

Viasat Satellite Safety Data Link Services

ISPACG FIT, 7-9 May 2026

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Director of Air Traffic Services

Viasat Aviation Safety Services

Over 30 years providing data link safety services

Oceanic and remote: FANS 1/A

- CPDLC meeting RCP240
- ADS-C meeting RSP180
- Dual voice

Flight deck IP connectivity

- EFB via a/g SWIM
- ACARS over IP

Domestic: ATN B2/ATS B2

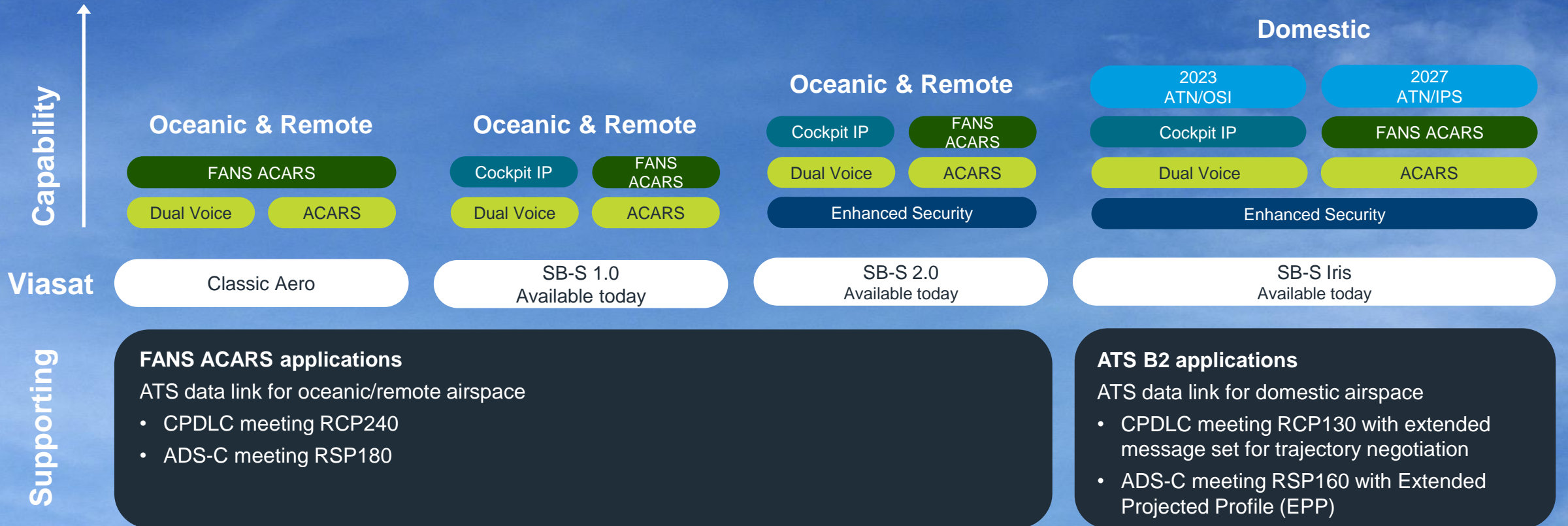
- CPDLC meeting RCP130
- ADS-C meeting RSP160
- Dual voice

Ready for 4D TBO

- Extended CPDLC message set for trajectory negotiation
- ADS-C Extended Projected Profile (EPP)
- Enhanced security



