

# MARK II+ COMMUNICATIONS MANAGEMENT UNIT (CMU)

Marketing Brochure



# Honeywell's Mark II+ Communications Management Unit (CMU)

As a leading supplier in the Aerospace sector, Honeywell is focused on developing avionics technology and solutions that help defense and commercial aircraft Go Anywhere, Go Anytime, and Go for Less. Honeywell Aerospace products and services are found on virtually every commercial, defense, and space aircraft today.

Optimized airspace use can be achieved through breakthroughs in modern communications, navigation, surveillance and air traffic management systems (CNS/ATM). A CNS/ATM system whose architecture meets the need for flexibility, updatability, and functional growth can enable incremental benefits from new modes of air traffic management. This new era of CNS/ATM operations has led to the evolution of the Honeywell Communications Management Unit (CMU) Mark II+ with the capacity to support flight critical Air Traffic Services functions using modern efficient digital air-ground Datalink protocols as well as legacy analog communication protocols.

The CMU Mark II+ is an avionics data router that is the center piece of the aircraft Datalink system that enables optimal scheduling, operational cost performance, and Controller/Pilot communications. The Mark II+ supports Future Air Navigation System (FANS) operations in the Flight Management System, supports Aeronautical Telecommunication Network Protected Mode Controller Pilot Data Link Communication (ATN PM-CPDLC), supports Aircraft Communication Addressing and Reporting System (ACARS), supports Very High Frequency Data Link Mode 2 Multi Frequency (VDLM2-MF), and includes a user-reconfigurable Airline Operational Control (AOC) database to automate and optimize hundreds of routine airline tasks.

Honeywell's CMU Mark II first entered the market in 1994 and was upgraded with modern processing capability and software to CMU Mark II+ in 2011. The CMU Mark II+ supports both today's and tomorrow's data communications needs. Honeywell's CMU Mark II products have become the most popular Datalink units in the market, with two product variants to

support either ARINC 724B aircraft wiring or ARINC 758 wiring and an install base of more than 7,000 units. The Mark II+ incorporates hundreds of features within a partitioned software architecture; each partition is software-loadable on-wing using data loaders or PCMCIA media. The Mark II+ provides ATN PM-CPDLC capability that is approved by the EuroControl White List and is designated Best In Class for PM-CPDLC operation in Europe. The Mark II+ also supports FANS-1/A+ functionality used throughout North America and the North Atlantic Tracks.

The AOC database within the CMU Mark II+ allows for vast customizability of operational procedures and communication between an aircraft, pilot, operations center, and Datalink Service Provider. AOC functions typically include routine tasks that enable quick aircraft turnaround, aircraft position reports, definition of Multipurpose Control Display Unit (MCDU) interfaces, printer formats, message encryption, and flight planning information. The AOC database is user-reconfigurable via a PC-based software tool. Rolling out new AOC functionality to the aircraft fleet is possible without expensive software updates or aircraft certification, and a new AOC database can be pushed to an aircraft wirelessly when CMU Mark II+ is coupled with a Honeywell Wireless Server Unit.



## CMU Mark II+ Specifications

Size	4 MCU per ARINC 600
Weight	12 lbs (5.44 kg) Max.
Power Requirements	115 VAC 400 Hz or 28 VDC, 30 Watts Max.
Connector	Per ARINC 724B or ARINC 758
Environmental	DO-160C, no forced-air cooling required
Mark II+ CMU Configurations	PN 965-0758-005 (ARINC 724B) PN 965-0758-006 (ARINC 758)
Aircraft Personality Module (APM)	PN 964-0465-001
Design Assurance Level	DO-178B DAL C
Reliability	30,000 Hours
Warranty	3 Years
Certified Platforms	B737, B747, B757, B767, A321, CRJ-700, CRJ-900, and multiple Business Jet aircraft platforms

### Airbus Air Traffic Services Unit

Honeywell also offers Airline Operations Control (AOC) software for use on the Airbus Air Traffic Services Unit (ATSU) used on A320 and A330 platforms. Honeywell ATSU AOC software provides airlines with the ability to have common AOC operations and similar functionality across CMU Mark II+ and ATSU equipped aircraft.

### ACARS Reconfiguration Tool

The ACARS Reconfiguration Tool is a PC-based application using a standard Microsoft Windows® Graphical User Interface. The tool, whose use requires no software programming experience, enables user personnel to customize their AOC database system to best meet their specific needs. The ACARS Reconfiguration Tool supports the AOC databases of both CMU Mark II+ and Airbus ATSU.

### AirSim Ground Support Tool

As an additional ground support tool, Honeywell offers a PC-based Datalink simulator called AirSim. AirSim supports both CMU Mark II+ and ATSU, providing operators with the ability to simulate complete Datalink operation for flight crew training or database verification before the new database is deployed to the fleet.

