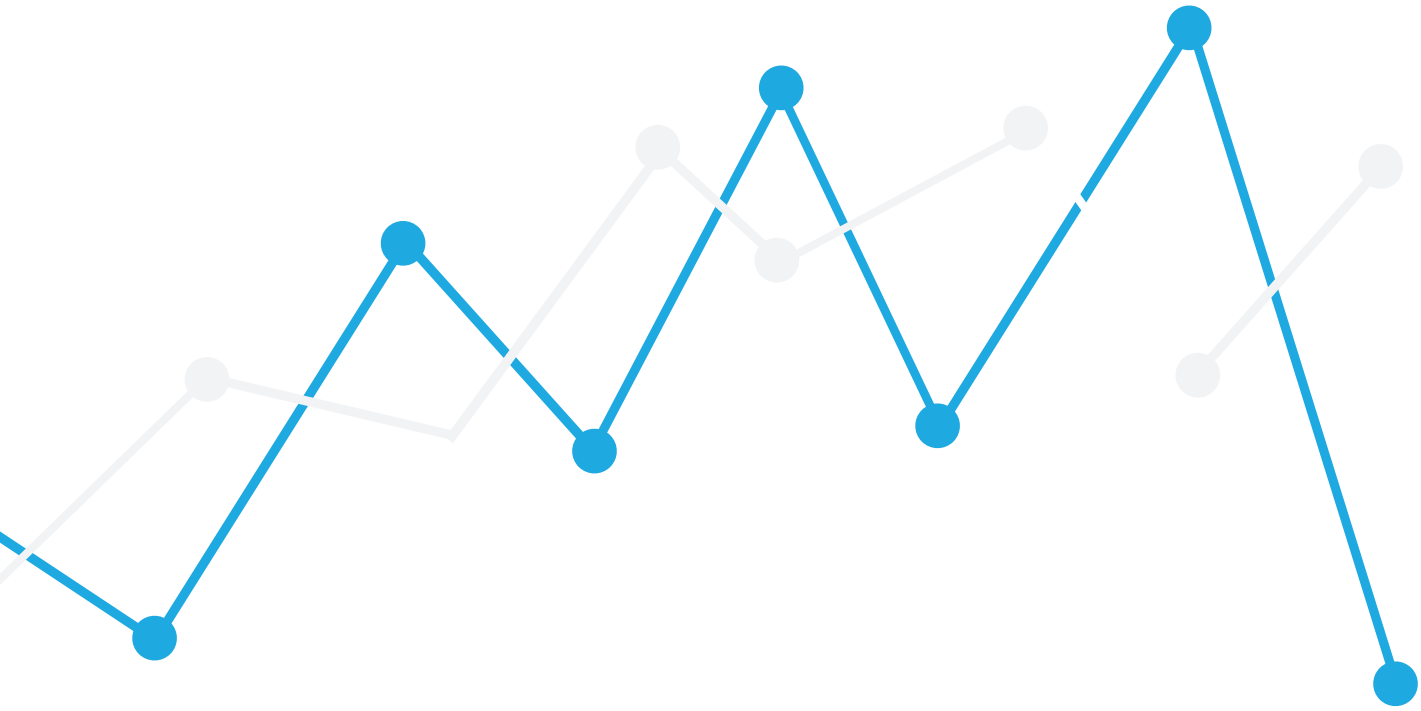
OUTERLINK
GLOBAL SOLUTIONS

WELCOME TO THE OUTERLINK IRIS SYSTEM: A COMPREHENSIVE, LIGHTWEIGHT, MONITORING, RECORDING AND NEXT GENERATION SATELLITE COMMUNICATIONS SYSTEM PROVIDING VOICE, VIDEO, ANALOG AND DIGITAL AIRCRAFT SYSTEM INFORMATION.

IRIS



100%

OF OPERATORS CAN USE DATA TO OPERATE A SAFER, MORE EFFICIENT PROGRAM.

KNOWING THE INS AND OUTS OF YOUR AIRCRAFT, FROM SMALL MAINTENANCE ISSUES TO HOW IT IS BEING FLOWN CAN MAKE A HUGE DIFFERENCE FOR YOUR PROGRAM'S SAFETY, EFFICIENCY AND BOTTOM LINE.

OPERATORS, BOTH LARGE AND SMALL, CAN BENEFIT FROM THE REVOLUTIONARY FEATURES OF IRIS. NO MATTER THE SIZE OF THE FLEET, IRIS DELIVERS THE DATA THAT OPERATORS NEED TO MAKE QUICK DECISIONS, DECREASE THE DOWNTIME OF THEIR AIRCRAFT AND KEEP A PULSE ON WHAT IS HAPPENING IN THE COCKPIT.

