

MOBEXCOM P25

DIGITAL VEHICULAR REPEATER SYSTEM



P25 COVERAGE TO GO

MOBEXCOM P25

The P25 Digital Vehicular Repeater System (DVRS) is the most cost effective solution for providing reliable portable radio coverage in buildings and other RF shielded areas.

Futurecom Vehicular Repeaters have been successfully deployed and in use by numerous Fire Departments across the US and Canada for more than 15 years.



MOBEXCOM P25 SPECIAL FEATURES FOR FIRE GROUND APPLICATIONS

- Rugged, self contained trunk mount DVRS package specially designed for public safety use.
- Transportable (TDVRS) Package with battery backup provides extra coverage flexibility and can be deployed where radio coverage is most needed.
- Programmable Simplex and Full Duplex mode.
- Can be configured for both Analog and P25 Digital operation to facilitate transitions from old to new infrastructure.
- Provides instant interoperability between digital and analog users.
Can be used to bridge two different frequency bands (cross-band models only).
- Easily controlled from the Mobile radio control head.
- Programmable remote control capabilities.
- High power (up to 10 Watts) for better in-building penetration.
- Automated activation option available.

MOBEXCOM P25 TECHNICAL HIGHLIGHTS

- Seamlessly interfaced to a remote mount Motorola radio:
 - XTL™5000 (O3 / O5 Control Head)
 - XTL™2500 (M5 Control Head)
- Available in VHF / UHF / 700 / 800MHz bands (25 or 12.5kHz).
- In-band or Cross-Band models available.
- Digital (Conventional) DVRS mode can be used to extend portable radio range in P25 Trunking (9600 Baud) or P25 Conventional Systems.
- Analog Conventional DVRS mode can be used to extend portable radio range in P25 Trunking, P25 Conventional, 3600 Trunking or Conventional Analog Systems.
- Can be used as a stand-alone repeater.
- 64 channels capable.
- Fully synthesized and field programmable.
- Field flash upgradeable.
- Programmable output power 1-10 Watts (at Antenna port).
- Advanced Simulcast Prevention Algorithm.
- Fireground signaling support.

KEY P25 TRUNKING SYSTEM FEATURES

The following list describes some key P25 trunking system features, which can be made available to the portable radio users via DVRS:

- Group Call (clear or coded).
- Private Call (clear or coded).
- Emergency Alarm / Call.
- Portable PTT ID pass-through.
- Call Alert Paging.
- Talk permit / Prohibit tone.
- Talk Group Proxing.
- Radio Check / Inhibit.
- Portable radio adaptive power control.
- P25 Over The Air Re-keying (OTAR).
- Failsoft , Out of Range and Site Trunking indication pass through.
- Dynamic regrouping.
- P25 Encryption.

Note: Some of the P25 features listed above require the use of 'DVRS Enabled' XTS™2500 or XTS™5000 portable radios.

KEY TYPE II TRUNKING SYSTEM FEATURES

The following list describes key 3600 trunking system features, which can be made available to the portable radio user via DVRS:

- Group Call (clear only)
- Emergency Alarm / Call
- Portable Emergency MDC ID pass-through
- Talk Permit / Prohibit tone

MOBEXCOM APPLICATIONS

The mode of the Digital Vehicular Repeater (DVRS) can be selected from the mobile radio control head, automatically by an external switch (portable charger, door or brake switch etc) or remotely.

The following modes are available: OFF, SYSTEM and LOCAL (optional).

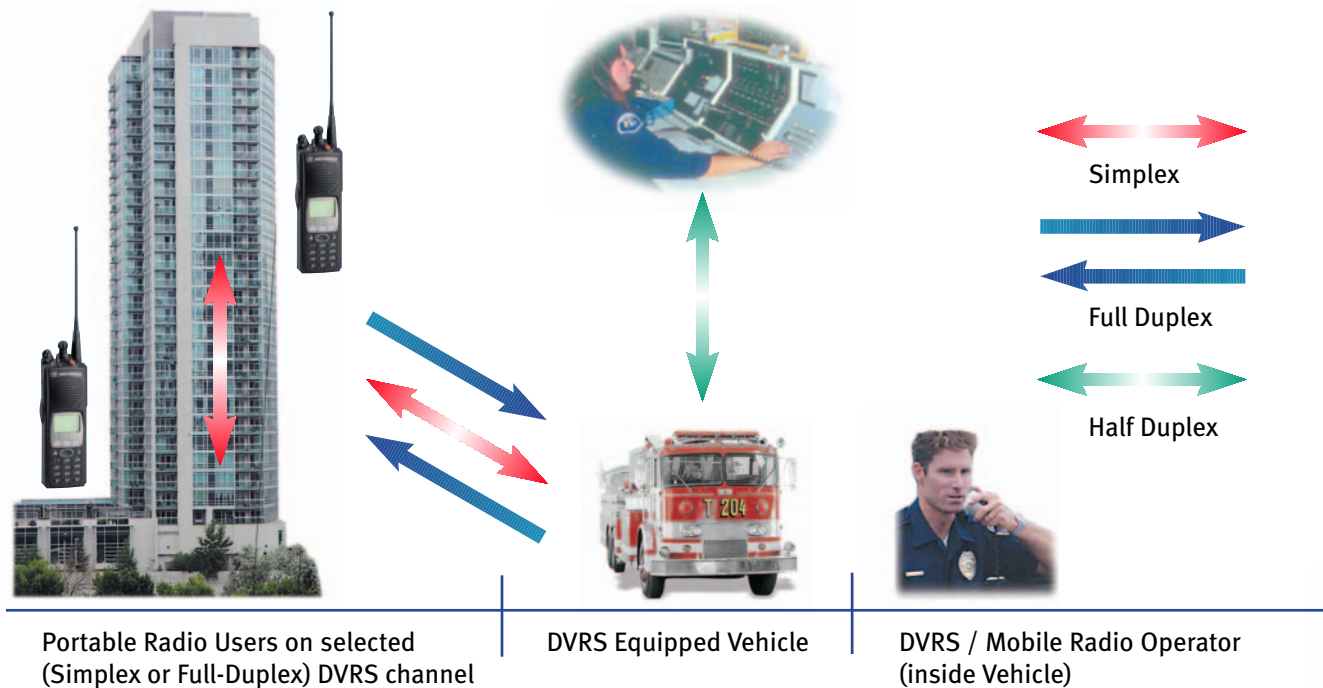
In the **OFF** mode the DVRS is not active and the Mobile radio operates as if there were no Vehicular Repeater present. This mode is to be used when the vehicle is in motion and no portable radio coverage extension is required.