Viasat data link ready for the future



L-band satellite fleet arrangement

I-6 F1: in service over the Indian Ocean

I-4 FA: in service over Europe/Middle East/Africa

I-4 F3: in service over Americas

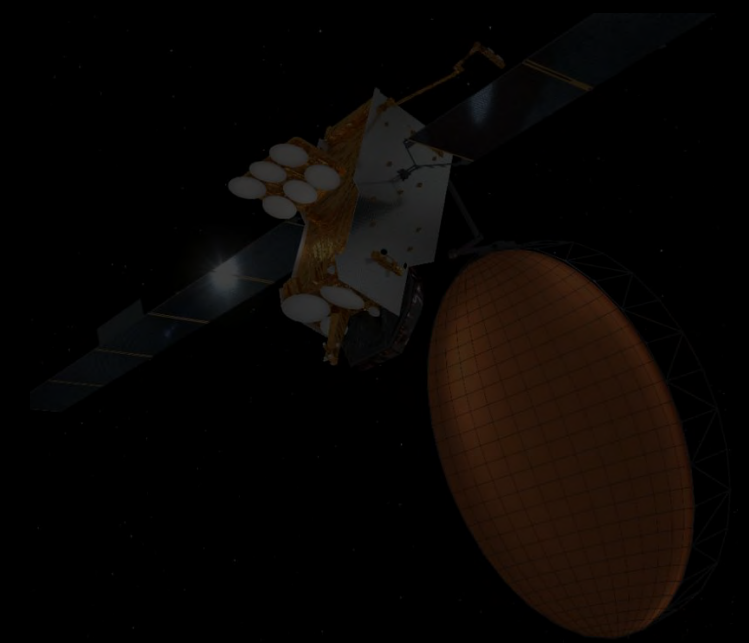
I-4 F2: in service over Asia Pacific

I-3 F5: in service over Atlantic Ocean

I-4 F1: in orbit for contingency

Three I-8 satellites planned

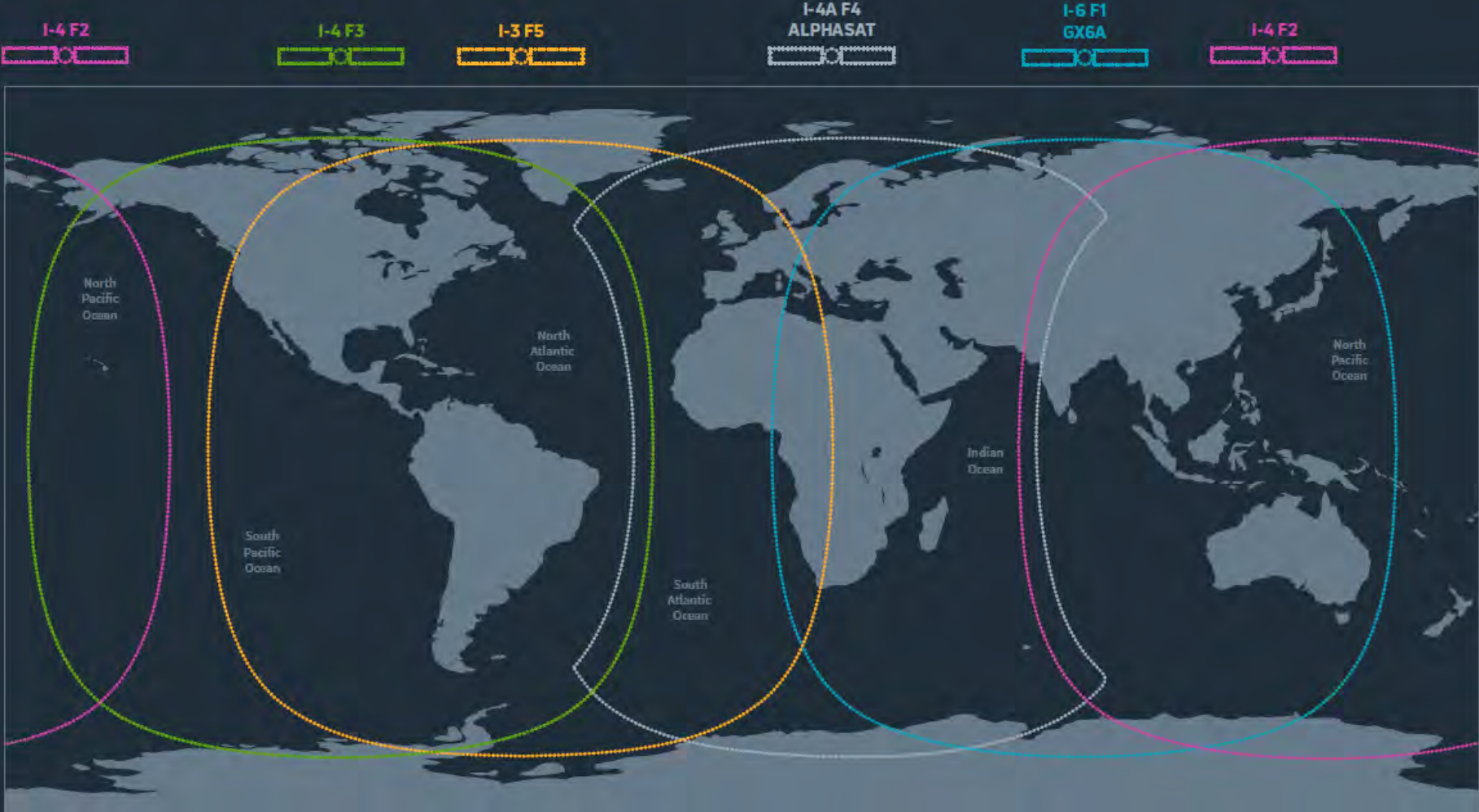
- ✓ Anticipated Service Entry Date 2028*
- ✓ Supports essential L-band safety services
- ✓ Additional network resilience