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### Honeywell Datalink Product Portfolio

Honeywell's broad Datalink product portfolio includes CMU Mark II+, CMU Mark III, ATSU AOC software, EPIC CMF, 777 CMF, 777-X CMF, 787 CMF, communication radios (HF, VHF, Satcom), cockpit printers, cockpit display units, and flight management systems—all avionics equipment necessary to equip a robust Datalink system. Honeywell Datalink products are used on almost all air transport and business jet aircraft.

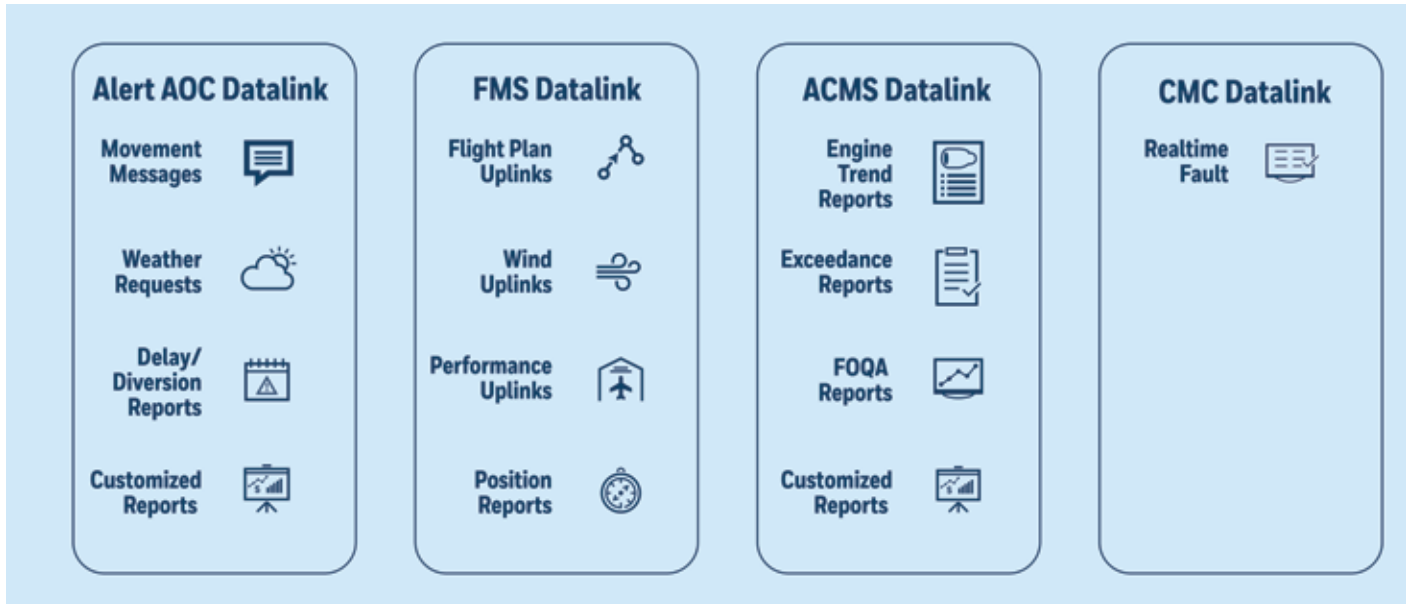
### Honeywell GoDirect Datalink Flight Services

Honeywell also offers GoDirect Datalink Flight Services to handle all aspects of aircraft operations. GoDirect, which serves nearly 2,000 aircraft today, provides flight planning, flight tracking, weather advisory, NOTAM, ATIS, and other services in addition to basic data message reformatting and routing functions. Honeywell's GoDirect portfolio includes additional value-added aircraft services including Fuel Optimization, Weather Information Service, and Flight Bag Pro.

## Integrated CommNav Data Unit Management Systems Product Family

The complete Communications, Navigation and Data Management family is part of a much larger Honeywell product family including Enhanced Ground Proximity Warning Systems (EGPWS); Weather Radar; Communication, Navigation and Identification (CNI); Traffic Alert and Collision Avoidance Systems (TCAS); and other products meeting the needs of both air transport and executive-business aircraft avionics requirements. The HF Data Radio is manufactured jointly by Honeywell and Rohde & Schwarz GmbH & Co. K.G. for sales and product support by Honeywell.

### CMU MKII+ Datalink Use Cases



### Find Out More

More information about Honeywell's Mark II+ Communications Management Unit can be found at:

<https://aerospace.honeywell.com/en/products/navigation-and-sensors/mark-ii-communications-management-unit>