



L3HARRIS

FAST. FORWARD.

COMMERCIAL AND MILITARY AVIONICS SOLUTIONS



Get Started >

Overview

L3Harris Structure

Commercial Aviation

Markets Served

Key Facts

Global Footprint

Customers

Avionics

Flight Data Services

Contact Information



L3Harris Commercial Aviation is a strategic alignment of our world-leading commercial aviation solutions, designed to serve OEMS, airlines, business jet, helicopter and military operators with a fully comprehensive and interrelated suite of avionics products and services.



INTRODUCING L3HARRIS COMMERCIAL AVIATION

Parent Company

\$18B USD+ Large Cap Technology Company

- > 48,000 Global Employees
- > 20,000 Engineers and Scientists
- > Leader in global aerospace and defense technology delivering end-to-end solutions that meet customers’ mission-critical needs across air, land, sea, space and cyber domains.

Prime Contractor In:

- > Civil Aviation Simulation and Airline Solutions
- > C3ISR Government Services
- > Aircraft Modernization Systems



Integrated Mission Systems



Space & Airborne Systems



Aviation Systems



Communications Systems

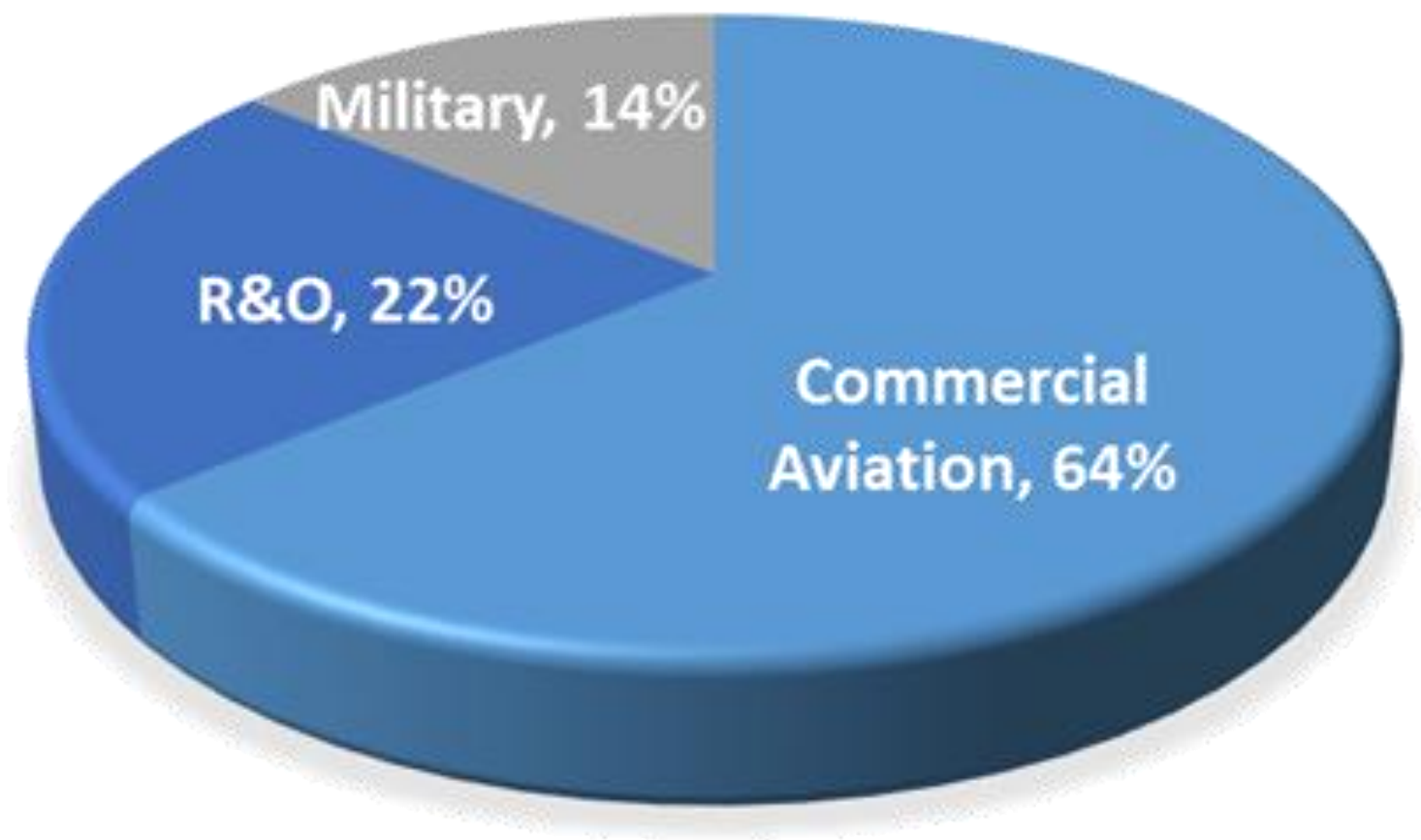


Structure



Markets Served

- > Commercial Aviation:
 - > Air Transport
 - > Regional
 - > Corporate Aviation
 - > General Aviation
- > Military/Government Aviation
- > MRO/Logistics Services
- > Other Key Initiatives:
 - > Investing in Future Technologies
 - > Collaboration with Customers and Strategic Partners





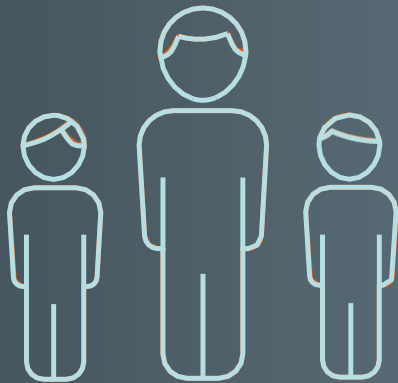
INTRODUCING L3HARRIS COMMERCIAL AVIATION

Key Facts

The numbers



More than
\$500M
Revenue



Over
1500+
Employees



15
Locations Worldwide



**St. Petersburg
Florida, US**
Headquarters



Introducing L3Harris
Commercial Aviation

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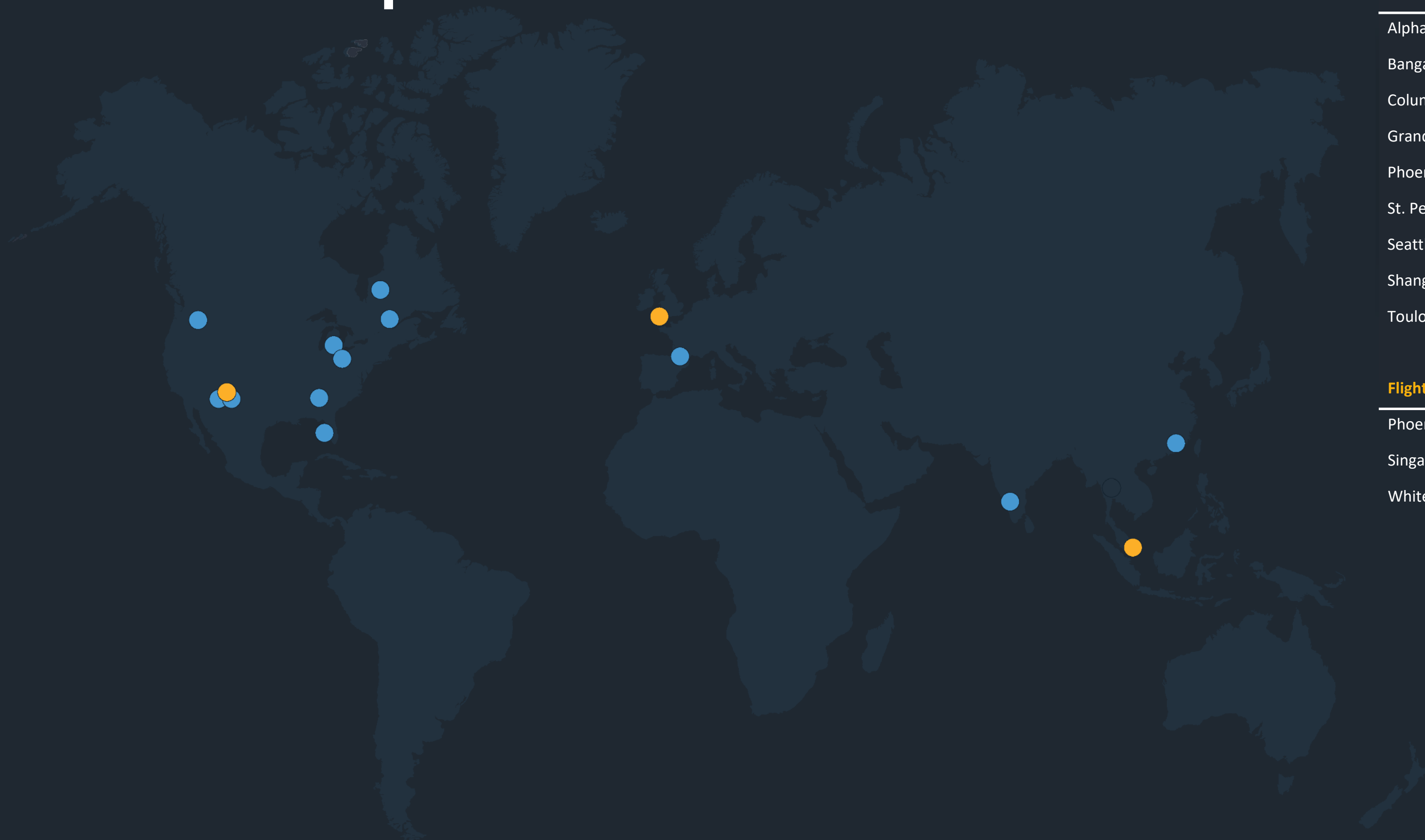
Flight Data Services

