Compliance sheet — star-geodesy

Everything a supplier qualification, a legal review or an export check usually asks about star-geodesy 0.1.1, in one document.

1. Identity

Document	STAR-PKG-STAR-GEODESY-EN · v2.3 · 2026-11-14
Package	star-geodesy
Version	0.1.1
Capability	star.geodesy.ecef
Maturity	Beta (VERIFIED)
Python	>=3.9
Source commit	dc09f61d
Source	https://github.com/Andrea07072000/S.T.A.R.-/tree/main/packages/star_geodesy

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_geodesy-
0.1.1-py3-none-any.whl
```

FILE	SHA-256
star_geodesy-0.1.1-py3-none-any.whl	31c32d559f5635c58b4bfd779c3158fdfe5ee901cc60520bb56381247aaf3911
star_geodesy.py	b64fb8d6cbe9e2df7fec7f89298e3ffe4534e3ae5960dc4d050a1584739261b4
star_geodesy-0.1.1-source.zip	eafb4a4fccf02fc1c7928ac20136e4b230136d1b1d3111fc772f0c37bccd3f43

5. What it does, and its limits

WGS-84 geodetic coordinates to and from ECEF. Standard library only.

Other datums, geoid heights, geodesic distances (see XC-003), any flight use.

- `geodetic_to_ecef(lat_deg, lon_deg, h_m) -> (x, y, z)` in metres (WGS-84, NIMA TR8350.2 constants).
- `ecef_to_geodetic(x, y, z) -> (lat_deg, lon_deg, h_m)`, iterative to 1e-14 rad at ANY altitude; RuntimeError if it does not converge; the forward transform of the result closes to < 1 micrometre.
- Invalid input raises `ValueError` (|lat| > 90, Earth's centre).

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_geodesy_0_1_1,
  author  = {Cavazzini, Andrea},
  title   = {{star-geodesy}: WGS-84 geodetic to/from ECEF with exact inversion at any
altitude},
  version = {0.1.1},
  year    = {2026},
  url     = {https://andrea07072000.github.io/S.T.A.R.-/software/star_geodesy/},
  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