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## GFZRNX-QC: Advanced GNSS Data Processing and Quality Control for Multi-System Observations

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GFZRNX-QC software is designed to streamline the processing of Receiver Independent Exchange Format (RINEX) observations and the generation of overall information by providing a robust and efficient solution for data cleaning and quality control. With a focus on multiple Global Navigation Satellite System (multi-GNSS) observations, GFZRNX-QC offers a comprehensive approach to ensuring data accuracy and reliability. GFZRNX-QC can allow users to efficiently manage and analyze data from various GNSS receivers, especially for low-cost GNSS receivers. The software incorporates advanced algorithms for data cleaning, helping users to eliminate inconsistencies and enhance the overall quality of GNSS observations. GFZRNX-QC conducts comprehensive quality control assessments on GNSS observations. This ensures that the processed data meets the highest standards of accuracy. The software generates detailed statistical results, offering insights into the performance and reliability of observations across the five major GNSS systems. This information aids researchers and analysts in making informed decisions. GFZRNX-QC produces various outputs that can be e.g. compatible to former processing tools like teqc. This can enhance user convenience and interoperability with other geodetic processing tools.

GFZRNX-QC has been extensively tested by utilizing multi-year data from IGS stations to enable comprehensive long-term statistical analysis. By combining efficient data processing, advanced cleaning algorithms, and extensive quality control measures, GFZRNX-QC serves as a valuable tool for researchers, geodesists, and GNSS professionals seeking reliable and accurate observations and overall information from multiple satellite systems.