



High Speed Mobile Radios

IP Series D25

UHF and 700/800 MHz



Features

- Patented, dual-receiver, Intelligent Diversity Reception™ system with two (2) independent, high-performance, low-noise FM receivers
- DSP-based 4, 8, and 16 level FSK for variable speed 32/48/64 Kbps in 25 kHz channels
- Viterbi Rate $\frac{3}{4}$ Forward Error Correction (FEC)
- Data Interleaving for burst error protection
- Supports up to 50 channels
- High-speed Serial and Ethernet ports
- Over the Air programming and firmware updates
- Broadband operation by design
- Ruggedized for Public Safety
- Fast transmit attack time (<5 ms)
- Integrated WAAS 12-channel GPS receiver

The IP Series 32-D25 and 64-D25 mobile digital transceivers are intelligent mobile radios designed for the challenging requirements of mobile data. Mounted in vehicles, intelligent devices may connect back to agency Application servers (CAD, message switch, records servers, etc.). The IP Series mobile radios provide the mobile link to land-based wired networks.

The dual band 700/800 MHz radio can be programmed for 700 MHz channels and 800 MHz channels, allowing agencies to eventually migrate to 700 MHz frequencies without replacing mobile hardware.

These mobile radios utilize a high-performance, four level Frequency-Shift Keying (FSK) wireless data modem for 32 kbps operation and between four and sixteen-level FSK for up to 64 kbps in 25 kHz channels. A multi-layered approach is taken to maximize signal reliability including patented multi-receiver Intelligent Diversity Reception™, data scrambling, data interleaving, and Viterbi Forward Error Correction (FEC). The result is up to 20 dB performance improvement over competing products in low signal-to-noise environments. These unique features assure very high message success rates, even while transferring data in a fast moving vehicle.



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IP Series D25 Mobile Radios

General Specifications

IPSeries32-D25	25.0 kHz / 32 kbps – firmware upgradeable to variable 32/48/64 kbps	
IPSeries64-D25	25.0 kHz / variable 32/48/64 kbps	
Parameter	UHF	700/800 MHz
frequency range	450 to 512 MHz	TX: 764-776 / 851-869 MHz
	T-Band	RX: 794-806 / 806-824 MHz
mode of operation	half-duplex, diversity reception	
operating temperature range	-30C to +60C (-22F to +140F)	
power supply voltage	13.8 VDC +/-20%	
power supply current	< 12 A, (TX) typical	< 10 A, (TX) typical
number of channels	50	
intelligent diversity reception	dual receiver, dual conversion superheterodyne architecture	
antenna connections	two (2) type "N" jacks (TX/RX1, RX2)	
data interface	RJ45 Ethernet 10 Base T & RS232 serial port	
dimensions / weight	3" X 6.5" X 10" / 5.5 lbs	
regulatory	FCC Part 90 and Part 15	
emission designator	20K0F1D	
transmit power	40 watts	20 watts
transmit attack time	less than 5 ms	
sensitivity	12.0 dB SINAD@ -116 dBm with a 1.0 kHz test tone @ +/- 2/3 rated maximum deviation	
distortion	less than 3% with a 1.0 kHz test tone @ +/- 2/3 rated maximum deviation	
shock / vibration	per TIA/EIA-603-A	
modulation	4 level FSK @ 32Kbps only. 4, 8, or 16 level FSK @ variable 64 Kbps operation	

GPS Receiver Specifications

general	12 Channel WAAS
protocols	NMEA. UBX binary

Specifications are subject to change.