Imagine this: Your aircraft has just landed. The pilot reports an error, but can't safely recreate it. You're at a loss since you cannot pinpoint the problem. Thankfully, you are able to pull the SD card from your flight data monitoring (FDM) system and review more than 300 parameters. Your maintenance team quickly finds the issue and has the aircraft back in the air. This is IRIS. This is the future.

Outerlink's IRIS system includes a full-duplex communications service combined with the rotorcraft industry's first satellite-transmitted, real-time FDM system that provides the total solution to safety and management oversight.

In addition to the recorded data, IRIS provides an always-on, always-connected signal that allows communication specialists to monitor an aircraft's activities in real-time, communicate with pilots through the revolutionary Global Push-To-Talk Radio technology and receive immediate alerts and warnings from the cockpit. GPS tracking reports are transmitted every 10 seconds, backfilled to the second, allowing operators to monitor their fleet anywhere in the world. You never have to wonder about the safety and efficiency of your fleet again. IRIS is equipped with an easy to use software suite to help management analyze the data that is fully synchronized with flight animations and the voice and video recording.

Welcome to the Future.

THE POWER OF NOW

INSTALL BEFORE FLIGHT

TO BENEFIT FROM MOST FDM SYSTEMS, OPERATORS TRADITIONALLY WAIT UNTIL THE AIRCRAFT LANDS TO COLLECT FLIGHT DATA FROM A STORAGE DEVICE ON THE RECORDER. THAT DATA MAY IMPROVE FUTURE FLIGHTS, BUT DOES LITTLE TO PROTECT THE AIRCRAFT AND ITS OCCUPANTS WHILE THEY ARE FLYING A MISSION. BY MONITORING AND TRANSMITTING KEY DATA IN REAL-TIME TO GROUND SUPPORT STAFF, IRIS TURNS AN FDM SYSTEM INTO AN ACCIDENT PREVENTION TOOL.

Data is valuable. Real-time data is priceless. Receiving information live as it happens, and being able to simply Push-To-Talk anywhere to communicate with the pilot about what's going on is invaluable.

For example, if an engine oil warning light comes on in the aircraft, the IRIS system can be configured to stream all labels related to engine performance directly to a computer display on the ground. If an engine failure is predicted, the pilot can be notified in time to land safely.

IRIS gives operators the ability to communicate globally with pre-defined talk groups. Perhaps an offshore operator notices weather moving into a quadrant out in the Gulf of Mexico. With the push of a button, the Operational Control Center can send one message to reach the 10 to 20 aircraft flying in that particular region at one time. You've now increased your safety, and you've done so in the most efficient and cost effective manner possible, because you only pay for what is transmitted and not what is heard by the group.

THE IRIS SYSTEM GIVES AIR OPERATORS THE ABILITY TO TRANSMIT ELECTRONIC DATA BI-DIRECTIONALLY VIA AN ALWAYS-ON, IP, SATELLITE CONNECTION, ALLOWING FOR NEAR-CONTINUOUS POSITION REPORTS TO GROUND CONTROLLERS.

Any data collected from the on-board FDM can be transmitted electronically, and operators are free to select which labels to receive, from traditional FDM data points such as GPS coordinates, airspeed, altitude and direction; or mechanical data such as engine temperature and rotor RPM. In addition, IRIS allows flight crews to transmit mission-specific data like vital signs or EKG results for a critical care patient. While in flight, a doctor can be notified of those vital signs and patient information on his cell phone, no matter his location. If needed, he can then call the helicopter. The possibilities are endless.

IRIS EQUIPMENT

CONTROL HEAD

SEE IT, HEAR IT, ANALYZE IT.

THE IRIS CONTROL HEAD PROVIDES A CONTINUOUS MINIMUM 30+ HOUR RECORDING LOOP OF UP TO THREE HIGH DEFINITION IP CAMERA VIDEO INPUTS AND FIVE AUDIO INPUT SOURCES. THE REMOVABLE SD MEDIA CAN HOLD 500 HOURS. THE DIALER ALLOWS FOR EASY “GROUP” SELECTION AND THE ABILITY TO DIRECT DIAL STANDARD TELEPHONE NUMBERS. USB FLASH MEMORY CONTAINS THE ENTIRE AIRCRAFT AND SYSTEM CONFIGURATIONS FOR QUICK SET UP OF THE DEVICE. INTUITIVE CONTROLS AND DISPLAYS ALLOW THE PILOT TO EASILY SELECT TALK GROUPS, CHECK THE STATUS OF ALL THE IRIS SYSTEM FUNCTIONS AND MAINTAIN RADIO CONTACT WITH ALL COMPANY AIRCRAFT AND OPERATIONS ANYWHERE ON THE GLOBE.

