

IP Series Base Station



IP Series D25 700 and 800 MHz Base Stations



Features

- Patented, triple-receiver, Intelligent Diversity Reception™ system with three (3) independent, high-performance, low-noise FM receivers
- DSP-based 4 level frequency shift keying (FSK) modem at 32 Kbps, and 8 and 16 level FSK for variable speed 32/48/64 Kbps for 25 kHz channel spacing
- Forward Error Correction (FEC)
- Data Interleaving for burst error protection
- High-speed Serial and Ethernet ports
- Patented collision-tolerant radio modems
- Full-duplex, continuous-duty operation
- Two (2) independent digital Phase Lock Loop (PLL) frequency synthesizers
- Broadband operation by design
- Rugged construction, compact size (one rack unit), modular design
- Fast transmit attack time
- Adaptive data rate based on RF conditions

State-of-the-art base station designed specifically for the stringent requirements of mobile data communication systems. The base station utilizes a multi-layered approach to signaling reliability, including Intelligent Diversity Reception™, dynamic scrambling, data interleaving, Forward Error Correction (FEC), Viterbi soft-decision algorithms and more to ensure messages are received error-free. The IP Series base station requires very little room at crowded tower sites. The one rack unit (1U) base station may be installed in existing racks, or assembled into its own rack.



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PARAMETER	Specification, 700 MHz	Specification, 800 MHz
frequency range	TX: 764-776 MHz RX: 794-806 MHz	TX: 851-869 MHz RX: 806-824 MHz
IPSeries32-D25	25.0 kHz / 32 kbps – firmware upgradeable to variable 32/48/64 kbps	25.0 kHz / 32 kbps – firmware upgradeable to variable 32/48/64 kbps
IPSeries64-D25	25.0 kHz / variable 32/48/64 kbps	25.0 kHz / variable 32/48/64 kbps
mode of operation	full-duplex, triple diversity reception	full-duplex, triple diversity reception
operating temperature range	-30C to +60C (-22F to +140F)	-30C to +60C (-22F to +140F)
power supply voltage	13.8 VDC +/-20%	13.8 VDC +/-20%
power supply	<0.75 amps receive, typical	<0.75 amps receive, typical
current consumption	<10 amps transmit, typical	<10 amps transmit, typical
Number of channels	1 channel (1 TX freq., 1 RX freq.)	1 channel (1 TX freq., 1 RX freq.)
intelligent diversity reception	triple receiver, dual conversion superheterodyne architecture	triple receiver, dual conversion superheterodyne architecture
Antenna connections	four (4) type "N" jacks (tx1, rx1, rx2, rx3)	four (4) type "N" jacks (tx1, rx1, rx2, rx3)
interface connection	RS232 serial port connector or RJ45 Ethernet 10 Base T	RS232 serial port connector or RJ45 Ethernet 10 Base T
Dimensions (HxWxD / lbs)	1.7" X 19" X 14" / 11 lbs	1.7" X 19" X 14" / 11 lbs
regulatory	FCC Part 90 and Part 15	FCC Part 90 and Part 15
emission designator	20K0F1D	20K0F1D
Transmit power	25 watts (+/- 1 dB)	20 watts (+/- 1 dB)
Transmit attack time	less than 5 ms	less than 5 ms
sensitivity	12.0 dB SINAD@ -116 dBm with a 1.0 kHz test tone @ +/- 2/3 rated maximum deviation	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	less than 3% with a 1.0 kHz test tone @ +/- 2/3 rated maximum deviation
shock / vibration	per TIA/EIA-603-A	per TIA/EIA-603-A
modulation	4 level FSK @ 32Kbps only. 4, 8 or 16 level FSK @ variable 32/48/64 kbps operation	4 level FSK @ 32Kbps only. 4, 8 or 16 level FSK @ variable 32/48/64 kbps operation

Specifications are subject to change.