Viasat current L-band coverage



v018 Updated 04/09/24



For illustrative purposes only. Coverage is approximate and subject to change. Not representative of any single product or service.

Satcom Network Path Identifiers*

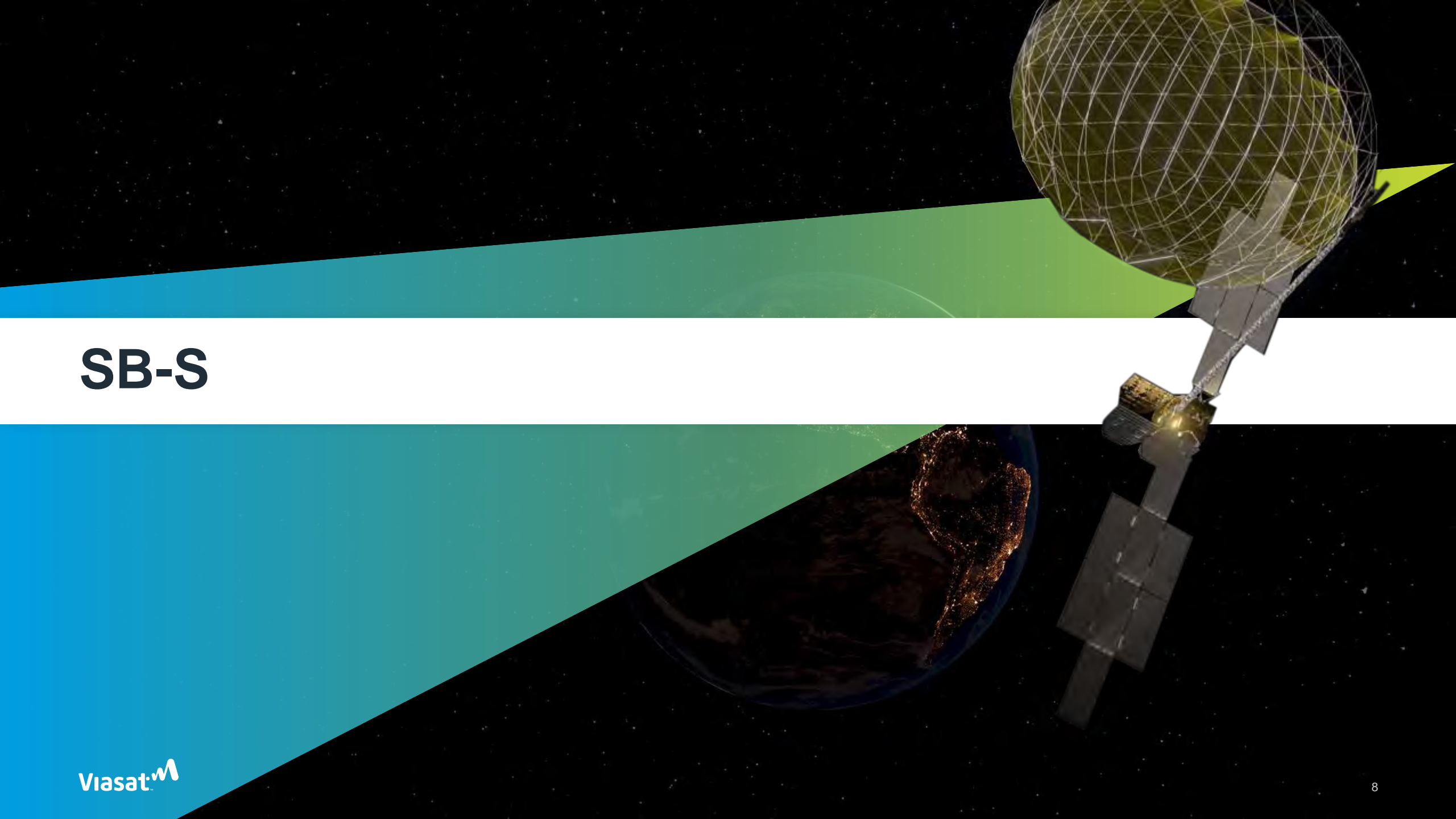
Satellite Service Provider (SSP)	Satellite	Service	Ground Station Location	ARINC ACARS Identifiers	SITA ACARS Identifiers	ADCC ACARS Identifiers
Inmarsat	AORE (3F5 at 54°W)	Classic Aero	Laurentides, Canada	XXN	AOE6	B3E
		Swift Broadband-Safety 1.0	N/A	N/A	N/A	N/A
		Swift Broadband-Safety 2.0	N/A	N/A	N/A	N/A
	EMEA (AF1 at 25°E)	Classic Aero over I-4	Fucino, Italy	XXF	EUA1	B4E
		Swift Broadband-Safety 1.0	Primary: Fucino, Italy Secondary: Thermopylae, Greece	X4E, X5E	EUA9	B1E
		Swift Broadband-Safety 2.0		X0E, X3E (Paumalu gateway) X1E, X2E (Borum gateway)	EUA7 (Paumalu gateway) EUA8 (Borum gateway)	TBD
	APAC (4F2 at 143.5°E)	Classic Aero over I-4	Paumalu, Hawaii, US	XXA	APK1	B4P
		Classic Aero over I-4 (virtual I-3 POR)	Warkworth, New Zealand	XXP	APK2	B3P
		Swift Broadband-Safety 1.0	Primary: Paumalu, Hawaii, US Secondary: Auckland, New Zealand	X4P, X5P	APK9	B1P
