

RTCM 10401.2, Standard for Differential Navstar GPS Reference Stations and Integrity Monitors (RSIM) (December 18, 2006)

This document delineates the performance, functional, interface, and environmental parameters for Differential GPS (DGPS) reference stations, integrity monitors and Transmitter/RSIM interface modules. The intent of this document is to facilitate both the manufacture and the purchase of service provider equipment in order to make the use of DGPS more economical and deployable through standardization. It will encourage consistency from one service provider to the next and thereby facilitate the use of DGPS.

This document is specific to the maritime area only in that the data link modulation specifications and certain control parameters are given for Minimum Shift Keying (MSK) Modulation in the Medium Frequency (MF) band in which Marine Radiobeacons operate. Otherwise, this document is readily applicable to many other DGPS applications including terrestrial and satellite links.

Performance parameters are defined in order to establish common terms of reference for evaluation, comparison, and certification. Where appropriate, minimum performance levels are specified; otherwise, minimum performance depends on the requirements for the specific application, and will be published in the service provider's broadcast standard.

A set of Reference Station/Integrity Monitor (RSIM) Messages is defined in order to standardize equipment interface parameters and to facilitate the flow of information between the various equipment (Reference Station, Integrity Monitor, Transmitter/RSIM Interface Module, and Control Station) regardless of the manufacturer. Within this specification, RTCM Recommended Standards For Differential NAVSTAR GPS Service pseudorange correction and ancillary messages are denoted as RTCM messages, and RTCM SC104 RSIM messages are denoted as RSIM messages. Type 1 RTCM messages are denoted RTCM #1, and Type 1 RSIM messages are denoted RSIM #1.