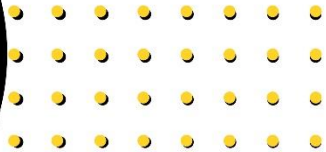# Connected Aircraft
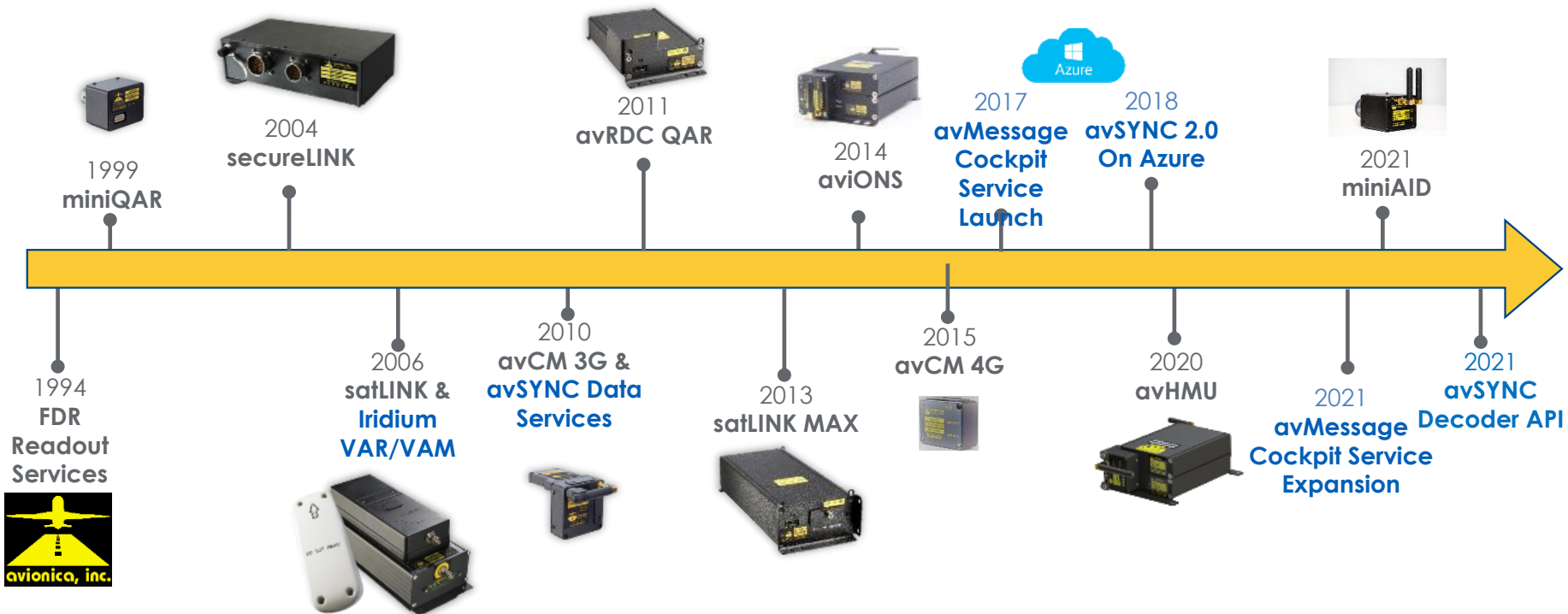
16th January 2024
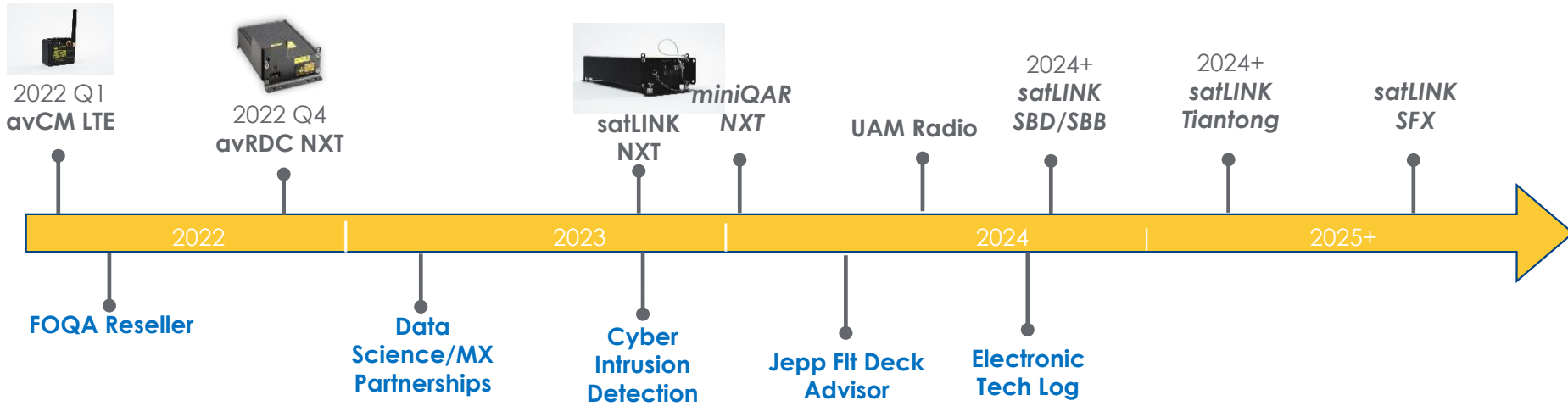
OVER 30 YEARS **DELIVERING**

