

EARTH OBSERVATION MISSION CFI SOFTWARE

Release Notes – Version 4.27

1 INTRODUCTION

This note describes the changes introduced in the new release of the Earth Observation CFI software libraries.

2 NEW RELEASE DESCRIPTION

2.1 CFI Software and Documentation Delivery

The new versions of the CFI software libraries are the following:

- EO_FILE_HANDLING -- Version 4.27
- EO_DATA_HANDLING -- Version 4.27
- EO_LIB -- Version 4.27
- EO_ORBIT -- Version 4.27
- EO_POINTING -- Version 4.27
- EO_VISIBILITY -- Version 4.27

The following Software User Manuals have been updated accordingly:

- EO_FILE_HANDLING issue 4.27
- EO_DATA_HANDLING issue 4.27
- EO_LIB issue 4.27
- EO_ORBIT issue 4.27
- EO_POINTING issue 4.27
- EO_VISIBILITY issue 4.27
- GENERAL issue 4.27

2.2 Compilation software and platform

This release of the CFI libraries are provided for LINUX, MACOS and WINDOWS platforms.

- LINUX 64-bits:

- Linux 4.10 (Ubuntu 17.04) Operating System
- gcc compiler version 6.3.0 (for linking the software to a C application)
- glibc 2.24
- LINUX 64-bits (Legacy):
 - Linux 2.6.35 (Ubuntu 10.10) Operating System
 - gcc compiler version 4.5.4 (for linking the software to a C application)
 - glibc 2.12
- PC WINDOWS 64-bits:
 - Microsoft Windows 10 Professional Operating System
 - Microsoft Visual Studio 2022 (for linking the software to a C application)
- PC WINDOWS 64-bits (older):
 - Microsoft Windows 7 Professional Operating System
 - Microsoft Visual Studio 2017 (for linking the software to a C application)
- MACOSX on Intel (64-bits):
 - Mac OS X version 10.12 (the libraries and executables have been compiled with compatibility with version 10.9 onwards).
 - gcc provided with Xcode 9.2 (for linking the software to a C application)
- MACOSX Apple M2 Max on Arm (64-bits):
 - MACOS 13.5.2 (the libraries and executables have been compiled with compatibility with version 13.5.2 onwards).
 - gcc provided with Xcode 14.3 (for linking the software to a C application)

Note that the distributed binaries have been generated with no debug.

2.3 Installation packages

The following installation packages are provided:

- EOCFI-4.27-CLIB-LINUX64_LEGACY.zip
- EOCFI-4.27-CLIB-LINUX64.zip
- EOCFI-4.27-CLIB-MACIN64.zip
- EOCFI-4.27-CLIB-MACARM64.zip
- EOCFI-4.27-CLIB-WINDOWS64.zip
- EOCFI-4.27-CLIB-WINDOWS64-V10.zip

3 CLOSED SPRS

Anomaly number	Description ANR
952	Inconsistent latitude/longitude change rate results
1027	Leap Seconds: UTC/TAI ANX times before leap second insertion time are modified
1029	EOCFI DEM Performance and Numerical Issues
1036	JAVA cfiError.getMsg triggers segmentation fault
1037	Typographical issues in code and documentation
1040	JAVA Target interface issues when used with multiTargetInter
1041	xo_orbit_cart_init() gets stuck in infinite loop when orbit input data is ill defined
1042	xo_orbit_init_file_precise SEGFAULT if orbit0 = NULL
1043	xo_orbit_init_file_precise fails when using a Restituted Orbit File
1045	Copernicus/Generic DEM data_source documentation is missing

4 NEW REQUIREMENTS

The following new features/requirements have been implemented.

Anomaly number	Description ANR
844	Use the NORAD catalogue number to identify TLE record instead of Name
1038	Add missing functions to C++ API
1046	Update the default mean eccentricity values for TRUTHS and CRISTAL
1051	Include EarthCARE TLE parameters in xl_sat_util.c

5 KNOWN PROBLEMS

There are no known problems.