Airborne AIS Solution
On-board AIS Solution

Need:
Many maritime based operations also include airborne assets. These aircraft need to seamlessly become a part of the overall maritime picture for a command or operations center. Aircraft interacting with vessels or other maritime aircraft need a way to see these vessels/aircraft and exchange information. Aircraft used in coastal surveillance have an expansive range, shouldn't they be able to identify the vessels in that area?

As AIS use is mandatory for many maritime operations and vessels, why not place that same technology on-board maritime aircraft to give the same capabilities? Many SAR operations and offshore platform service helicopter operators have already recognized this need and realize the benefits of AIS.

Solution:
By utilizing AIS technology and data, situational awareness is greatly enhanced due to the aircraft's extended VHF range. The dedicated VHF data link provides reliable information exchange between AIS equipped shore stations, off-shore platforms, vessels and aircrafts. Vessels can be identified, monitored and tracked from the aircraft. Also, the aircraft position can be monitored from shore or platform.

A combination of airborne specific AIS hardware and software components creates the solution. An AIS transponder, built in accordance with aviation standards, is installed on the aircraft. This unit transmits and receives the AIS data which includes vessel MMSI, navigation status and other voyage related data, IMO ship identification number, cargo type and other ship-related static data. AIS MSG 9, SAR aircraft position report, is also transmitted.

Pegasus Airborne Situational Awareness Solution (ASAS) is an electronic charting system (ECS) designed to fit neatly into a ruggedized display, electronic flight bag, or integrated into the aircraft's own display system. It provides complete AIS integration with the ability to display static, dynamic, and voyage related information in real-time on a multitude of electronic chart formats.

Safer and more efficient SAR operations are possible. This solution provides operations centers the ability to see all assets deployed, and assets are able to see each other. Therefore, more aircraft can be actively engaged in the SAR operation for a quicker rescue.

Organizations responsible for coastal surveillance receive the benefit of extended marine domain awareness by using AIS in aircrafts. Secure communications can be added thru software enablement.
**Components:**

**VDL 6000 Airborne AIS System** includes the transponder and mounting tray.
- Designed and built to aviation standards
- Optional Silent mode for receive/no transmit operation
- Software upgradeable to secure functionality

**Pegasus** is designed with advanced navigation and communication features. It is a member of the CNS Systems’ ECS suite of products. It can be configured to provide single or dual windows with your Primary Flight Display (PFD) located on the right side and your Multi-function Display (MFD) located on the left.
- A simple touch screen display with an on-screen keyboard
- The display of Class A and B vessels and AIS Base Stations
- The display of AIS SART (Search and Rescue Transponder), SAR AIS equipped Aircraft (Helicopters and Fixed wing) and AtoN (Aids to Navigation)
- IMO IAMSAR Search Patterns
- Receive and Transmit Text, Binary and Safety Related Messages
- Text and graphical display of AIS information
- Full AIS functionality using ITU-R (International Telecommunication Union – Radio communication Sector) M.1371 standard messaging
- Optional Advanced Data Communications – Pegasus can be configured to send filtered AIS data feeds to other mission critical and onboard systems. Automatic polling for Static and Voyage related data. Satellite communications, and Data Storage and Replay functions.
- Optional Secure AIS functionality – Pegasus can be configured to perform Secure AIS communications.