

System I/O

- ARINC 429: 18-inputs / 8-outputs
- Discrete: 16-inputs / 8-outputs
- Full Duplex RS-485: 2
- CANbus: 1
- 100BaseTx Ethernet Port (maintenance): 1
- Secure Wireless Broadcast (Bluetooth): 1

Hardware

- CMU: ARINC 724B & 758
- VDR: ARINC 750 & TSO-C160, VDL Mode 0/A & Mode 2
- MCDU: ARINC 739 & TSO-C113

Specifications: General

- Environmental Categories: RTCA DO-160G
- Software Certification: RTCA DO-178C Level B
- TSO-C113a Airborne Multipurpose Electronic Displays
- TSO-C160a VDL Mode 2 Communications Equipment

Specifications: All-In-One

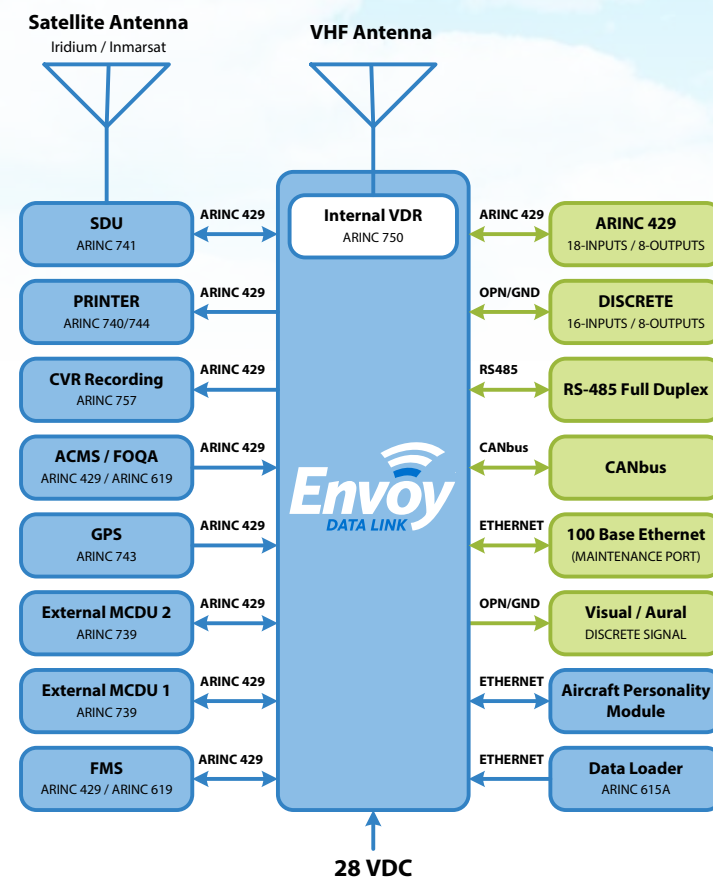
- Dimensional envelope: 5.75" wide x 4.5" high x 8.5" deep
- Mounting: DZUS Rail
- Weight: 6.0 lbs. (2.7 kg)
- Power: 28 VDC, 25 Watts Typical
- Operating Temperature -40 to +55C

Specifications: Remote CMU + VDR

- Dimensional envelope: 2 MCU
- Operating Temperature: -55 to +70C
- Power: 28 VDC

Interfaces

- ARINC 429 Interfaces to aircraft systems
- ARINC 619 interface (CVR, ACMS, FOQA)
- ARINC 739 (MCDU)
- ARINC 740 and 744 (Printer)
- ARINC 741 (SATCOM: Iridium, Inmarsat)
- ARINC 615 (Data loader)
- Network: ARINC and SITA



Envoy™

DATA LINK



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Everything You Need for Data Link Communications ... In a Single Unit!

Envoy is your direct route for compliance to FANS 1/A+ and ATN B1 CPDLC mandates.

FANS 1/A+ (CPDLC and ADS-C) + ATN B1 CPDLC + AOC ACARS + Global Flight Tracking

Everything You Need for Data Link Communications... In a Single Unit!



Software Applications

Certified to RTCA DO-178C Level B

- FANS 1/A+ (CPDLC and ADS-C)
- ATN B1 CPDLC
- AOC ACARS
- Global Flight Tracking (GADSS)
- Secure Wireless Broadcast (Bluetooth)

About Envoy...

Envoy Data Link is a modern, light-weight, high-speed digital data link communications product that includes three integrated avionics modules (CMU, VDR, and MCDU) and the software applications for all your data link needs. Envoy is a single, stand-alone avionics unit that brings enhancements to safety and efficiency found in the modern Communications, Navigation, and Surveillance (CNS) Air Traffic Management (ATM) environment. Envoy also contains True Dual Stack functionality that allows a flight crew to change between FANS CPDLC and ATN B1 CPDLC based on airspace requirements.

FANS 1/A+ (CPDLC and ADS-C)

Fully certified for FANS 1/A+, VHF Mode A/2 and SATCOM

Envoy Data Link delivers FANS 1/A+ to operators requiring certified compliance with mandates across the North Atlantic Track System, European Tango routes, and other FANS routes throughout world. Envoy contains all the hardware and software required for FANS 1/A+ CPDLC and ADS-C.