SEAMLESS CONNECTED AIRCRAFT

SOLUTIONS.

AVIONICA (30+ YEARS OF INNOVATION)

1994 — FDR Readout Services

1999 — miniQAR

2004 — secureLINK

2006 — satLINK & Iridium VAR/VAM

2010 — avCM 3G & avSYNC Data Services

2011 — avRDC QAR

2013 — satLINK MAX

2014 — aviONS

2015 — avCM 4G

2017 — avMessage Cockpit Service Launch

2018 — avSYNC 2.0 On Azure

2020 — avHMU

2021 — avMessage Cockpit Service Expansion

2021 — miniAID

2021 — avSYNC Decoder API

AVIONICA (30+ YEARS OF INNOVATION)

Above the timeline:

- 2022 Q1 — avCM LTE
- 2022 Q4 — avRDC NXT
- satLINK NXT
- miniQAR NXT
- UAM Radio
- 2024+ satLINK SBD/SBB
- 2024+ satLINK Tiantong
- satLINK SFX

Timeline: 2022 | 2023 | 2024 | 2025+

Below the timeline:

- FOQA Reseller
- Data Science/MX Partnerships
- Cyber Intrusion Detection
- Jepp Flt Deck Advisor
- Electronic Tech Log

Use Cases supporting Connected Aircraft

- ✓ Safety Analytics
  - FDM – FOQA
- ✓ Maintenance Analytics
  - MOQA, ACMS, Predictive Maintenance
- ✓ EFB
  - Cockpit Connectivity
- ✓ ACARS
  - ACARS over IP

