency, any TETRA channel	60 kHz (high selectivity), 90 kHz (low delay)		
	Group delay	<12µs (14 µs high selectivity)		
	ALC	Time-slot based per channel		
	Squelch (*)	Settable		
(*) 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.				
Band Selective mode	Filter options up to 4 sub-bands	100 kHz to 5 MHz in 25 kHz steps		
	Group delay	<2µs at band centre for 5MHz filter; <7µs at band edge		
	ALC	RMS based with frame peak hold		
Impedance		50 Ω		
Noise figure		4.5 dB at maximum gain		
Downlink output power/carrier		+27 dBm (1 carrier) +24 dBm (2 carriers) +21 dBm (4 carriers) +18 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 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				
Voltage Options		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		
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		
(**) Note: Case size for 7 MHz B/W options is approx. 115 mm deeper				
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 RED:	Safety	EN62368-1, EN 50385		
	EMC	EN 301 489-1, EN 301 489-5		
	Radio	EN 302 561		