EQUIPPED WITH AN ON-BOARD SELF-TEST OF THE ENTIRE IRIS SYSTEM, THE EASILY READABLE DISPLAY PROVIDES STATUS INDICATORS FOR ALL RECORDING AND COMMUNICATIONS SYSTEMS. THE UNIT USES AN INTERNAL CLOCK THAT ALLOWS FOR CONTINUOUS DATE AND TIME STAMPS FROM AIRCRAFT POWER UP TO POWER DOWN AND SYNCHRONIZES ALL VOICE AND VIDEO RECORDING WITH THE AIRCRAFT DATA.

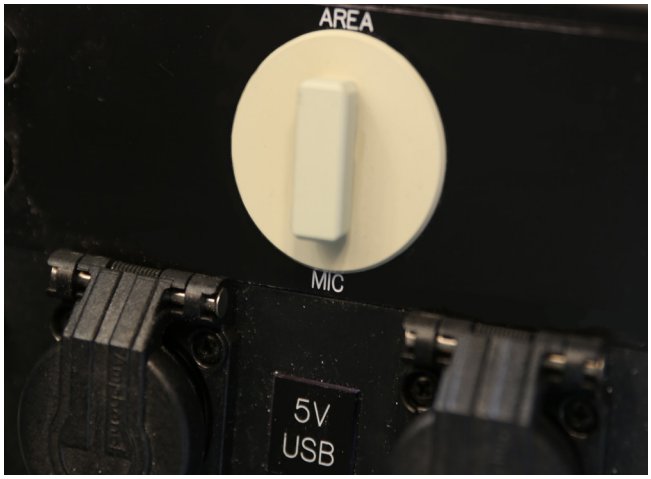
IRIS EQUIPMENT

PROCESSOR

SEE IT, HEAR IT, ANALYZE IT.

THE IRIS DATA COMMUNICATION PROCESSOR AND FLIGHT DATA ACQUISITION UNIT ARE COMBINED IN A SINGLE ENCLOSURE. THE SYSTEM IS HIGHLY FLEXIBLE AND PROVISIONED WITH EXTENSIVE AIRCRAFT ENGINE AND AIRFRAME DATA INPUTS FOR CAPTURING DATA FROM BOTH ANALOG AND DIGITAL AIRCRAFT. IN ADDITION, THE SYSTEM USES STATE-OF-THE ART, INTERNAL, ALTITUDE AND HEADING REFERENCE SYSTEM, AND ACCELEROMETERS TO TRACK 3D MOVEMENT, AND G FORCES, INDEPENDENT OF AIRCRAFT DATA SOURCES. THE SYSTEM IS PROVISIONED WITH A BATTERY BACK UP WHICH ALLOWS THE RECORDING OF INTERNALLY GENERATED DATA TO CONTINUE DURING AN AIRCRAFT POWER FAILURE. THE LIVE DATA LINK MAKES ALL DATA AVAILABLE FOR SELECTIVE REVIEW BY GROUND PERSONNEL WHILE THE AIRCRAFT IS IN FLIGHT.

THE DATA LINK TO GROUND ALLOWS FOR 2 REDUNDANT, FULLY INDEPENDENT SATELLITE NETWORKS. ALL RECORDED AND STREAMED DATA IS PROTECTED WITH MILITARY GRADE 256 BIT ENCRYPTION.



IRIS EQUIPMENT

VOICE AND VIDEO

SEE IT, HEAR IT, ANALYZE IT.

THE HIGH RESOLUTION, HIGH DEFINITION INTERNET PROTOCOL COLOR CAMERA HAS BEEN CERTIFIED FOR USE WITH THE OUTERLINK IRIS SYSTEM. THE SYSTEM CAN ACCEPT UP TO THREE CAMERAS AND THE VIDEO STREAM IS RECORDED AT 30 FRAMES PER SECOND TO GIVE USERS A DETAILED REVIEW. THE HIGH RESOLUTION 1080P CAMERA(S) PROVIDES DETAILED DIGITAL IMAGES THAT ARE ALSO FULLY PROTECTED BY A MILITARY GRADE 256 BIT ENCRYPTION.

IN ADDITION TO THE INDIVIDUAL CREW AUDIO RECORDING, THE IRIS SYSTEM INCLUDES AN AREA MICROPHONE TO PICK UP ALL EXTERNAL AUDIO. THE SMALL, LIGHTWEIGHT MICROPHONE HAS BEEN DO-160 TESTED AND MEETS THE INTERNATIONALLY RECOGNIZED ENVIRONMENTAL STANDARDS.

IRIS EQUIPMENT

TERMINAL

SEE IT, HEAR IT, ANALYZE IT.