		Swift Broadband-Safety 2.0		X2P, X3P (Paumalu gateway) X0P, X1P (Borum gateway)	APK7 (Paumalu gateway) APK8 (Borum gateway)	TBD
	AMER (4F3 at 98°W)	Classic Aero over I-4	Primary: Paumalu, Hawaii, US Secondary: Laurentides, Canada	XXH	AME1	B4A
		Classic Aero over I-4 (virtual I-3 AORW)	Laurentides, Canada	XXW	AME2	B3W
		Swift Broadband-Safety 1.0	Primary: Paumalu, Hawaii, US Secondary: Laurentides, Canada	X4A, X5A	AME9	B1A
		Swift Broadband-Safety 2.0		X2A, X3A (Paumalu gateway) X0A, X1A (Borum gateway)	AME7 (Paumalu gateway) AME8 (Borum gateway)	TBD
	IOR/IOE (6F1 at 83.5°E)	Classic Aero over I-6 (virtual I-3 IOR)	Primary: Perth, Australia Secondary (and rainfade): Merredin, Australia	XXI	IOR5	B3I
		Swift Broadband-Safety 1.0 (IOE)	Primary: Perth, Australia Secondary: Merredin, Australia	X4I, X5I	IOR9	B1I
		Swift Broadband-Safety 2.0 (IOE)		X2I, X3I (Paumalu gateway) X0I, X1I (Borum gateway)	IOR7 (Paumalu gateway) IOR8 (Borum gateway)	TBD

* As of June 2025. Network paths subject to change. Extract from table in ICAO Noria Handbook

