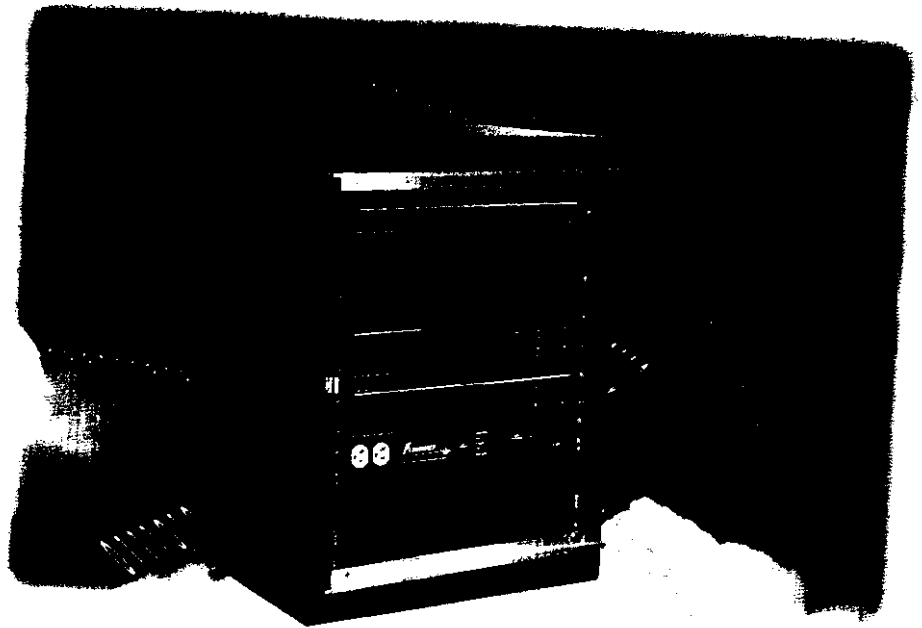# OpenSky IBS-750 Multi-Mode Base Station

- Trunked or Conventional

- Software Configurable

- Analog and Digital Modes

- Digital Voice and Data

- 19.2 kb/s Air Link Data Rate

- TDMA/FDMA based

- Cell based Architecture

- Full Network Management

- OpenLink C&C Bus

- Digital pass-through

The IBS-750 is a multi-mode base station capable of operating in analog FM systems or as a fully digital base station using OpenSky communication protocols. Available in trunked or conventional single channel configurations, the IBS-750 provides high performance, expandability and end-to-end TCP/IP connectivity for use with applications requiring an air-link data rate of 19.2kb/s.

OpenSky provides a versatile solution to the problem of integrating digital voice and data communication in a single communications system for fleet applications. The IBS-750 is part of the OpenSky suite of products, all of which are designed to be digital and completely software programmable.

The IBS-750 can operate autonomously as a voice repeater or as part of a radio dispatch system providing data and voice connectivity between mobiles and a control center. Its software based architecture provides the versatility to support both FM/CTCSS voice and selected analog data protocols as well as advanced OpenSky digital communication services.

The base station can be used in either conventional single channel or digital trunked modes of operation. When configured as part of an OpenSky digital trunking system, no dedicated control channel is required resulting in greater channel efficiency and increased access availability for users.

OpensSky supports a cell based architecture allowing users to roam between IBS-750 base stations. This cellular approach provides considerable flexibility to network operators, enabling wide-area coverage with frequency reuse.

Specifications

Transmitter

Frequency range:	851-869 MHz
Channel steps:	12.5 kHz
Frequency stability:	0.1 ppm
RF output impedance:	50 ohms
Power output:	75
Power adjustment:	
Duty cycle rating:	
Emission designator:	

Spurious & harmonic emissions

Analog

FM noise at 60% deviation:	
Audio response:	

Audio distortion:

Receiver

Frequency range:	
Channel steps:	
Frequency stability:	
Input impedance:	
Sensitivity, data:	

Spurious and image rej.:	80
Unwanted responses:	75
Service speaker output:	5 watts

Analog Voice

Sensitivity, 12 dB SINAD:	
Intermodulation immunity:	
Selectivity, EIA:	
Audio response:	

Audio distortion:
Audio hum and noise:

Controller

Data Interface:

Async mode date rate:	
Sync mode data rates:	
OpenLink:	
Remote Control:	

Physical & Environmental

Height:	
Width:	22"
Depth:	19.25
Rack:	
Operating Temperature:	
Storage:	
General:	
Power supply:	
Current consumption:	6.1
Turn-on time:	25

Specifications subject to change without

IBS-750 Multi-Mode Basestation

The modular design of the IBS-750 uses three primary components connected via OpenLink, an RS-485 based control bus:

The BSC-1010 is a high performance DSP based channel controller which manages channel access arbitration, provides true digital pass-through for repeated voice and provides the communications bridge between a mobile fleet and fixed assets. The BSC-1010 performs demodulation and error management and is the OpenLink master. The BSC-1010 also provides an RS-232 interface for dial-up communications with a remote location over the PSTN. This line operates at a rate of 19.2kb/s and supports remote diagnostic and control capabilities. It may also be used for remote application download to base station equipment and can connect through to the OpenLink interface for command and control of other base station equipment.

The BSX-1010 is a high performance transceiver optimized for the requirements of OpenSky's digital protocol. It provides full duplex operation and links with the BSC-1010 via an IQ baseband interface.

The HPA-750 High Power RF Amplifier provides a continuously rated RF output of 75 Watts and full remote control through OpenLink.

OpenLink provides remote control and monitoring capabilities linked to OpenSky's extensive network management system.

A few words about the OpenSky *protocol.....*

The OpenSky Communications Protocol, OCP, found its roots in CDPD. AMP Wireless Systems has taken this basic architecture and modified the Physical and Media Access layers to support digital trunking and simultaneous digital voice and data in one RF channel.

OCP supports advanced features such as roaming, 4096 voice groups, embedded GPS capability, over the air reprogramability and much more.

For more details of OpeSky Wireless Communications products, accessories and services, please contact us at:

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