THE IRIS ANTENNA/TERMINAL CONTAINS TWO PHASED ARRAY ANTENNAS THAT TRACK THE SATELLITE AND FOCUS ALL THE ENERGY TO MAINTAIN THE CONSTANT IP CONNECTION. THE DAYS OF “SEND AND FORGET PACKET DATA” ARE GONE. THE CONSTANT IP CONNECTIVITY ALLOWS FOR SEAMLESS PUSH-TO-TALK (PTT) VOIP RADIO WITH YOUR ENTIRE GLOBAL FLEET AND LIGHTNING SPEED BI-DIRECTIONAL DATA COMMUNICATIONS.

EYES IN THE SKY, GLOBALLY

IRIS PUTS YOUR FLEET AT YOUR FINGERTIPS.

IRIS USERS NEVER MISS AN INCIDENT WITH IMMEDIATE ALERTS AND WARNINGS AND EASY TO FOLLOW DATA CHARTS.

SMART-ER

DATA IS NOT USEFUL IF YOU CANNOT UNDERSTAND IT. OUTERLINK'S IRIS SOLUTION INCLUDES A USER-FRIENDLY SOFTWARE SUITE THAT HELPS OPERATORS TO ANALYZE AND MAKE SENSE OF THEIR AIRCRAFT DATA.

IRIS contains a powerful computing platform that can read, analyze and output customer defined operational and maintenance event alerts. The Safety Matrix and Reporting Threshold (S.M.A.R.T) application runs on the IRIS platform and constantly monitors all live data being recorded.

Customers can define events. When a defined event has occurred, the system will mark the event on the recorder and alert ground personnel. Customers can define message routing and priority to a pre-designated phone or email.

In addition, IRIS has a comprehensive software suite to playback and analyze the recorded data. The Flight Analysis Safety Trend and Report System (FASTARS) software supplies voice and video playback tools along with modules to create Flight and Maintenance Operational Quality Assurance (FOQA/MOQA) events, animations and secure download tools customizable by the customer. An animation module is also included, allowing customers to create a 3D animation of their model aircraft.

IRIS can also integrate with a number of FOQA applications. As part of the FASTARS software application, a raw data playback viewer is included along with a translation program that allows the user to convert the recorded data into information readable by FOQA software. This provides customers with a comprehensive suite of tools and services to manage their safety program.

JOIN US.

WHO NEEDS IRIS?

OPERATORS LARGE AND SMALL BENEFIT FROM OUTERLINK'S IRIS SOLUTION. YOU WILL SAVE MONEY, TIME AND WEIGHT WHEN YOU INSTALL IRIS IN PLACE OF ALL OF THE SYSTEMS IT REPLACES.

Outerlink has designed the IRIS system to be a cost-effective solution for all aircraft operators. Price should not be a road block to safety, which is why IRIS is a fraction of the cost when compared to the multiple systems it replaces.

When customers invest in IRIS, they do so with a reassurance that obsolescence will never be a factor. Due to IRIS' functions being software-defined, the system can be updated to stay in step with technological advances without the need for new hardware. If satellite providers come up with a faster service, in other bands, IRIS users can adapt by simply changing their satellite terminals.

All of that power is built into IRIS' single system; reducing the amount of weight that an aircraft has to carry when compared to the many boxes needed to support each of the system's functions separately.

The IRIS system is compatible with a full range of helicopters, from older analog models to the newest models on the market. Even with a mixed fleet of airplanes and rotorcraft from different manufacturers and model years, operators can create an integrated monitoring and communications system using IRIS.

IRIS is the most cost-effective, comprehensive solution to real-time, in-flight aircraft monitoring.

A CASE FOR IRIS

There is a strong business case for installing or retrofitting the IRIS system. Apart from the savings of the number of components on-board, there is a cost savings associated with eliminating the operations and support costs of multiple aging devices from different vendors.

IRIS IS A FRACTION OF THE COST THAT YOU WOULD PAY FOR EACH OF THE COMPONENTS IT REPLACES.

IRIS can be used differently by each operator. The system is capable of integrating with third party FOQA software, and the data can be separated into tracking and communications for a communications center and strictly cautions and warnings for an operational control center.

IRIS also meets all aspects of the FAA 135.607 ruling, mandating that all air ambulance operators must have an approved flight data monitoring system capable of recording flight performance data by April 24, 2018.

OUT WITH THE OLD. IN WITH THE NEW.

IRIS WILL SAVE YOU TIME, MONEY AND USEFUL WEIGHT ON YOUR AIRCRAFT. STOP THE GUESSING GAME AND KNOW EXACTLY HOW YOUR AIRCRAFT IS BEING OPERATED AND MAINTAINED WITH THE MOST COMPREHENSIVE FLIGHT DATA MONITORING, TRACKING AND COMMUNICATIONS SYSTEM AVAILABLE.

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