OpenSky®
Securely Combining Voice and Data

pspc.harris.com
The Harris OpenSky Trunked radio network combines the power of Internet Protocol (IP) with the efficiency of Time Division Multiple Access (TDMA) technology. The result is a state-of-the-art communications platform offering security, flexibility and unmatched data capabilities on an IP-based platform that can easily and economically expand to meet your future needs. OpenSky is built on Harris’ VIDA® IP platform which offers a secure, robust, efficient and highly scalable architecture with virtually unlimited capacity. The VIDA architecture of the OpenSky system offers the capability of seamless interoperability with other analog or P25 systems.

One of the biggest advantages of the system is its unmatched ability to support both voice and data on the same channel. In an OpenSky system, each time slot can either be a voice or a data slot. OpenSky employs voice-over-IP technology, and is operational in both 700/800 and 900 MHz frequency bands.

OpenSky offers:

- Spectrum efficiency through the utilization of TDMA technology to provide two talk paths on one channel
- Embedded Control Channel in each time slot, thereby eliminating the need for a dedicated control
- Integrated voice and data eliminates the need for dedicated data channels while providing both voice and data encryption; voice is given priority over data
- Digital audio clarity for better voice quality, reduced background noise, improved dynamic range and better effective coverage
- Request-to-Talk (RTT) with multiple indexes to provide a variety of status messages to dispatch
- Industry-standard, off-the-shelf equipment, such as high-volume IP routers and workstations, are utilized in the VIDA network architecture
- Control and Status Service allows a computer or other device to control the radio and transmit and receive call traffic remotely
- Over-the-Air Programming (OTAP) allows for remote software updates or radio programming through the IP network and/or over-the-air; reducing user downtime

OpenSky cell sites are compact, 25W repeaters designed for outside mounting on rooftops, utility poles or wherever they are needed. These sites represent an economical solution for difficult coverage areas or in-building coverage.
The raw over-the-air data rate of OpenSky is fast enough to deliver hundreds of bytes of data messages in seconds. More importantly, OpenSky can carry a very large quantity of messages without compromising the important voice traffic on the network.

Data features include:

- End-to-End Internet Protocol (IP) interface to the data messaging application software. Each radio has an IP address
- Voice and Data on the same radio. If a radio is involved in a data call when a voice call comes in, the voice call immediately comes over the speaker. The data session will either remain in place or re-try, but no voice call is missed
- Internal GPS receiver (optional) in mobile radios. This enables mobile units to be tracked using Automatic Vehicle Location (AVL) technology with or without on-board mobile data computers
- Robust protocol under heavy load which provides efficient support of both long messages, such as file transfers, and short messages, such as AVL
- Over-the-Air Reprogramming (OTAR) for radio profile changes or software upgrades
- Standards-based mobile data architecture based on the time-proven IS-732 standard and utilizing high volume IP network equipment. Software applications are basically “Plug-and-Play”
- IP/UDP header compression improves efficiency of network data traffic
- Proxy registration reduces the amount of data traffic needed to establish and maintain data and voice registration over the RF link for improved power-on timing, roaming and channel loading
- Data encryption to application data payload
- SLIP/PPP connections support for data applications
- Unmatched ability to support both voice and data on the same channel
Harris’ award-winning Symphony™ Dispatch Console uses multiple, innovative approaches to common dispatch center issues to improve on every aspect of the dispatcher experience. Simple, clean, reliable and intuitive are doubly important in a stressful dispatch environment.

In addition to classic dispatch functions such as Patch, Simulselect, Emergency, and Call History, the Symphony Dispatch Console system provides many advanced features such as receiving Emergency Alert with GPS location, and integrated Call Check Recorder. Tracking modules allow the dispatcher to review the calls received on a particular programmed Talk Groups.

The Symphony also allows administrators and users to configure their working environment with the features and functions that work best for them. Multiple screen configurations can be created for scenarios ranging from crisis situations to shift/staffing changes.

Learn more about the OpenSky solution at pspc.harris.com

Harris is an international communications and information technology company serving government and commercial markets in more than 125 countries. Headquartered in Melbourne, Florida, the company has approximately $5 billion of annual revenue and about 14,000 employees — including 6,000 engineers and scientists. Harris is dedicated to developing best-in-class assured communications® products, systems and services. Additional information about Harris Corporation is available at harris.com.

The Harris logo, assured communications, VIDA, OpenSky, and Symphony are registered trademarks of Harris Corporation.