

D-CSR 3604

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

Key features

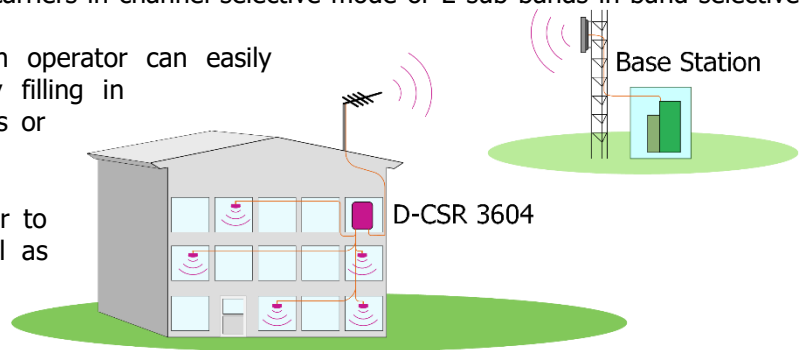
- 19" Rack mount configuration.
- Large repeater coverage footprint due to high output power and gain.
- Dual aspect – programmable band or channel selective mode.
- Very low propagation delay leading to higher security, resilience and availability of information.
- Easy system implementation with built-in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



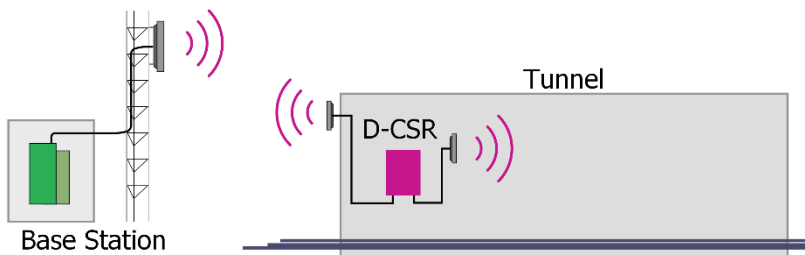
The D-CSR 3604 provides quick, cost-effective and secure radio coverage in any TETRA, TETRAPOL and many UHF networks and can handle up to eight carriers in channel selective mode or 2 sub-bands in band selective mode within the specified band.

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.

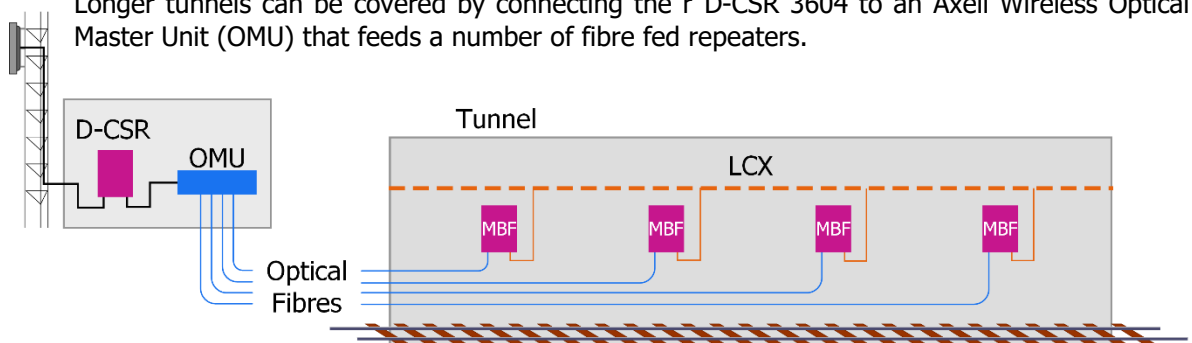
The wireless interface permits the operator to remotely configure RF parameters as well as monitor alarms on a continuous basis. Supervision is available over various wireless modems



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		
Typical frequency ranges include: (others bands upon request up to 520MHz)	Downlink	Uplink
	390 MHz to 395 MHz 390 MHz to 396.5 MHz 390 MHz to 397 MHz 395 MHz to 400 MHz 420 MHz to 425 MHz 423 MHz to 430 MHz 425 MHz to 430 MHz 460 MHz to 465 MHz 465 MHz to 470 MHz	380 MHz to 385 MHz 380 MHz to 386.5 MHz 380 MHz to 387 MHz 385 MHz to 390 MHz 410 MHz to 415 MHz 413 MHz to 420 MHz 415 MHz to 420 MHz 450 MHz to 455 MHz 455 MHz to 460 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)	Time-slot based per channel	
ALC (Band selective mode)	RMS based with frame peak hold	
Squelch (Channel selective mode) (1)	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), UMTS or Ethernet	
	Circuit Switched via GSM/EDGE(850/900/1800/1900), or PSTN	
Power requirements	230VAC 50Hz or 110VAC 60Hz or -48 VDC	
Power consumption	180 W, typical	
External connection		
AC/DC Input	IEC/XLR	
RF Port connectors	N –Type Female	
External alarm inputs	4	
Ethernet port	External	
Alarm relay output	Dry contact	
Mechanical specification		
Dimensions	19” , 4U, 450mm depth	
Weight	< 20 kg	
Cooling	Convection	
Mounting	Rack mounted	
Environmental specification		
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

(1) 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.

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E&OE, specification subject to revision without notice.