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INTRODUCING L3HARRIS COMMERCIAL AVIATION

Global Footprint



Aviation Products

Alpharetta, USA

Bangalore, India

Columbus, USA

Grand Rapids, USA

Phoenix, USA

St. Petersburg, USA

Seattle, USA

Shanghai, China

Toulouse, France

Flight Data Services

Phoenix, AZ

Singapore, Asia Pacific

Whiteley, UK



INTRODUCING L3HARRIS COMMERCIAL AVIATION

Customers - Avionics



More >



INTRODUCING L3HARRIS COMMERCIAL AVIATION



Partners - Flight Data Services



More >



INTRODUCING L3HARRIS COMMERCIAL AVIATION



Customers - Flight Data Services

			
			 Royal Flying Doctor Service
			



Delivering total peace-of-mind.



There’s no room for compromise when it comes to avionics. We design and deliver technology to meet the unique demands of every cockpit, offering unparalleled safety and situational awareness in the sky.



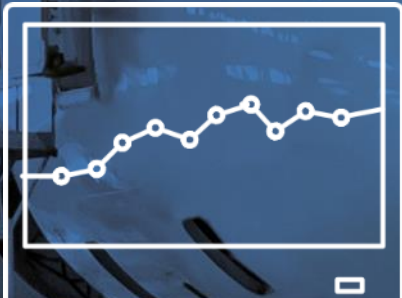
>30 Years

TCAS/Surveillance Experience



80,000+

‘Black Boxes’ Delivered



100%

Data Retrieval Rate



50,000+

Displays and Processors Delivered



Recorders Overview

L3Harris has nearly 60 years of delivering Cockpit Voice Recorders (CVR), Flight Data Recorders (FDR) and CVDR units for commercial and military aircraft. Additionally, we offer sophisticated handheld devices for retrieving data quickly and effortlessly.



SRVIVR25[®] Cockpit Voice and Flight Data Recorders

>25 hours CVRs and Datalink recording.
> 140 FDRs recording



Recorder Data Interface

Easy to use tablet interface for retrieving data from recorders. No training is needed, just plug-and-play.



Legacy Cockpit Voice and Data Recorders

Proven technology with 100% data retrieval rate.





Recorder Product Families

Over 80,000 recorders delivered over the last 50 years and counting. The 50,000th recorder produced is on display in The Smithsonian.

- > FA2100
- > FA5000 Series
- > SRVIVR®
- > SRVIVR25™
- > FA5300 (MADRAS)
- > FA 2200 and FA2300 MADRAS
- > Data Acquisition Storage Unit (DASU)
- > F3000 Flight Data Acquisition Unit
- > Lightweight Data Recorder (LDR)
- > Micro Quick Access Recorder (mQAR)





Surveillance & ADS-B

With over 20 years of experience and the first to market with ADS-B applications, L3Harris remains a leader in the development of life-saving surveillance systems designed to provide highly accurate situational awareness and sophisticated collision avoidance that improve safety and flight efficiency.

