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# Minimum Operational Performance Standards for Aircraft Context Management (CM) Equipment

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Prepared by: SC-169

# FOREWORD

This document was prepared by RTCA Special Committee 169 (SC-169). It was approved by the RTCA Technical Management Committee on July 13, 1994.

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- analyzing and recommending solutions to the system technical issues that aviation faces as it continues to pursue increased safety, system capacity and efficiency;

- developing consensus on the application of pertinent technology to fulfill user and provider requirements, including development of minimum operational performance standards for electronic systems and equipment that support aviation, and

- assisting in developing the appropriate technical material upon which positions for the International Civil Aviation Organization and the International Telecommunication Union and other appropriate international organizations can be based.

The organization's recommendations are often used as the basis for government and private sector decisions as well as the foundation for many Federal Aviation Administration Technical Standard Orders.

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# 1.0 PURPOSE AND SCOPE

## 1.1 Introduction

This document contains Minimum Operational Performance Standards (MOPS) for aircraft equipment required for the Context Management (CM) process. The CM process supports addressing requirements for Air Traffic Services Communication (ATSC) such as Air Traffic Control (ATC) Two-Way Data Link Communications (TWDL), Automatic Dependent Surveillance (ADS), and Flight Information Services (FIS). The Aeronautical Telecommunication Network (ATN) provides the media and protocols to conduct data link communication for the CM process.

The term "CMComm" as used in this document includes all components and units, including software, necessary for the aircraft equipment to support the CM process and interface with the ATN. This document includes functional, performance, interface, and equipment standards for CMComm. Testing standards are also provided.

Compliance with these standards is recommended as one means of assuring that the equipment will perform its intended functions satisfactorily under all conditions normally encountered in routine aeronautical operations. Any regulatory application of this document is the sole responsibility of the appropriate governmental agencies.

Section 1 of this document provides a functional description of the CM process and related information needed to understand the rationale for equipment characteristics and requirements stated in the remaining sections.

Section 2 contains the minimum performance standards for CMComm. These standards specify the required performance under standard operating and environmental conditions. Also included are recommended bench test procedures necessary to demonstrate equipment compliance with the stated minimum requirements.

Section 3 describes the performance required of the installed equipment. Tests for the installed equipment are included when performance cannot be adequately determined through bench testing.

Section 4 describes the operational performance characteristics for equipment installations and defines conditions that will assure the equipment user that operations can be conducted safely and reliably in the expected operational environment.

## 1.2 Functional Description

The CM process described in this document provides for the exchange of relevant address information between an aircraft CMComm and a ground CM system peer. The CM process includes three functions: Log-On, Update, and Contact.

### 1.2.1 Log-On Function

The Log-On function defines a method for the aircraft to provide appropriate aircraft application addresses to the CM ground system peer and subsequently, for the CM ground