SYSTEM mode is used when the portable radio users are attending to a fire incident and require extended portable radio communications (typically in-building), Call Logging and reliable communications with the System users.

LOCAL mode can be programmed as an option for use in cases when the portable users and DVRS / Mobile radio operators do not want to be heard by the system users or when the DVRS is deployed in an area where no system radio coverage is available.

The communications capabilities available in each DVRS mode are summarized in the table below.

COMMUNICATIONS SUPPORTED VIA DVRS	SELECTED DVRS MODE		
	OFF	LOCAL	SYSTEM
PORTABLE TO PORTABLE	NO	YES	YES
PORTABLE TO DVRS / MOBILE RADIO OPERATOR	NO	YES	YES
PORTABLE TO SYSTEM	NO	NO	YES
SYSTEM TO PORTABLE	NO	NO	YES
SYSTEM TO DVRS / MOBILE RADIO OPERATOR	YES	YES	YES
DVRS / MOBILE RADIO OPERATOR TO PORTABLE	NO	YES	YES
DVRS / MOBILE RADIO OPERATOR TO SYSTEM	YES	PROGRAMMABLE	YES



XTL™2500/XTL™5000 SELECTED MODE	DVRS MODE (SIMPLEX OR FULL DUPLEX)	
	ANALOG	P25 DIGITAL
P25 9600 BAUD TRUNKING	YES	YES
P25 CONVENTIONAL	YES	YES
3600 TRUNKING ANALOG OR DIGITAL	YES	NO
CONVENTIONAL ANALOG	YES	NO

General Specifications

Dimensions (DVR & Duplexer only):		
Height / Width / Depth		185mm (7.28") / 186mm (7.32") / 315mm (12.41")
Weight (DVR Only, without filtering)		10.3kg (22.7lb)
Channel Spacing		12.5 or 25 kHz programmable
Number of Channels		64
CTCSS/DCS		Programmable per channel
Power Supply		13.8V DC +/- 20%
DC Current Drain	RPTR off	0.01 A Max
	Standby/Receive	0.8 A Max
	Transmit	4.5 A Max
Operating Temperature		-30° to +60° C
Protection Against Liquids		IP6 (water jet proof)
Antenna Impedance		50 Ohms
Duty Cycle		Continuous
External Connectors	Antenna	Mini UHF
	Computer Interface	USB

Equipment Type Acceptance

	VHF	UHF	700	800
FCC	LO6-DVRSVHF	LO6-DVRSUHF	LO6-DVRS700	LO6-DVRS800
Industry Canada	2098B-DVRSVHF	2098B-DVRSUHF	2098B-DVRS700	2098B-DVRS800

Transmitter Specifications

	VHF	UHF	700	800
Frequency Band [MHz]	136-174	380-430 450-470 470-512	764-776	851-870
Power Output @ Antenna Port	10W (programmable per channel from 1W to 10W)			
CCT Option	15 sec to 15 min or Disabled			
Max Spurious Output	-20dBm			
Frequency Stability	+/- 1.5ppm			
FM Hum and Noise 12.5 / 25 kHz	37 dB / 43 dB			
Audio Response	+1, -3 dB of 6 dB / octave pre-emphasis characteristic over 300 Hz – 3 kHz			
Audio Distortion	<2%			

Receiver Specifications

	VHF	UHF	700	800
Frequency Band [MHz]	136-174	380-430 450-470 470-512	794-806	806-825
Receiver Sensitivity	-115 dBm (0.39µV)			
Frequency Stability	+/- 1.5ppm			
Selectivity 12.5 / 25 kHz	60 dB / 75 dB			
Intermodulation	75 dB			
Deviation 12.5 / 25 kHz	+/-2.5 kHz / +/-5 kHz			
FM Hum and Noise 12.5 / 25 kHz	37 dB / 43 dB			
Audio Output (Repeater Detect Audio)	600 mV RMS nominal, flat response			
Audio Response	+1, -3 dB of 6 dB / octave pre-emphasis characteristic over 300 Hz – 3 kHz			
Audio Distortion	<2%			

MOBEXCOM P25 DVRS AVAILABLE EXCLUSIVELY FROM MOTOROLA

Specifications subject to change without notice.



3277 Langstaff Rd., Concord, ON Canada L4K 5P8
Tel. 1-800-701-9180 or (905) 660-5548, Fax (905) 660-6858