



avWiFi

ONBOARD NETWORK SERVICES

The avWiFi is a WiFi-enabled onboard router capable of providing Terminal Wireless connectivity to the aircraft as well as cabin connectivity for onboard PEDs inflight and on the ground. As one of the world's first retrofit cybersecurity FAA STCs, Avionica's groundbreaking cybersecurity features will no doubt bring legacy aircraft into the 21st century. The avWiFi supports seamless segregation between the Aircraft Control Domain (ACD)(e.g., ACARS, navigation), the Airline Information Services Domain (AISD)(e.g., Maintenance, ADS-B), and Passenger Information and Entertainment Services Domain (PIESD) (e.g., IFE internet). Some of the supported use cases include in-flight flight deck EFB internet, and ACD data – such as in-flight parameters – flowing to PIESD EFBs & hosted applications. The avWiFi supports modern wireless security standards for all its connections (e.g., username/password, EAP-TLS certificates)



ENDLESS APPS

The avWiFi supports one of the first of its kind application hosting on aircraft. Our revolutionary technology allows us to deploy and start applications over the air at the press of a button! Functions available include:

- Cabin VoIP over hardwire or soft phones (iPad, iPhone) to make calls within the aircraft or leverage a SATCOM channel to make external calls
- Dataloading over ARINC 615 and 615A. Additionally, Avionica supports loading B777 aircraft through AIMS. Loadable Parts can be staged on our ground system and synchronized automatically
- Full integration with PED EFB applications (e.g., Jeppesen FliteDeck Pro) over ARINC 834
- Integration with cabin temperature and smoke sensor systems
- Your own app: third parties can utilize Avionica's SDK to write their own Docker applications (at either DAL D or E) to consume & process aircraft data in real-time – this can include ARINC 717 data or up to 10 ARINC 429 ports. Applications also have the ability to transmit data to ground servers during flight!

OPERATIONS IN MIND

The avWiFi – along with the rest of the Avionica ecosystem of products – is designed with airline operations in mind. Day-to-day operations require zero touch time for downloading data, uploading configurations or uploading loadable parts. For actions that require manual action, Avionica simplifies configuration management for technicians by staging files on the unit remotely. All a technician has to do is press "Go!"

UNPARALLEL VERSATILITY

The avWiFi is a versatile product that can accommodate a variety of use cases. When part of an aviONS system, it leverages the AID capabilities of the avRDC MAX and the connectivity of the avCM to provide a complete aircraft connectivity solution. avWiFi installations also leverage the cybersecurity features to control the data going between the ACD and AISD/PIESD security domains; the data available to WiFi devices can also be marshalled in the same way. While the avWiFi supports a cabin access point and terminal wireless simultaneously, some installations have an avWiFi installed near an external antenna to maximize the reach of the terminal wireless connection.



TECHNICAL SPECIFICATIONS

SIZE/WEIGHT (WITH ANTENNA)

Dimensions: 5.74in L, 4.1in W, 1.52in H
 Weight: 17.6oz Nominal
 Power: 28VDC (Max 340mA Nominal)

CERTIFICATION CONSIDERATIONS

Compliant to DO-178C DAL D
 Cybersecurity: Compliant to DO-326A, DO-356A, DO-355
 Cybersecurity: Compliant FAA Issue papers 1, 2 & 3
 Implementation compliant to ARINC 834, 835 & 653 standards
 Approved STC on Boeing 737, 777, 747 and Airbus A330

avWiFi AIRCRAFT INTERFACES

Ethernet: 2 ports
 ARINC 717: 1 Rx (Bi-phase/bi-polar)
 RS 232: 4 Tx, 5 Rx
 RS 422: 2 Rx
 Ethernet: 4 Ports
 Discretes: 10 I/O

SPEEDS

Wired Ethernet: 100baseT
 Wireless Speeds (4G): Up to 1.6 Flight Hours per minute (ARINC 717 at 256 words per second)

ENVIRONMENTAL

DO-160G

D1,C,A,A,S,X,X,X,X,X,A(15),BX,B,B,BCX,TT,M,X,X,X,A,X