

Standards for GNSS Data Submitted to CDDIS

Version 2.0 (2022-05)

Overview

The purpose of this document is to give data providers information about the types and standards of GNSS data that the CDDIS accepts for its archive. The CDDIS follows IGS standards outlined in the IGS Site Guideline documentation:

<http://kb.igs.org/hc/en-us/articles/202011433-Current-IGS-Site-Guidelines>

Other standards are required by the CDDIS to keep incoming data in formats consistent with those existing in the CDDIS archive and to maximize processing and archival efficiency. Data providers should review submitted data sets carefully to avoid uploading empty, corrupt, invalid, or duplicate files.

Accepted GNSS File Types

- GPS, GLONASS, and multi-GNSS data
- Data in daily, hourly, and high-rate sub-hourly increments (see below)
- Observation, navigation, and meteorological data
- Data in RINEX V2 format using the RINEX V2 filename format
- Data in RINEX V3 format using the long filename format
- Data in RINEX V4 format using the long filename format
- Observation data in the Hatanaka compact RINEX format (d-files); o-files and observation summary (s-files) are not accepted

File Formats

RINEX V2 filename format:

- Daily:
 - 30-second sampling rate (IGS standard)
 - Gzip compressed (file compression extension .gz)
 - Format example (case sensitive): **mmmmDDD#.YYt.gz** (IGS standard). For more information see: https://cddis.nasa.gov/Data_and_Derived_Products/GNSS/daily_30second_data.html
- Hourly:
 - 30-second sampling rate (IGS standard)
 - Gzip compressed (file compression extension .gz)
 - Format example (case sensitive): **mmmmDDD#.YYt.gz** (IGS standard). For more information see: https://cddis.nasa.gov/Data_and_Derived_Products/GNSS/hourly_30second_data.html
- High-rate:
 - 1-second sampling rate (IGS standard)

- Gzip compressed (file compression extension .gz)
- Format example (case sensitive): **mmmmDDDHMM.YYt.gz** (IGS standard). For more information see:
https://cddis.nasa.gov/Data_and_Derived_Products/GNSS/high-rate_data.html

For information on the RINEX V2 format, see:

<https://files.igs.org/pub/data/format/rinex211.txt>

Long filename format:

- Daily:
 - 30-second sampling rate (IGS standard)
 - Navigation files: sampling rate in the filename not required (IGS standard)
 - Gzip compressed (file compression extension .gz)
 - Format example (case sensitive):
XXXXMRCCC_K_YYYYDDDHMM_01D_30S_TT.fff.gz (IGS standard).
For more information see:
https://cddis.nasa.gov/Data_and_Derived_Products/GNSS/daily_30second_data.html
- Hourly:
 - 30-second sampling rate (IGS standard)
 - Navigation files: sampling rate in the filename not required (IGS standard)
 - Gzip compressed (file compression extension .gz)
 - Format example (case sensitive):
XXXXMRCCC_K_YYYYDDDHMM_01H_30S_TT.fff.gz (IGS standard).
For more information see:
https://cddis.nasa.gov/Data_and_Derived_Products/GNSS/hourly_30second_data.html
- High-rate:
 - 1-second sampling rate (IGS standard)
 - Navigation files: sampling rate in the filename not required (IGS standard)
 - Gzip compressed (file compression extension .gz)
 - Format example (case sensitive):
XXXXMRCCC_K_YYYYDDDHMM_15M_01S_TT.fff.gz (IGS standard).
For more information, see:
https://cddis.nasa.gov/Data_and_Derived_Products/GNSS/high-rate_data.html

For information on the long filename format, see:

<https://files.igs.org/pub/data/format/rinex303.pdf> and
https://files.igs.org/pub/data/format/rinex_4.00.pdf.

If there are any questions, please contact the CDDIS at:
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