

# SmartSky Networks for Enhanced Flight Crew Communications

The advent of the use of Personal Electronic Devices (PEDs) in the cockpit is leading to a new generation of enhanced flight crew communications. For instance, using tablets as Electronic Flight Bags (EFBs) has shown that dependence on paper-based charts can be minimized, efficiencies of flight operations enhanced, and flight crew workloads reduced. Internet-based applications for flight planning and filing activities are becoming increasingly capable but, as with the EFBs, they are limited primarily to *preflight* operations unless being used on a Wi-Fi equipped aircraft. Discussions with flight crews make it clear that there is an immediate need for improved communications to and from the cockpit, particularly from the aircraft to the ground. Bi-directional throughput comparable to the Internet in your office or at home will:

- Facilitate inflight transmissions of Indicating and Crew Alerting System (ICAS) messages and pictures of cockpit displays to expert resources on the ground,
- Enable en route access to emerging Internet-based applications for timely crew and operations support,
- Make it possible to respond to flight disruptions caused by ATC, weather, or maintenance issues by providing real-time communications to coordinate schedule replanning with both headquarters and en route travel resources.

SmartSky 4G brings flight and ground support crew communications into the 21<sup>st</sup> century.

## Key benefits while en route:

- Conduct video calls with your maintenance team
- Send real-time pictures of ICAS messages to experts on the ground
- Evaluate high resolution weather forecasts on a more timely basis
- Receive updates to electronic charts, company procedures, and trip sheets
- Easily file flight plans and manage schedule changes
- Communicate in real-time with first responders on the ground during inflight medical emergencies using video and medical sensor data

## Challenge

Unfortunately, due to spectrum limitations, current inflight satellite and Air-To-Ground (ATG) connectivity systems still provide only a limited ability for flight crews to conduct data communications to and from their aircraft. The bandwidth required by new Internet-based applications that can be implemented on flight crew PEDs far exceeds current network capabilities, especially when sending data from the aircraft to the ground. In addition, satellite solutions have latency issues that make voice calls cumbersome and the costs for even limited data transmissions via satellite can be daunting.

## Solution

At SmartSky, our 4G network solution provides the bi-directional, high bandwidth connectivity that moves pilots and crew up to the next generation of inflight Internet services and data communications. Supported by the largest spectrum position ever utilized for airborne communications, SmartSky 4G will deliver unparalleled connectivity with sufficient bandwidth to insure an office-grade communications experience for all users – whether in the front of the aircraft or in the back. SmartSky 4G enables Wi-Fi that really flies.

## Benefits

Imagine being able to communicate from the cockpit as easily as you interact with the Internet from your office or at home. Flight following. Disruption management. Flight data monitoring. Flight route optimization. Calls to maintenance with real-time squawks. High resolution weather forecasts and reports. Crew manpower planning. Direct connections with emergency medical support. Customs and security coordination. System data to MROs. Real-time interactions with ground services. With SmartSky 4G nothing changes but your altitude.

## Why SmartSky?

SmartSky's innovation includes seeing what others have seen, thinking what no one else has thought, and putting it all together. Leveraging a highly experienced, interdisciplinary management team, we are implementing comprehensive solutions that address the connectivity needs of the global aviation industry, starting with the launch of SmartSky 4G in the continental United States. High speed. Low Latency. Reliable. Affordable. Just like in your office or at home. At SmartSky, we push the envelope of technology and are passionate about performance – both ours and yours.

## Learn More

To learn more about SmartSky contact us at:  
[www.smartskynetworks.com/contact](http://www.smartskynetworks.com/contact)