

Rockwell Collins Communications Management Unit (CMU-900)



Meeting CNS/ATM Requirements

For today's challenging CNS/ATM environment, we have developed the state-of-the-art communication management unit for data link operation. As one of the newest members of the Series 900 line of avionics, the CMU-900 is the most sophisticated data link system in the industry. Its digital technology offers faster integrated communication management and unprecedented flexibility and growth.

Our CMU-900 is an ARINC 758 compliant data link router, interfacing with many aircraft systems such as ACMS/DFDAU, SATCOM, VHF, HFDL, FMS and other aircraft systems. It is designed to support current and future airspace operations, including industry leading implementations for AOC data link such as Plain Old ACARS (POA), AVLK and VDL Mode 2. It also includes industry leading implementations of ATC data link such as FANS, ADS-C, AFN, CPDLC and ATN CPDLC.

Components include the hardware platform, core software, airline operational control (AOC) application function, and the optional ATN Air Traffic Control (ATC) datalink functions. The AOC application data is certification-independent and user-programmable. Updates to the core software and AOC application may be accomplished using an ARINC 615 data loader.

NEXT-GENERATION TECHNOLOGY

CMU-900 provides a cost-effective approach to growth as the CNS/ATM architecture evolves. The software's partitioned architecture enables revisions of nonessential AOC software without affecting or requiring recertification of core software. A Windows®-based AOC application development tool enables easy reprogramming of the unit, allowing design, evaluation, simulation, testing and change documentation for the

AOC software. This same programming tool may be used to program DLM-900 AOC applications and ATSU-equipped Airbus aircraft utilizing our AOC-900 application product, with no duplication of development effort.

In accordance with ARINC 758, the CMU-900 utilizes an Aircraft Personality Module (APM) to store information unique to each individual aircraft. Our APM-900 replaces the programming pins used to define aircraft-specific information in previous ARINC 724B ACARS installations. Together with the APM-900, our CMU-900 was the first ARINC 758-compliant CMU to receive FAA certification, accomplished aboard a Boeing 737-800 in May 1999.

**Rockwell
Collins**

Building trust every day

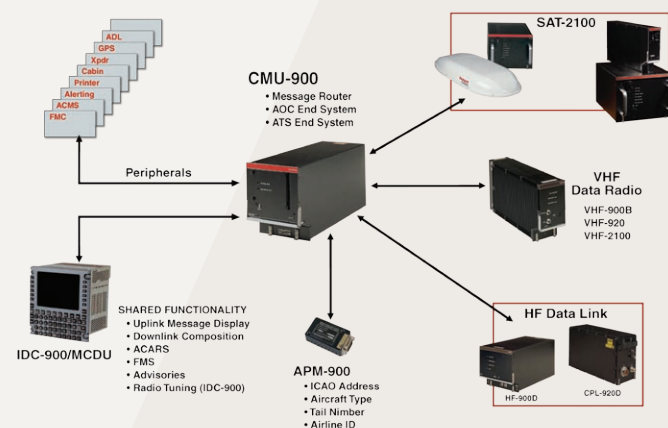
CMU-900 ATC DATALINK CAPABILITIES

The CMU-900's ATN Router and CPDLC applications are certified. Around 200 aircraft fly today with ATN CPDLC capability, and all of them have the CMU-900. It is compliant with ATN: ICAO SARPs, ED/DO documents and applicable FAA ACs.

Our CMU-900 is also being used every day in support of FANS operations and is Boeing FANS 1 AEIT certified. It is the communications router for the FANS applications (ADS-C, AFN, CPDLC) and interfaces to all the physical layers (HFDL, SATCOM, VDL Modes A, 1, 2) in support of worldwide FANS operations.

SUMMARY OF CAPABILITIES

- ARINC Characteristic 758 compliant and highly reliable
- Single part number for all aircraft types
- Provides multiple air/ground protocols:
 - Plain Old ACARS (POA)
 - AOA/VDL Mode 2
 - ATN
- Supports encryption and compression
 - Encrypted messages are compressed
 - CRC is calculated to ensure message integrity
 - Secure communication of ACARS messages
- Boeing FANS-1 AEIT qualified
- Certified via TC and STC on most aircraft types in various software configurations
- Core software
 - Certified software configuration
 - Digital and discrete IO
 - Peripheral and uplink/downlink routing
 - ACARS over AVLC (VDL Mode 2) - option
 - ATN router - option
 - Software dataload for Core, AOC, and VM data
 - ATS application
 - Technical application
- AOC application
 - User modifiable without certification impact
- Vendor modifiable data
 - Rockwell Collins modifiable without certification impact
- AOA and VDL M2 avionics are certified and available
- ATN/CPDLC avionics are certified and available
- Over 2300 CMU-900s/APM-900s delivered



SPECIFICATIONS

Weight	12 lb maximum (5.5 kg)
Size	4 MCU per ARINC 600
Mount size	2 Shell NIC 600
Power	Primary 115 V ac; 400 Hz Optional 28 V dc Usage <35 W
Power interrupt	Play-through 600 mS
Warm start	No limit
Environmental	Qualification RTCA DO-160C Temperature -40 to +55 °C Cooling ARINC 600, 404
Input/output	
ARINC 429	Transmitters 15 Receivers 46
Analog	Discrete inputs 29 Discrete outputs 16 Discrete inputs/outputs 2 Analog inputs 6 VHF (MSK audio) 1 Serial outputs 4 Serial inputs 2 Relay contacts 2

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

Building trust every day.

Rockwell Collins delivers smart communication and aviation electronics solutions to customers worldwide. Backed by a global network of service and support, we stand committed to putting technology and practical innovation to work for you whenever and wherever you need us. In this way, working together, we build trust. Every day.

For more information contact:

Rockwell Collins
400 Collins Road NE
Cedar Rapids, Iowa 52498
319.295.4085
email: csmarketing@rockwellcollins.com
web site: www.rockwellcollins.com

**Rockwell
Collins**

Building trust every day