- > NXT-600™/-700™/-800™ Series of Mode S Transponders
- > T³CAS® Integrated Surveillance System
- > TCAS 3000SP™
- > Lynx® ADS-B Transponder & Display



Surveillance and ADS-B products are manufactured by ACSS, an L3Harris and Thales Company



More >



SafeRoute+ ADS-B In

SafeRoute+ is the only ADS-B In retrofit solution for airlines. It increases safety and efficiency during all phases of flight by providing pilots a precise forward field of view for aircraft up to 100 nautical miles and enables flight optimization and routing efficiency.

- > Uses the existing Navigation Display, Multi-function Control and Display Unit
- > New ADS-B Guidance Display from L3Harris shows
- > Simple software upgrade to existing T3CAS and NXT units
- > Selectable applications:
 - > Enhanced Airborne Traffic Situational Awareness (AIRB)
 - > CDTI-Assisted Visual Separation (CAVS)
 - > Interval Management Spacing (I-IM)
 - > In-Trail Procedures (ITP)





Standbys

L3Harris provides a line of compact and reliable Standbys as a cost-effective replacement option for legacy mechanical instruments for commercial aircraft and helicopters.



ESI-500

Synthetic vision enabled standby for general aviation, helicopters and business jets.



EFD-750

High-performance, OEM and pilot configurable standby unit for general aviation, helicopters and business jets.



GH-3900

Compact, Customizable solution designed to meet almost any cockpit.



GH-4200

Designed for single and tandem high-performance aircraft.





Multi-Function Displays, Navigation and Satellite

Developed to meet the stringent safety and security demands of civil, commercial, military aircraft and helicopter manufacturers, L3Harris provides a selection of highly reliable displays, navigation and satellite communication products.



**AFIRS™ 228
Cockpit SATCOM**

Voice and data transfer on/off the aircraft for airlines.



**TACAN+
Navigation**

The market leader with more than 60,000 systems sold. It's the only system able to process four, in range TACAN/DME stations simultaneously and two in bearing.



**EFI-650
CRT-to-LCD**

High performance and low operating costs for regional and business aviation aircraft.





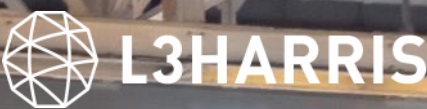
Aftermarket Solutions

Maintenance, Repair & Overhaul (MRO)

- > Upgrades (Commercial/Military)
- > Retrofits (Commercial/Military)
- > Life Extension (Commercial/Military)
- > Obsolescence Management (Commercial/Military)
- > Service Bulletin A/D (Commercial)

Data Services

- > Portable Interface for FA2100
- > Recorder Data Interface





World’s largest dedicated provider of flight data analysis services.

Improving aviation safety by connecting the best analysis service to more flight data across the world.



24/7

Around the clock
global support



7,600+

Monitored flights
per day



16M

Database of flights



823

Safety events configurable
to your SOPs



Service Capabilities



**Flight Safety
Management Support
Service**



**Flight Data
Connect**



**Express
Readout**



Flight Safety Management Support Service

This service goes beyond data processing and validation, applying incident investigation and safety management expertise to the flight data monitoring program. It provides investigation and reporting of significant events, generation and presentation of data analysis reports to provide safety intelligence to allow the identification of areas that may require intervention or mitigation in the operation.





What is Flight Data Connect?

L3Harris collaborates with IATA, industry leaders, OEMs and champions of aviation safety to provide you a membership base, and flight data for over 300 airlines and corporate operators. Flight Data Connect enables operators to compare actual flight measurements taken from the Flight Data Recorder (FDR/black box) against your Standard Operating Procedures (SOPs) and perform advanced FDM/FOQA analysis. As a key element of your Safety Management System (SMS), Flight Data Connect allows you to identify, quantify, assess and address risk factors.

Delivered through a state-of-the-art secured web platform, the Flight Data Connect service manages all the specialist and complex tasks providing you with actionable information to make a measured improvement to your operational safety.

