Compliance Testing, LLC
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Test Report

Prepared for: FLYHT Aerospace Solutions Ltd.

Model: AFIRS 228S Automated Flight Information Reporting System

Description: Dual Channel Satcom System that incorporates simultaneous operation of embedded radios.

Serial Number: 5012

FCC ID: 2ABRJ-228S

To

FCC Part 1.1310

Date of Issue: October 2, 2015

On the behalf of the applicant:	**FLYHT Aerospace Solutions Ltd.** **300E, 1144 – 29 Ave. NE** **Calgary, Alberta T2E 7P1**
Attention of:	**Derek Graham, Chief Technical Officer** **Ph: (403)291-7438** **E-Mail: dgraham@flyht.com**

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Project No: p1580009

Alex Macon
Project Test Engineer

Test Report Revision History

Revision	Date	Revised By	Reason for Revision
1.0	September 18, 2015	Alex Macon	Original Document
2.0	September 23, 2015	Amanda Reed	Updated contact person & address on cover page
3.0	September 29, 2015	Alex Macon	Updated Limits and added minimum safe distance calculation.
4.0	September 29, 2015	Diana Williams	Added second FCC ID.
5.0	October 2, 2015	Diana Williams	Corrected FCC ID and Description.

ILAC / A2LA

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The tests results contained within this test report all fall within our scope of accreditation, unless below

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Testing Certificate Number: **2152.01**

FCC Site Reg. #349717

IC Site Reg. #2044A-2

Non-accredited tests contained in this report:

N/A

Average Power calculations

Average Power = Peak Power * duty-cycle%

Tuned Frequency (MHz)	Conducted Peak Output Power (mW)	Duty Cycle (%)	Average Power (mW)
1622.35	4620	100	4620
1625.98	1770	100	1770

MPE Evaluation
Dual channel Iridium satcom system used in aircrafts that incorporates Iridium 9523 and 9602.
This is a Mobile device used in a Uncontrolled Exposure environment.

Limits Uncontrolled Exposure 47 CFR 1.1310 Table 1, (B)	0.3-1.234 MHz:	Limit [mW/cm²] = 100
	1.34-30 MHz:	Limit [mW/cm²] = (180/f²)
	30-300 MHz:	Limit [mW/cm²] = 0.2
	300-1500 MHz:	Limit [mW/cm²] = f/1500
	1500-100,000 MHz	Limit [mW/cm²] = 1.0

Test Data

Test Frequency, MHz	1622.35
Power, Conducted, mW (P)	4620
Antenna Gain Isotropic	3 dBi
Antenna Gain Numeric (G)	2.0
Antenna Type	
Distance (R)	20 cm

Test Frequency, MHz	1625.98
Power, Conducted, mW (P)	1770
Antenna Gain Isotropic	3 dBi
Antenna Gain Numeric (G)	2.0
Antenna Type	
Distance (R)	20 cm

$$S = \frac{P * G}{4\pi r^2}$$

Power Density (S) mw/cm^2	Power mW (P)	Numeric Gain (G)	Distance (r^2) cm
1.8391719745	4620	2	20

$$S = \frac{P * G}{4\pi r^2}$$

Power Density (S) mw/cm^2	Power mW (P)	Numeric Gain (G)	Distance (r^2) cm
0.7046178344	1770	2	20

Power Density (S) =2.5437
Limit =(from above table) = 1.0

The combined power spectral density is over the general population limit of 1.0 so minimum safe distance was calculated.

formula R=√(PG/4πL)			
Distance (R) (cm)	Power (mW)	Numeric Gain (G)	Limit (mW/cm)
31.89852541	6390	2	1

The minimum safe distance is 31.9 cm

END OF TEST REPORT