Reducing Service Interruptions

- *Improving detection and failover times*
 - › We are working to improve on the detection related to the subset of events that impact a small number of terminals, or very specific traffic associated with a particular application. Larger events are generally well characterized and reported
 - › This will require the introduction of automation, and at present we are targeting mid-2027 for general introduction. At the same time, we are looking at how to improve the present process.
 - › Failover capability to move to another satellite is generally embedded in the terminal design. However, in the case of ground station isolation it could present a challenge to exercise this. To solve this, we have started implementing an Out of Band (OOB) solution that allows us to terminate the transmission from an isolated site to force terminals to the overlapping areas.
- *Modernization efforts for interruptions related to legacy equipment*
 - › Starting at the end of last year, we have initiated activities to move traffic over to newer hardware. In 2026, we will continue this process with a smaller subset of equipment
- *Improving stability and reducing service interruptions*
 - › We have already worked with our Satellite Access Station (SAS) site hosting entities and partners to reduce the possibility of occurrence of service interruptions
 - › This has included reviewing procedures and escalation processes at our SAS sites, and putting in place the OOB solution to guard against dual link failure

SB-S



SB-S

SB-S is a mature technology, operational worldwide

- > Compact, lightweight
- > 700+ SB-S systems in service

Supports

- > ACARS and FANS
- > 2 x Voice Channels, ATS short codes

IP connectivity

- > Connected EFB
- > ACARS over IP

Enhanced security

- > End-to-end PKI VPN secure gateways protect from cyber threats

Honeywell

Aspire 400



THALES

AVIATOR 200S
(Airbus LCS)





Lightweight and low-profile terminal

“For the HELGA antenna on an A320 the drag value is negligible based on our internal Airbus experts (<0.1%)”

Viasat SB-S: a lightweight and highly capable satcom solution

Available now

SB-S supported aircraft types, in-service and planned



1000 SB-S equipped aircraft flying today!



787*
2028



A350
2023



777X
2025



A330
2022



C919
2023



737 NG/MAX
2023



A320neo
2022



C909
TBC



A satellite is shown in space, featuring a large, spherical wireframe antenna structure. The satellite is positioned against a black background filled with stars. A portion of the Earth is visible in the lower-left quadrant, showing city lights and landmasses. The satellite's body is white and grey, with various instruments and panels. A green and blue diagonal band runs across the image, partially obscuring the satellite and the Earth.

Iris ATN Service



Iris ATN Service

- > Operational since January 2024, when ESSP, the Iris Service Provider, received ATM/ANS Organizational Approval (AOA) from EASA
- > Delivers **ATN/OSI** datalink and voice services to the flight deck in one airborne satcom terminal (supporting FANS, ATN, AOC, IP data and voice)
- > Provides **a scalable, multilink path** (satcom interoperable with VDL M2)
- > Enables **Trajectory Based Operations** supporting **ATS Baseline 2 data link** (incl., ADS-C EPP and CPDLC) and **secure IP connectivity** (for EFB exchanges via air-ground SWIM)
- > Offers **high reliability** and **significantly higher data throughput capacity**
- > Uses **end-to-end PKI VPN secure gateways** to protect from cyber threats

The **Iris Global** program will support extension of ATN/OSI and ATN/IPS compliant services to continental airspace in other world regions