This safety critical insight provides essential feedback in a timely manner and directly assists in cost savings through efficiencies and preventative maintenance, which reduce potential operational delays.

FLIGHT DATA CONNECT IS THE WORLD'S LEADING FLIGHT DATA MONITORING (FDM) / FLIGHT OPERATIONS QUALITY ASSURANCE (FOQA) SERVICE.

With Flight Data Connect, operators can benefit from:

- > Advanced flight data analysis tools, making it easy to identify and investigate safety issues
- > Service and support, available from our dedicated analyst team in your time zone
- > 24/7 Aircraft On Ground (AOG) hotline
- > Support from our safety community that operate the same aircraft models you do
- > Ability to measure your operation against other corporate or commercial jet operators in the same airspace. Data is de-identified and requires (free) membership to the IATA Flight Data eXchange program

Express Readout

Overview

Service Capabilities

Flight Safety Management

Flight Data Connect

Express Readout Services

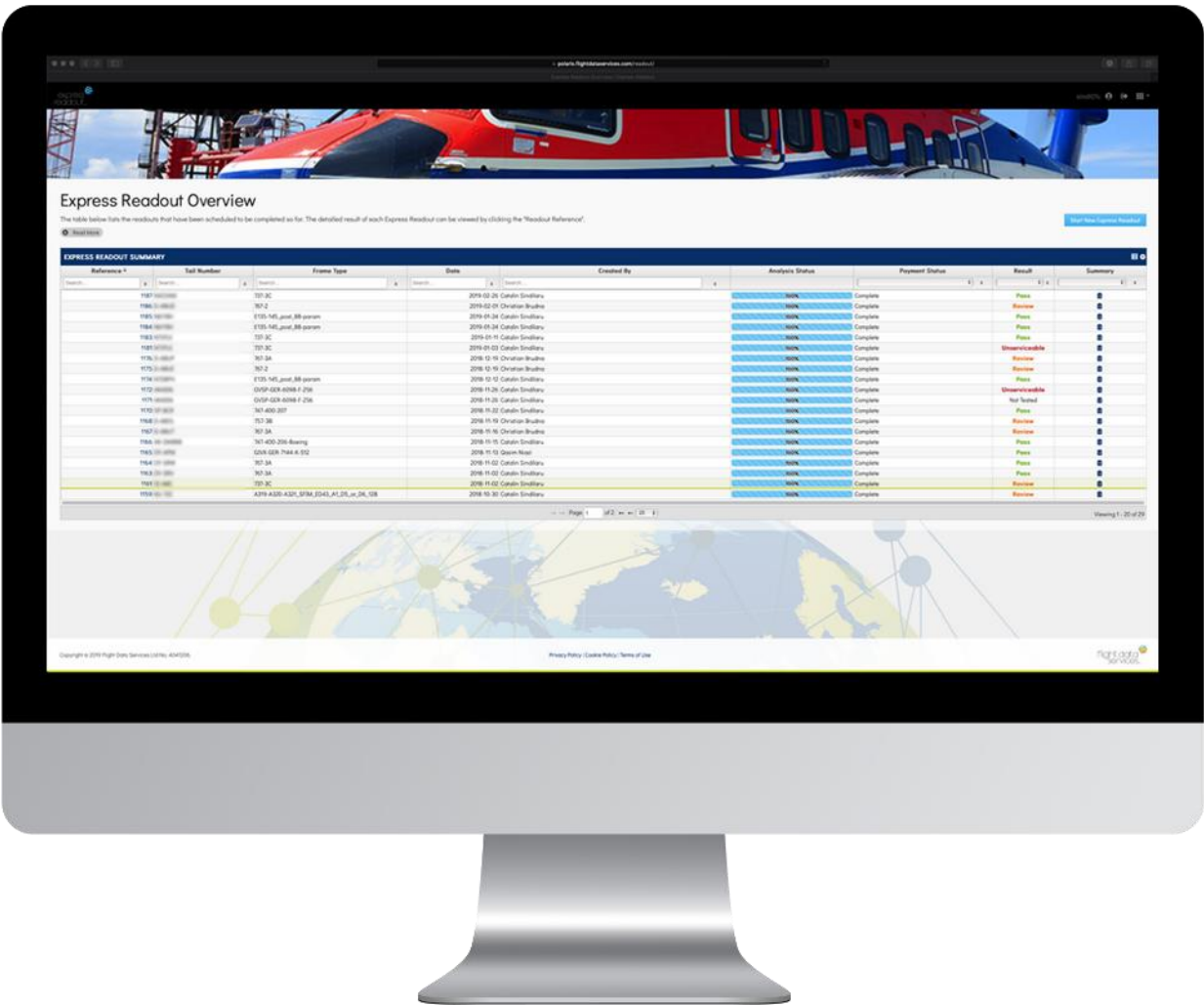
FDR Readout Services

CVR Readout Services

Avionics Overview

Contact Information

Our Self-Service Express Readout service is a web-based, semi-automatic tool which applies patented algorithms to identify suspect parameter patterns and highlights them so that the user can inspect them afterwards.



- > Fast turnaround time. Express Readout results are available in under 10 minutes from data upload
- > Share the readout with others so that they can inspect, comment or change the validity status of a parameter
- > Data frame auto detection. If the user doesn't know what data frame to use, the auto detect feature will search for the most likely data frame
- > Multiple flights upload within the same readout. The user is able to assess up to 50 flights hours within the same readout. Good for finding intermittent failures
- > Interactive charts mean you can inspect every parameter in detail
- > Compliant with all current regulations
- > Re-test within 30 days at no additional charge, used to confirm repair of faulty signals
- > Results are stored indefinitely on our servers



Overview

Service Capabilities

Flight Safety Management

Flight Data Connect

Express Readout Services

FDR Readout Services

CVR Readout Services

Avionics Overview

Contact Information



FDR Express Readout

The automated FDR analysis complies with the FAA AC 20-141 document, Appendix 5 “TYPICAL REASONABLENESS AND QUALITY CHECK INSTRUCTIONS”. The correlation tests included in Express Readout far exceed the set listed and are carried out for all segments presented for examination. All of the recorded parameters will be tested before the results are collated to form the initial report. At this stage expert analysts will review the parameters marked “inspect” and review the parameter charts to determine their serviceability. Once this is complete the readout reports will be accessible on the website.

