



**RCA**  
Communications Systems

# P25 Public Safety Radio



**RPX6500** UHF / VHF  
P25 Mobile Two-Way Radio

# WORKS WITH YOUR CURRENT RADIOS!

**Guaranteed compatible with your current P25 radios.**

RCA's RPX6500 mobile radio meets all Project 25 (P25) specifications for Police, Fire, Ambulance, and other emergency services. P25 radios meet Military Standard Spec 810F for durability, shock and humidity. RCA's P25 mobile radio has 25W of power for maximum signal coverage with an optional upgrade to 110W. RCA's 3 Year Warranty is the best in the industry, giving you peace of mind when purchasing P25 equipment.

## RPX6500 FEATURES

**MULTICOM™ TECHNOLOGY** Provides cross-platform P25 Conventional and P25 Trunking system capability, as well as Analog Conventional and MPT1327 Trunking system capability

**P25 CAP COMPLIANT** Provides interoperability, integrating easily with any existing public safety analog, P25 Conventional and P25 Trunking Systems

**MIXED MODE OPERATION** Auto Sense option enables radios to auto-detect incoming analog or P25 Digital signals

**AMBE+2™ VOCODER** Advanced digital vocoder eliminates background noise, providing loud, crystal clear communication

**ENCRYPTION OPTIONS** DES-OFB 128-bit or AES 256-bit encryption in P25 Digital mode or Scrambler voice encryption in analog mode

**LARGE CHANNEL, INDIVIDUAL AND TALKGROUP CAPACITY** Up to 1500 channels and up to 250 Individual/Talkgroup ID's

**SAFETY/EMERGENCY FUNCTIONS** Stun/Kill/Revive, Emergency Alarm and optional GPS or AVL

**SIGNALING COMPATIBLE WITH LEGACY PUBLIC SAFETY SYSTEMS** 2-Tone, 5-Tone, DTMF Encode/Decode and MDC1200 Encode/Decode which provide Public Safety essential functions such as: 2-Tone Paging, PTT ID, Individual/Group Call, Call Alert, Emergency Alarm, Remote Monitor, Radio Inhibit, Radio Check, Radio Mute/Unmute, Text Messaging.

**CONTROL OPTIONS** Your choice of a remote control head with microphone or a keypad/display handset microphone

**FLEXIBLE MOUNTING** Radio can be mounted just about anywhere in a vehicle while the remote control head with microphone or handset microphone can be placed where it's needed most

**EASY-TO-READ DOT-MATRIX DISPLAY** Bright backlight makes it easy to navigate through the menu and radio functions

**LARGE CHANNEL SWITCH AND 3 POSITION ZONE SELECT OPTION** Makes switching channels and zones easy, even when wearing gloves

**DURABLE AND RELIABLE** All aluminum design meets Military Specs (MIL-STD-810C/D/E/F) for durability, shock, droppage, extreme temperatures, solar radiation, vibration, rain, humidity, salt fog, blowing dust and sand

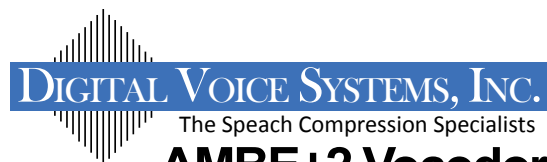
**25W OF POWER** Powerful signal provides extended coverage. Optional upgrade to 110W of power is available for even greater coverage.

**IP54 RATED** RCA's P25 mobile radio is dust and splash resistant

**DESKTOP BASE STATION OPTION** Convert a RPX6500 mobile unit into a Desktop Base Station with the DBSK6500 Conversion Kit

### FREQUENCIES AND PART NUMBERS

VHF (136-174 MHz) - RPX6500V;  
UHF (335-400 MHz) - RPX6500UR;  
UHF (400-480 MHz) - RPX6500U;  
UHF (440-520 MHz) - RPX6500U2



