

# EARTH OBSERVATION MISSION CFI SOFTWARE

## Release Notes – Version 4.26

### 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 4.26
- EO\_DATA\_HANDLING -- Version 4.26
- EO\_LIB -- Version 4.26
- EO\_ORBIT -- Version 4.26
- EO\_POINTING -- Version 4.26
- EO\_VISIBILITY -- Version 4.26

The following Software User Manuals have been updated accordingly:

- EO\_FILE\_HANDLING issue 4.26
- EO\_DATA\_HANDLING issue 4.26
- EO\_LIB issue 4.26
- EO\_ORBIT issue 4.26
- EO\_POINTING issue 4.26
- EO\_VISIBILITY issue 4.26
- GENERAL issue 4.26

#### 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-4.26-CLIB-LINUX64\_LEGACY.zip
- EOCFI-4.26-CLIB-LINUX64.zip
- EOCFI-4.26-CLIB-MACIN64.zip
- EOCFI-4.26-CLIB-MACARM64.zip
- EOCFI-4.26-CLIB-WINDOWS64.zip
- EOCFI-4.26-CLIB-WINDOWS64-V10.zip

### 3 CLOSED SPRS

Anomaly number	Description ANR
978	Enable support for Mac M1 processor
988	Activate MEMCHECK/COVERAGE//PROFILE_CHECK
991	xd_xml_validate is not thread safe
1018	Leap Second handling in Restituted Attitude File
1019	Segmentation fault when using file containing multiple <covarianceMatrix> elements
1021	xo_orbit_init_file: Actual error codes do not match the documentation
1023	Station visibility outputs negative number of seconds
1024	Station visibility: segmentation fault if number of mask points > 360
1025	Error "Input mean eccentricity < 0" when using ORBPRES modelling circular orbit
1032	Error during EOCFI orbit initialisation and interpolation
1033	Error/warning table incomplete for xp_target_altitude

### 4 NEW REQUIREMENTS

The following new features/requirements have been implemented.

Anomaly number	Description ANR
995	Update gen_osf_* tools (and underlying functions) to support Longitude drift
996	Add API support for Longitude drift
1016	Changes in explorer_visibility to support longitude drift

### 5 KNOWN PROBLEMS

[EOCFI-ANR-0952] Inconsistent latitude/longitude change rate results