

# EDIGéO module

The EDIGéO module is a Geotools plugin to read EDIGéO format files. The module implements a Geotools DataStore responsible for files with the `.thf` extension. There are also many others classes responsible of all other EDIGéO files (`.scd`, `.dic`, `.vec`). The module has been recently developed and not yet committed into Geotools project. It is integrated to the [Spatial Data Integrator](#) project (spatial ETL). Due to this integration, development of this module is based on 2.3.x branch. Upgrade to 2.4.x branch is planned but not yet tested.

## The EDIGéO Format

The EDIGéO exchange format is a TEXT based file format promoted by the french national mapping agency, IGN, at European level. EDIGEO is an extension / modification of DIGEST formats and has a very **rich** (even overwhelming) description capability. EDIGEO is mostly used by the Cadastre Agency or the DGI to provide data.

An EDIGEO exchange is made up of :

- a single `.THF` file : general description of the exchanged geo dataset (more than one geo dataset can be supported by the EDIGEO standard but only one is supported by the EDIGEO module at this time).
- For each geo dataset, a set of description data :
  - a single `.GEN` file : generality about the geo dataset described
  - a single `.GEO` file : referencing and Coordinate System information
  - a single `.QAL` file : dataset quality information
  - a single `.DIC` file : dictionary / objects, primitive and relationships classification
  - a single `.SCD` file : data model of the geo dataset
  - a subset of geo data (`.VEC` files) :
    - a "Spaghetti" data file (S1)
    - a "Parcelles" data file (T1, topological data)
    - a "Feuilles" data file (T2, topological data)
    - a "Sections" data file (T3, topological data)

## Module architecture

The module can be split into two distinct parts.

The first part of the module is independent of Geotools; this part parses all the text files (`.THF`, `.DIC`, `.SCD`, `.VEC`).

The second part of the module provides the actual interface to the Geotools library. This part defines:

- a DataStore : class `EdigeoDatastore`
- a FeatureReader : class `EdigeoFeatureReader`
- a DataStoreFactory : class `EdigeoDataStoreFactory`

Both parts are gathered in the same package : `org.geotools.data.edigeo`

## Development directions

What needs to be done first:

- JUnit test cases --> Done
- Evaluate module performance : due to the EDIGEO standard, parsing could be very costly. Especially dealing with topological objects.