avionica

Flight Data Management
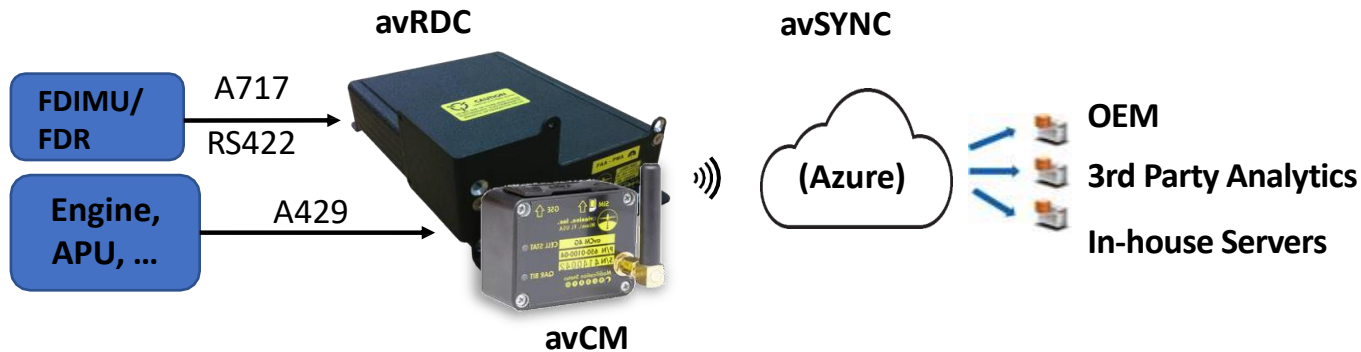

miniQAR
Quick Access Recorder

avRDC
Remote Data Concentrator

Value Story
Avionica QAR products are in support of many FAA/EASA Approved FDM programs, many of which utilize the timely nature of the data "99.8% within 15min" to evaluate MOQA events such as hard landings

Predictive Maintenance Solutions

avRDC

avSYNC

FDIMU/ FDR

A717

RS422

Engine, APU, …

A429

avCM

(Azure)

OEM

3rd Party Analytics

In-house Servers

- High fidelity data for predictive maintenance solutions
- Capture parameters most critical to understanding fleet issues
- Installations designed to accelerate deployments with flexibility for future updates with minimal downtime
- Reduce ACARS costs with cellular download of ACMS reports
- Data for flight operations programs, e.g., FOQA, fuel, …
- Data for maintenance programs, e.g., pneumatics, hydraulics, …
- Data for OEM diagnostics and support programs … e.g., engines

avionica

e-Enabled Onboard Network | aviONS

avWiFi

- Intel Atom 1.46GHz
- 256GB storage – Upgrade to a 1TB SSD
- 802.11 b/g/n WiFi Wireless
- Client mode for airport WiFi (TWLU)

aviONS

avCM LTE

- LTE Global Cellular GIG SKY WORLD MOBILE DATA
- Lightweight - 5 oz (141 gr)
- Easily Upgradeable
- Secure, VPN or SFTP security

2.75 in
8.50 in
4.06 in

avRDC MAX (AID)

- 50 data interfaces (ARINC 410, 429, & 717, RS 232 & 422, USB 2.0)
- Up to 6 Ethernet ports, in up to 3 security domains
- QAR Functionality
- Under 15oz (480gr) weight

avionica

Seamless Connected Aircraft Solutions

- Product OEM

- STC Holder

- Integration Design tailored to your aircraft

- FOT Install Support

- Support

- Training Repairs

Based on the services selected Avionica will work collaboratively to develop the phased approach for installation options to minimize downtime and provide immediate and future benefits