- NATS Mandate, Phase 2B, (FL350 - FL390), DEC 2017
- NATS Mandate, Phase 2C, (FL290 and above), JAN 2020
- FAA NextGEN, NAS Tower and En Route Domains

ATN B1 CPDLC

Fully certified for ATN B1 CPDLC, VHF Mode 2

Envoy Data Link delivers ATN B1 CPDLC to operators requiring certified compliance with the European mandate.

Beginning February 2020, the ATN B1 CPDLC mandate, requires ALL non-exempt aircraft operating above FL285 to have ATN B1 CPDLC equipment in designated airspace.

- EU Mandate: DLS-IR (EC) 29/2009 and 2015/310

True Dual Stack CPDLC

FANS 1/A+ CPDLC and ATN B1 CPDLC ... in a single unit

Operating within the NATS, Tango routes, and throughout European airspace represents a unique challenge to some operators who require compliance with two different mandates. Envoy Data Link has True Dual Stack software applications that allow a flight crew to change between FANS CPDLC and ATN B1 CPDLC based on individual airspace requirements.

Other CMUs in combination with expensive FMS changes only allow for FANS CPDLC or ATN CPDLC, not both ... penalizing the operator for flight segments that are not in compliance.

With Envoy, you maintain compliance with all ATC mandates.



FAA NextGEN Services

Tower and En Route Services (DCL and CPDLC)

Envoy supports the benefits and enhancements enabled by the FAA NextGEN program and infrastructure.

Operators with routes throughout the U.S. National Airspace System can take advantage of these services to reduce delays and obtain more efficient routes, improve safety, and reduce congestion or adverse weather delays.

CPDLC Departure Clearance (DCL) Services

DCL is currently operational at 55 U.S. airports with more coming on-line. Controllers send text-based clearance instructions to flight crews instead of speaking over the radio. Air carrier dispatchers simultaneously receive the same information, giving all decision makers a shared awareness for faster reactions to changes. Flight crews review the instructions and signal acceptance by pushing a button, and the instructions are then loaded into the aircraft's flight management system.

En route CPDLC Services

With FANS 1/A+ built into Envoy, operators are prepared for future FAA NextGEN services for en route CPDLC ... today. En route services begin in 2019 with planned availability at all 20 en route centers by 2021.

Airline Operational Control (AOC ACARS)

Full featured and customizable AOC ACARS unit

Envoy Data Link is a full featured AOC ACARS unit capable of standard ACARS messaging such as OOOI, Weather, Position, and Engine reporting. Envoy comes standard with Built-in messaging per ARINC 618, 620, 622, and 623

User Customizable AOC ACARS Database

- Customizable menu layout, appearance, and color scheme tailored to fit individual operator requirements
- Customizable automation via events and triggers
- Field loadable databases that do not affect certification

Air Traffic Services (ATS) Messaging

ATS messaging includes pre-departure, pushback, taxi, and oceanic clearances as well as D-ATIS and TWIP services.

Global Flight Tracking (GADSS)

Position Reports per ICAO 15-minute recommendation

Envoy enables Global Flight Tracking by sending specialized position reports over the ACARS network, either terrestrial VHF or by SATCOM.

Envoy Features Condition-based Reporting

By monitoring the condition of configured events and triggers, the timing of automated position reporting can change in frequency depending on the severity of monitored parameters.

Secure Wireless Broadcast (Bluetooth)

Wireless Transmission of Aircraft Data and Messages

Envoy allows Bluetooth wireless broadcast of stored aircraft system data and messages. Messages are transmitted at specific intervals and received by an application running on a mobile device such as a tablet or smart phone.

- Non-real time ACARS via Bluetooth broadcast
- Rapid deployment of low cost mobile devices & Apps
- App-based data processing of ACARS data

ARINC 619 Interface (ACMS, FOQA)

Envoy can be configured to work with an assortment of on aircraft and end system devices in order to provide data link capability for messages to or from existing avionics systems.

Devices include Flight Management Computers for requests such as Winds Aloft or Flight Plan updates. These requests are transparently sent through the unit to the ground when initiated from the FMC. The accompanying response message from the ground is then routed by the unit back to the FMC where the uplinked message and data is available.

ARINC 739 Interface (MCDU Control)

Envoy can display/control other avionics functions

Envoy includes an integrated MCDU that is capable of hosting other ARINC 739 compatible avionics to display and control those device functions from the Envoy front panel.

Envoy functions can be displayed/controlled by other avionics

Envoy can also be hosted from other ARINC 739 MCDUs such as those associated with an FMC. This allows existing MCDUs on the aircraft to display and control Envoy functions from the All-In-One unit or from the Envoy Remote CMU + VDR form factor.

ARINC 741 Interface (SATCOM)

SATCOM: Iridium or Inmarsat for AOC ACARS and FANS 1/A+

From the Envoy unit, connections are made to a 741 protocol compliant SDU data channel to support both FANS 1/A (CPDLC and ADS-C) messages and ACARS message exchanges.

ARINC 615A (Data Loader)

Updates via existing data loader or Envoy maintenance port

Envoy supports ARINC 615A Ethernet data loaders for software updates and uploading of customizable user databases in the field without the need to remove equipment from the aircraft. This can be performed with an aircraft data loader or from the Envoy maintenance port via laptop application.