# Compliance sheet — star-calendar

Everything a supplier qualification, a legal review or an export check usually asks about star-calendar 0.1.0, in one document.

## 1. Identity

| | |
|---|---|
| Document | STAR-PKG-STAR-CALENDAR-EN · v2.3 · 2026-11-14 |
| Package | star-calendar |
| Version | 0.1.0 |
| Capability | star.time.calendar |
| Maturity | Released & Verified (RELEASED) |
| Python | >=3.9 |
| Source commit | dc09f61d |
| Source | https://github.com/Andrea07072000/S.T.A.R.-/tree/main/packages/star_calendar |

## 2. Licence and obligations

Apache License 2.0. You may use, copy, modify and distribute it, also commercially, and you receive a patent licence from the contributors. When you redistribute it: keep the LICENSE file and the copyright notices (and a NOTICE file, if a future version adds one), and state in modified files that you changed them. You may not use the S.T.A.R. name to endorse your product.

## 3. What it needs at run time

Nothing beyond the Python standard library: it works offline.

## 4. Integrity

SHA-256 fingerprints of the files published on this website. Check a downloaded file with:

```
python -c "import
hashlib,sys;print(hashlib.sha256(open(sys.argv[1],'rb').read()).hexdigest())" star_calendar-
0.1.0-py3-none-any.whl
```

| FILE | SHA-256 |
|---|---|
| star_calendar-0.1.0-py3-none-any.whl | de705ff2aadbb52c80b8061a710ca9c6c1e31d3ef58699ff4e4f850c436542c1 |
| star_calendar.py | 5f13630e7f6b18a15f81f71232bdde3fb705581e12123545f47f30302d4d7e29 |
| star_calendar-0.1.0-source.zip | 434f7820a8a2a510b80274193b015d731cd033f1e3d7d97c369a46b02b847624 |

# 5. What it does, and its limits

Exact integer conversion between calendar dates and Julian Day Numbers in the Julian, proleptic Gregorian and civil calendars from JDN 0 to year 9999; identical to ERFA, CPython datetime and NAIF SPICE on 9014 dates, and dates that do not exist are refused.

A calendar, not a time scale: no leap seconds, no UTC/TT/TDB conversion, no time zones, no local adoption dates of the Gregorian calendar (the civil switch is the papal one of October 1582).

- `jdn(year, month, day, calendar)` and `calendar_date(jdn, calendar)` for `"gregorian"`, `"julian"` and `"auto"` (Julian up to 1582-10-04, Gregorian from 1582-10-15); astronomical year numbering; valid from JDN 0 to 9999-12-31.
- `julian_date(...)` returns the pair (JD at the preceding midnight, fraction of day): the sum is the Julian Date and the pair keeps a nanosecond that a single float would lose. `weekday(jdn)` (0 = Monday), `day_of_year(...)`.
- Measured: the same day number as ERFA, CPython `datetime` and NAIF SPICE (MIXED calendar) on 9014 dates, zero mismatches, including years B.C. and every day around the 1582 switch.
- Every function returns integers (or the documented pair) or raises `ValueError`: non-integer or boolean year, month, day or day number; a date that does not exist in the calendar (29 February 1900 Gregorian, 1582-10-05 to 1582-10-14 civil); an unknown calendar; a time outside the day; anything outside the valid range.

# 6. Export, use and certification

The package is published and freely available. That usually takes software out of export-control lists, but not every use of it: read the page on space activities and export control before using it in a controlled programme. It is not certified or qualified for flight; the evidence describes what was tested and how.

# 7. Citation and bill of materials

```
@software{cavazzini_star_calendar_0_1_0,
  author  = {Cavazzini, Andrea},
  title   = {{star-calendar}: Calendar dates and Julian day numbers, exactly},
  version = {0.1.0},
  year    = {2026},
  url     = {https://andrea07072000.github.io/S.T.A.R.-/software/star_calendar/},
  note    = {Apache-2.0. Source: https://github.com/Andrea07072000/S.T.A.R.-, commit dc09f61d}
}
```

CITATION.cff · BibTeX · SBOM CycloneDX 1.5 · SBOM SPDX 2.3

# 8. Warranty and liability

Provided "as is", without warranties or conditions of any kind (Apache License 2.0, sections 7 and 8), to the extent the law allows. This never excludes liability that the law does not allow to exclude.

Related: space activities and export control · acceptable use · evidence and limits · licence texts