avionica

satLINK MAX + aviONS

Twice as Capable, Half as Heavy

- 2, 3 or 4 Channel Global Iridium Voice & Data Communications
- Industry lightest SATCOM + Onboard Network Server combined
- Global LTE Cellular ground connectivity for ACARS over Cellular
- Voice + Data Messaging Service Packages Included
- EFB Aircraft Interface Function (AID) – Moving Map
- Wireless Flight data download (QAR) & A615 Data Loading
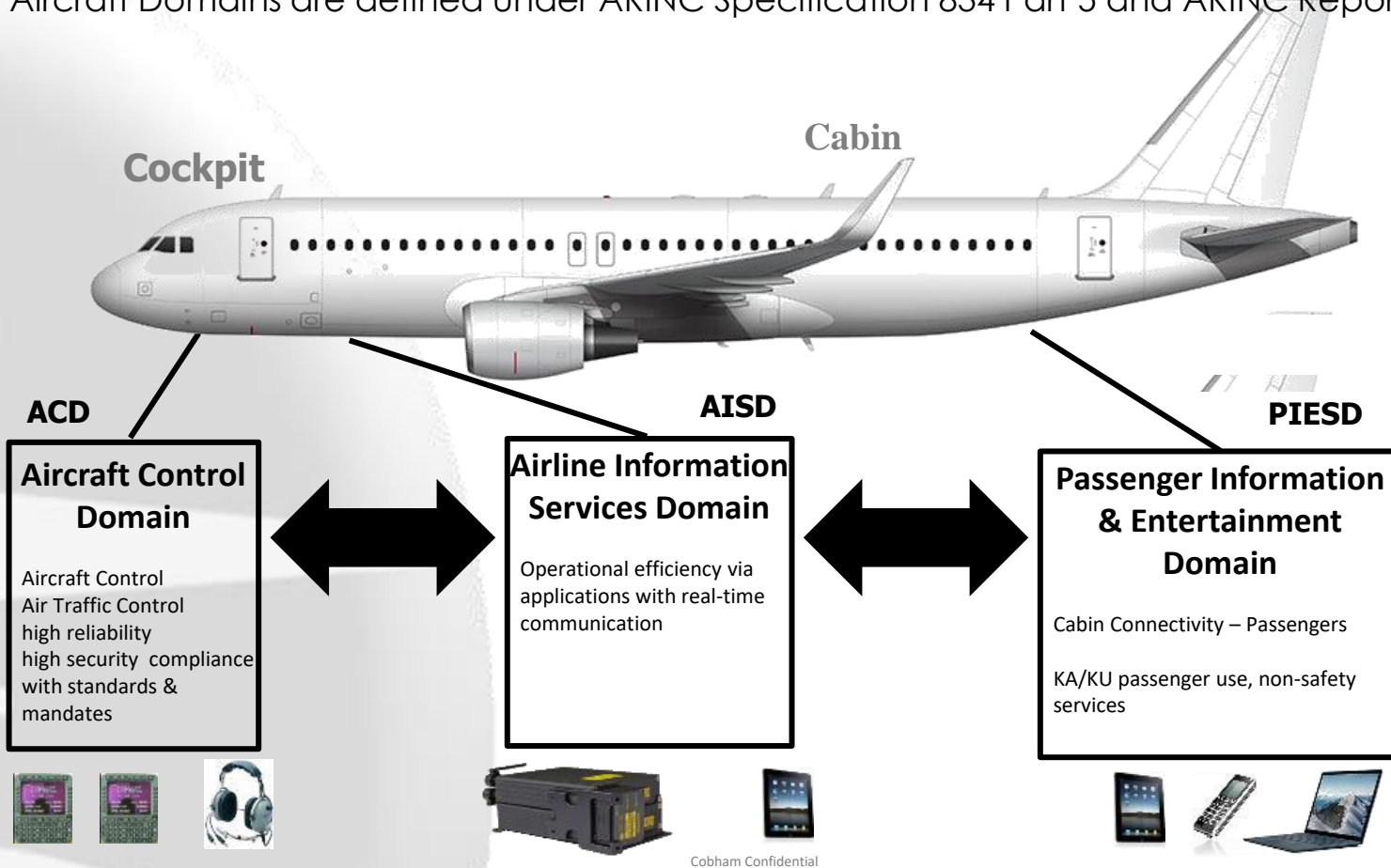- Flight Crew WiFi (including hot spot connectivity)

satLINK MAX

+

aviONS

Aircraft Communication & Segregation

Aircraft Domains are defined under ARINC Specification 834 Part 5 and ARINC Report 821

Cockpit

Cabin

ACD

AISD

PIESD

Aircraft Control Domain

Aircraft Control
Air Traffic Control
high reliability
high security compliance
with standards &
mandates

Airline Information Services Domain

Operational efficiency via
applications with real-time
communication

Passenger Information & Entertainment Domain

Cabin Connectivity – Passengers

KA/KU passenger use, non-safety
services

Cobham Confidential

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