27

Aircraft flying with
Iris Datalink

27,500+

Flights performed
with Iris Datalink

Iris service in operation since January 2024

easyJet

Jet2.com
Friendly low fares

ITA
AIRWAYS

t transavia

Viasat^m

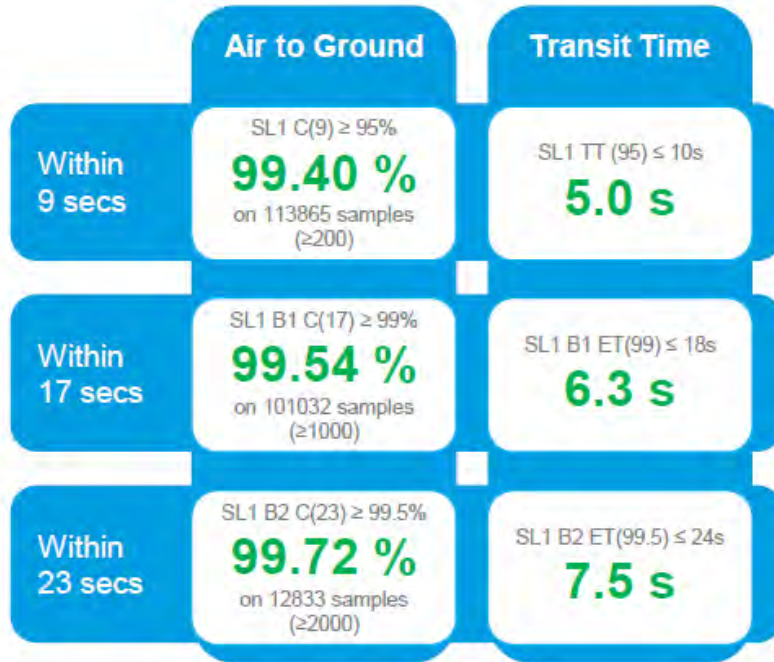


Performance report 2025

01 January 2025 till 31 December 2025



IRIS ATN/OSI Service Level 1 (CPDLC)



IRIS ATN/OSI Service Level 2 (ADS-C)



Total Flights **18002**

easyJet 13460

Jet2.com 2855

ITA AIRWAYS 1023

transavia 664

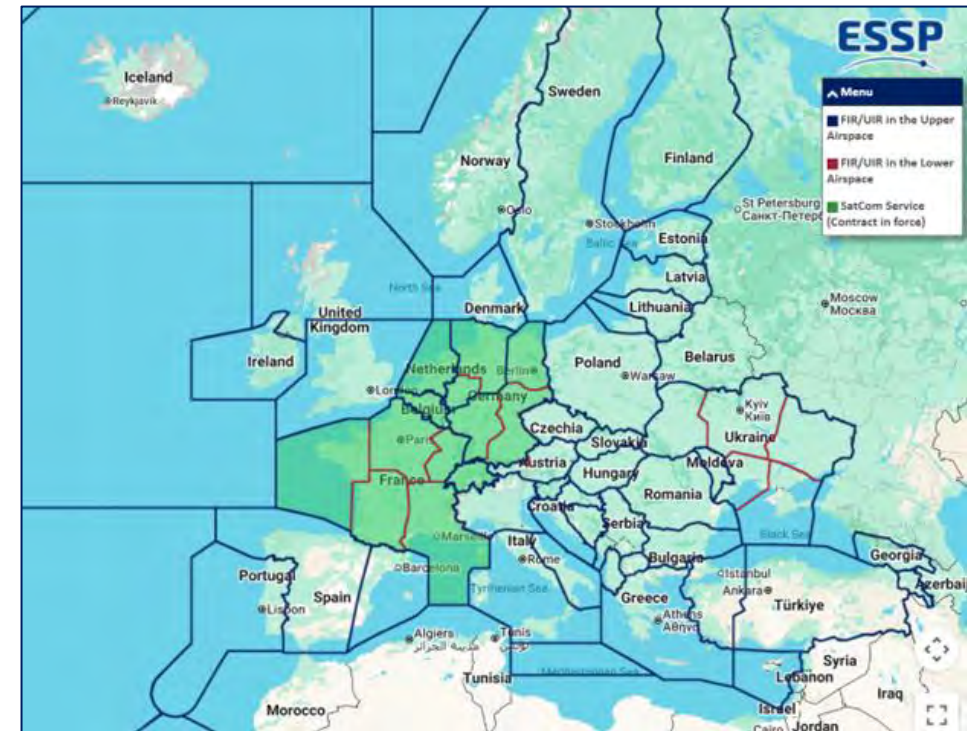
Airspace with live Iris services

- Iris Service is currently fully operational and provided by ESSP who is certified and overseen by EASA since July 2023
- 19 ANSPs participated in pre-commercial operations
- 4 ANSPs connected now with Iris Service
- Full specification of Iris Service is provided in the Iris Service Definition Document published at [ESSP website](#)