## P25 CAP



## RPX6500 SPECIFICATIONS

GENERAL			
<b>Frequency Bands</b>	136 - 174 MHz ("V"); 335 - 400 MHz ("UR"); 400 - 480 MHz ("U"); 440 - 520 MHz ("U2")		
<b>Dimensions</b>	(H) 2.2 inches (56mm) x (W) 6.7 inches (170mm) x (D) 6.5 inches (165mm)		
<b>Weight</b>	2 lbs 14 ounces (1.3kg)		
<b>Power Supply</b>	10.8 -16.3 V DC		
<b>Channel Spacing</b>	10, 12.5, 20 or 25 kHz		
<b>Channel Stability</b>	<1.5 ppm		
<b>Inputs/Outputs</b>	Ignition-sense input; PTT; Carrier Detect; On/Off; Configurable output		
<b>Antenna Connector</b>	50 Ω BNC		
<b>Modulation</b>	Pre-emphasized FM, C4FM		
<b>Conformance</b>	EN 300 086, EN 300 113, EN 300 219, EN 300 279, AS4295, FCC, IC P25CAP Compliant		
<b>Environmental Protection</b>	IP54		
<b>Environmental Standards</b>	MIL-STD-810 F	Method	Procedure
	Low Pressure (Altitude), Storage	500.4	I
	Low Pressure (Altitude), Operational	500.4	II
	High Temp, Storage	501.4	I
	High Temp, Operating	501.4	II
	Low Temp, Storage	502.4	I
	Low Temp, Operating	502.4	II
	Thermal Shock	503.4	I
	Solar Radiation	505.4	I(A2)
	Relative Humidity	507.4	
	Dust	510.4	I
	Sand	510.4	II
	General Vibration: Truck/trailer/tracked - restrained cargo	514.5	I Cat 24
	General Vibration: Minimum Integrity	514.5	I Cat 24
	Shock - Transit Drop	516.5	IV
<b>Operating Temperature</b>	-22°F (-30°C) - 140°F (60°C)		
<b>Emission Designators</b>	Analog	11K0F3E, 11K2F3E, 16K0F3E	
	Digital	8K00F1E, 8K10F1D/F1E, 11K0F1D, 11K2F1D, 16K0F1D	

TRANSMITTER SPECIFICATION	
<b>Power Output</b>	1 - 25 Watts (3 programmable levels)
<b>Current Consumption</b>	<7.5 A (UHF)
<b>Audio Frequency Response</b>	+1 dB to -3 dB of pre-emphasized 300 to 3000 Hz on 25 kHz Channel (300 to 2550 Hz on 12.5 kHz Channel)
<b>Duty Cycle</b>	1 minute transmit, 4 minute receive
<b>Modulation</b>	C4FM, FM
<b>Transmitter Power</b>	1-25 W, 3 programmable levels
<b>Transmit Rise Time</b>	<25 ms
<b>Hum and Noise</b>	>40 dB (12.5 kHz); >45 dB (25 kHz)
RECEIVER SPECIFICATION	
<b>Sensitivity</b>	<0.3 μV for 12 dB SINAD <0.3 μV for 5% BER
<b>Selectivity</b>	>73 dB (25 kHz) >65 dB (12.5 kHz)
<b>Intermodulation</b>	>70 dB
<b>Audio Frequency Response</b>	+1 dB to -3 dB of de-emphasized 300 to 3000 Hz on 25 kHz Channel (300 to 2550 Hz on 12.5 kHz Channel)
<b>Audio Output</b>	4 W into 4 @ <5% distortion (link for 10 W into 8 )
<b>Blocking</b>	>95 dB at +/- 1 MHz
<b>Hum and Noise</b>	>40 dB (12.5 kHz); >45 dB (25 kHz)
ANALOG CONVENTIONAL	
<ul style="list-style-type: none"> <li>• CTCSS • DCS • Sequential Tone (Selcall) • FFSK • DTMF • 2-Tone Paging • MDC1200 • Status • Status Calls • 240 Scan/Vote Groups • 250 Entry Phone Book • 1,000 Channels • Analog Mode Including Scrambler</li> </ul>	
ANALOG TRUNKED OPERATION	
<ul style="list-style-type: none"> <li>• MPT1327 • MPT1343 • 250 Entry Phonebook • Status • Status Calls • 1,024 Trunked Channels • Busy, Queued • Abbreviated Dialling • Normal, Priority, Emergency, Group, Broadcast • Diversion</li> </ul>	
P25 CONVENTIONAL AND TRUNKING	
<ul style="list-style-type: none"> <li>• P25 CAP Compliant • 40 zones • 1,500 channels • Trunked • Scanning • Voting • Individual Calls • Emergency Call • Status • Status Calls • CTCSS, DCS, DTMF • AMBE+2 Vocoder • DES OFB and AES 256 Bit Encryption</li> </ul>	

# ACCESSORIES & OPTIONS



**Radio Control Head**  
CTRH6500



**Keypad Speaker Mic**  
MM6500WP



**Standard Speaker Mic**  
MM6500



**Keypad Speaker Mic w/ Display<sup>(Black)</sup>**  
KDH6500



**Keypad Speaker Mic w/ Display<sup>(Red)</sup>**  
KDH6500R



**Keypad Speaker Mic w/ Display<sup>(Yellow)</sup>**  
KDH6500Y



**Keypad Speaker Mic w/ Display<sup>(Blue)</sup>**  
KDH6500B



**External Speaker**  
EXSPK6500



**3dB Stainless Steel Mobile Antenna**  
B4503<sup>(UHF)</sup> / B1443<sup>(VHF)</sup>



**0dB Stainless Steel Mobile Antenna**  
QW450<sup>(UHF)</sup> / QW152<sup>(VHF)</sup>



**Magnetic Roof Mount for Antenna**  
G8PI



**Base Station Kit-Desktop Mic & Power Supply**  
DMM6500 + SS-18



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