The Express Readout website is accessible to the user 24/7/365 from any device connected to the internet. Once completed, the results of the readout may be shared with other users simply by exchanging the readout ID and password.

The completed readout will include:

- > A summary sheet showing details of the aircraft, recorder and readout process, reference to the airworthiness requirement against which the test was conducted, a statement of compliance and finally a pass or fail status
- > A table listing each parameter, its reference to the airworthiness requirement being applied and its serviceability status. Parameters are named using the clear FDS standard naming convention
- > Access to the website which includes graphs for each parameter over all the flight segments uploaded
- > Access to the flight data in CSV format (optional download from website)
- > Analysis of all parameters on the recorder (not just the mandatory set)



CVR Intelligibility Test Express Readout

- > CVR readout will first decompress the CVR raw data compressed audio files into a Microsoft standard audio (WAV) file for examination
- > This file will be accessible by the operator through the website
- > The analysis process will follow the “Guidance on CVR recording Inspection” produced by the Flight Recorder Partnership Group (EFRPG) and published by the Bureau d’Enquêtes et d’Analyses (BEA) in 2018. All CVR readouts will include Level 2 intelligibility analysis
- > For speech intelligibility, Flight Data Services analysts who have, or have held, a pilot’s license will listen to the recordings as they are familiar with the standard of reception required for error-free ATC communications. Only English language speech will be analyzed for intelligibility

CVR Datalink Decoding (DLR)

- > Datalink messages are controlled by the Communications Management Unit (CMU) and displayed in the cockpit
- > L3Harris’ readout service will decrypt the messages and display them in plain readable text



For more information about any of our products, please use:

**L3Harris.com Landing Page
www.L3Harris.com/avionics**

**Recorders, Standby's, SATCOM, Navigation Products
Email: Avionics.Sales@L3Harris.com
Phone: (616) 949-6600**

**TCAS, Lynx, Surveillance Products (ACSS)
Email: ACSS.OrderAdmin@L3Harris.com
Phone: (623) 445-7070**



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L3Harris Technologies is an agile global aerospace and defense technology innovator, delivering end-to-end solutions that meet customers’ mission-critical needs. The company provides advanced defense and commercial technologies across air, land, sea, space and cyber domains.