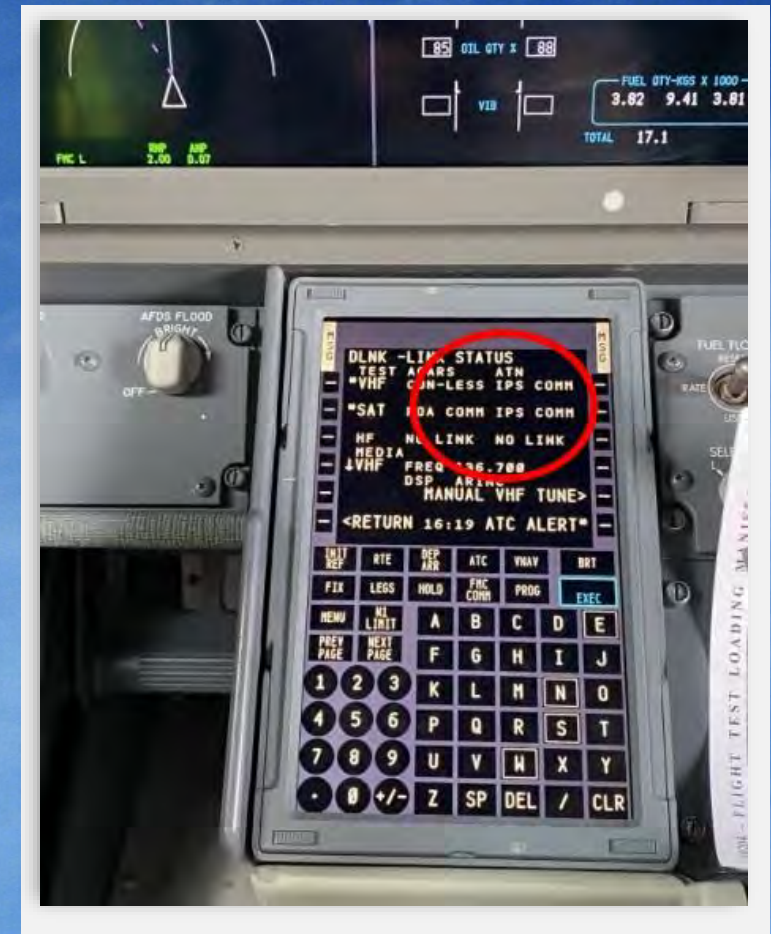
LIST OF APPROVED ATM/ANS ORGANISATIONS UNDER THE OVERSIGHT OF EASA

CERTIFICATE REFERENCE	ORGANISATION NAME	COUNTRY	SCOPE	ISSUE DATE	STATUS
EASA.AOA.PAN.038	European Satellite Service Provider (ESSP SAS)	France	Aeronautical Mobile Satellite Service (AMSS)	20/07/2023	Valid



Roadmap to support ATN/IPS standard

- > We are building an ATN/OSI and ATN/IPS gateway that allows all aircraft, to transition seamlessly no matter which standard they operate on
- > Boeing ecoDemonstrator flight in 2025 December
- > OSI & IPS interoperability trials in 2024/2025



Iris Test Facilities



Danny Bharj

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Air & ground integration



AOC application testing



End-to-end system testing



ATN/IPS integration



ANSP HMI & i4D evaluation



ATN/OSI & multilink

Avionics & aircraft testing



What ANSPs can test

- EPP display and discrepancy alerts
- ATN/OSI and ATN/IPS gateway behavior
- EFB/SWIM application exchanges over secure IP



Other Iris Initiatives

Iris ESA Global Project


- > Launched in June 2022
- > International development & demonstrations for Iris-based services work package
- > Future-proof for global ATC and AOC services, as part of fleet renewal

Iris Phase 4

- > Approved
- > Negotiations ongoing

Trajectory-Based Operations

- > Several ANSPs in APAC have demonstrated the use of TBO via EFB (Multi-Regional TBO)
- > Opportunity to test/develop a prototype of the ATS B2 service over satcom
- > APAC TBO Pathfinder Project - Trajectory-based demonstrations, flight trials between regions
- > Jointly test/simulate use cases, leveraging Viasat's Iris Test Facility



**Air travel is changing fast.
Stay ahead with Viasat.**

Questions?