Introduction

To comply with upcoming operational rule making as part of SESAR and Next Gen Fokker Services has developed an upgrade program comprising of ADS-B out, RNP (GNSS), TCAS 7.1 and CPDLC.

Controller – Pilot Data Link Communications (CPDLC) is a new development in the way the aircraft flying around are controlled. The Air Traffic Control (ATC) environment is slowly changing to Air Traffic Management (ATM), part of the transition is the introduction of CPDLC. It is an air to ground (and vice versa) data-link, which enables the exchange of text messages between controllers and pilots.

CPDLC complements traditional voice communications, providing pilots and controllers with an additional communications medium.

Your needs

The LINK 2000+ Programme is co-coordinating the European implementation of CPDLC in upper airspace. In the United States it is known as FANS 1/A, Future Air Navigation System is a format of communication for CPDLC. FANS 1 was originally developed by Boeing and later adopted by Airbus (FANS A).

Data link communications is a key element of the Single European Sky (SES). CPDLC will be an operational mandate, in Europe the introduction date is set at February 2015.

Your benefits

CPDLC cuts down on voice traffic on VHF and HF and allows for faster and more accurate communications with ATC. CPDLC permits pilots to communicate directly with the controller, via both canned messages and free text, and it eliminates language barrier issues.

The first phase of mandatory CPDLC implementation, over the North Atlantic, will introduce new tracks between existing tracks and allow more effective use of airspace.

The benefits of CPDLC combined with voice radio are as follows:

- Increasing the availability of the voice radio frequency for the delivery of time critical clearances by using CPDLC for non-time critical communication.
- Offloading the controller by providing opportunities to automate certain communication tasks.
- Improving the workload balance within the sector team with an optimized sharing of communication task, change in the working method of controllers.

Optional benefits, “ACARS” functionalities

The one-box solution we offer is also capable to fulfill optional data transmissions like ACARS, this gives a lot of real time information to streamline your operation:

- Airlines Operational Communication
- OOOI
- Return to gate
- Monitoring
- «Engine exceedance/N1 restricted operation
- «Flight cycle monitoring (Max N1, N2 T/O and climb)
- D-FIS
- Other (discussion)
- By adding SATCOM capability FANS compliance is possible, necessary for Oceanic operations.
Product description

Technical concept
The CPDLC system we offer comprises of one box system fitted the aircraft. This box is connected to aircraft electrical power, a dedicated VHF comm. antenna and a GNSS receiver for the time stamp

Required modification
The following equipment will be installed:
• Install a circuit breaker with the related wiring
• Install dedicated VHF antenna if not installed yet
• Install a Spectralux box in the pedestal
• Install a GNSS antenna with the related coax cable if not present yet
• Do the tests.

Aircraft applicability
The CPDLC modification is available for all a wide range of aircraft like:
Fokker 70/Fokker 100
Boeing B737
Boeing B757
Boeing B747
Airbus A320 family