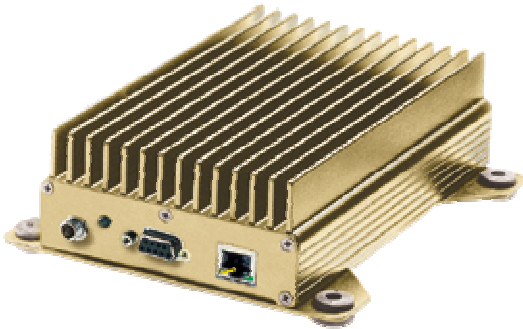


# IP Series Mobile Radios



## IP100/400/800 Radios

The IP Series mobile digital transceivers are intelligent mobile radios designed for the challenging requirements of mobile data and voice applications. Mounted in vehicles, intelligent devices may connect to the serial port or Ethernet port for connectivity back to the Internet Protocol Network Controller (IPNC) and other servers (CAD, message switch, records servers, LAN, etc.). The IP Series mobile radios provide the mobile link to land-based wired networks.



These mobile radios utilize a high-performance, four-level Frequency-Shift Keying (FSK) wireless data modem. A multi-layered approach is taken to maximize signal reliability including patented multi-receiver Intelligent Diversity Reception™, data scrambling, data interleaving, Forward Error Correction (FEC), and Viterbi soft-decision algorithms. 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 large blocks of data in a moving vehicle.

IP100/400/800 Series digital radios feature a low power consumption, high performance integrated GPS receiver. Embedding this technology in the mobile radio lowers the cost of acquiring GPS data from vehicles and ensures optimal performance.

## Features

- Multi-patented, dual receiver, Intelligent Diversity Reception System™
- Native, end-to-end IP
- Ruggedized for public safety
- Multi-channel, multi-site intelligent roaming
- Supports up to 256 channels
- Over-the-air programming
- Forward Error Correction (FEC)
- Data interleaving for burst error protection
- High stability less than 2.5 ppm
- Serial Line Internet Protocol (SLIP) interface or 10 Base T Ethernet interface
- Digital Phase Lock Loop (PLL) frequency synthesizer
- Compact size, rugged construction
- Fast radio transit attack time – less than 5 ms
- Two (2) extremely sensitive, high overload, FM receivers
- Integrated Global Position System (GPS) receiver



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### Web Site

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## GENERAL SPECIFICATIONS

PARAMETER	Specification IP100	Specification IP400	Specification IP800
frequency range	135 to 175 MHz	400 to 512 MHz	806 to 869 MHz
channel spacing/speed			
IPSeries	12.5 kHz / 9.6 kbps 25.0 kHz / 19.2 kbps	12.5 kHz / 9.6 kbps 25.0 kHz / 19.2 kbps	12.5 kHz / 9.6 kbps 25.0 kHz / 19.2 kbps
IPSeries32	12.5 kHz / 16 kbps 25.0 kHz / 32 kbps	12.5 kHz / 16 kbps 25.0 kHz / 32 kbps	12.5 kHz / 16 kbps 25.0 kHz / 32 kbps
mode of operation	half-duplex, diversity reception	half-duplex, diversity reception	half-duplex, diversity reception
operating temperature range	-30C to +60C (-22F to +140F)	-30C to +60C (-22F to +140F)	-30C to +60C (-22F to +140F)
power supply voltage	13.8 VDC +/-20%	13.8 VDC +/-20%	13.8 VDC +/-20%
power supply	<0.2 amps receive, typical	<0.2 amps receive, typical	<0.2 amps receive, typical
current consumption	<16 amps transmit, typical	<13 amps transmit, typical	<8 amps transmit, typical
number of channels	50	50	50
intelligent diversity reception	dual receiver, diversity reception	dual receiver, diversity reception	dual receiver, diversity reception
antenna connections	Two (2) type "N" jacks (tx/rx1, rx2)	two (2) type "N" jacks (tx/rx1, rx2)	two (2) type "N" jacks (tx/rx1, rx2)
interface connection	RS232 serial port connector or RJ45 Ethernet 10 Base T	RS232 serial port connector or RJ45 Ethernet 10 Base T	RS232 serial port connector or RJ45 Ethernet 10 Base T
Dimensions (HxWxD / lbs)	2" X 4.5" X 8" / 2.5 lbs	2" X 4.5" X 8" / 2.5 lbs	2" X 4.5" X 8" / 2.5 lbs
regulatory	FCC Part 90 and Part 15	FCC Part 90 and Part 15	FCC Part 90 and Part 15

## IP SERIES MOBILE RADIO TRANSMITTER SPECIFICATIONS

PARAMETER	Specification IP100	Specification IP400	Specification IP800
frequency stability	+/- 1.5 ppm @ operating temp	+/- 1.5 ppm @ operating temp	+/- 1.0 ppm @ operating temp
emission designator	20K0F1D	20K0F1D	20K0F1D
spurious and harmonic	-61 dBc max	-59 dBc max	-56 dBc max
transmit power	60 watts (+/- 1 dB)	40 watts (+/- 1 dB)	20 watts (+/- 1 dB)
transmit attack time	less than 5 ms	less than 5 ms	less than 5 ms

## IP SERIES MOBILE RADIO RECEIVER SPECIFICATIONS

PARAMETER	Specification IP100	Specification IP400	Specification IP800
sensitivity (voice)	12.0 dB SINAD@ -119 dB max level	12.0 dB SINAD@ -118 dB max level	12.0 dB SINAD@ -118 dB max level
distortion	less than 3% @ 1.0 kHz	less than 3% @ 1.0 kHz	less than 3% @ 1.0 kHz
spurious rejection	85 dB minimum	85 dB minimum	85 dB minimum
intermodulation rejection	75 dB minimum	75 dB minimum	75 dB minimum

## GPS RECEIVER SPECIFICATIONS

general	L1 frequency, C/A code (SPS), 8-channel continuous tracking receiver, 32 correlators
protocols	TSIP, TAIP, and NMEA 0183

Specifications are subject to change.