

## Reception Stations

The data contained in GEONETCast is delivered via communication satellites. For Africa, the EUTELSAT 5 (situated at 5 degrees west) has been selected to disseminate the services. A low cost ground reception infrastructure, basically a C-band parabolic antenna with LNB, pointed to the EUTELSAT 5 and connected to a computer containing a digital video broadcasting (DVB) board, enables one to receive and store the data locally. The DVB board in the system ensures that the data is captured and stored.

Currently the GEONETCast data stream is a one way system, therefore only reception is possible. This is a continuous data stream. Data is broadcasted on a 24 hour - 7 days basis. Non operation of a ground receiving system results in a data gap, as data is broadcasted only once.



*Pointing Antennas for GEONETCast reception*

GEONETCast is currently disseminating images derived from various geostationary and polar orbiting sensors/platforms, as well as, derived products. As the dissemination system started, it provided the European and African national meteorological centres with relevant and timely information mainly focussing on meteorological applications. Currently, the system is rapidly expanding and is disseminating environmental data from various third party data providers as well. The Group on Earth Observation (GEO) sees the system as the data delivery backbone to provide in-situ, airborne and space borne data as part of the Global Earth Observation System of Systems (GEOSS) to the user community. Further details on the images and products the so called “Product Navigator” can be consulted, are available at [EUMETSAT](#).

A single reception station can potentially receive all the data being transmitted from one communications satellite independent of the data provider. A typical reception station comprises a standard PC with DVB card inserted and a satellite off-set antenna fitted with a digital universal V/H LNB for Ku-band, or fitted with a circular polarisation feedhorn, bandpass filter and special LNB for C-band. To decode and decrypt the DVB signal, e.g. for GEONETCast, EUMETCast, Client Software and in some instances, EUMETCast Key Unit (EKU) are also required.

The cost of reception stations is kept to a minimum by utilising industry open standards to the maximum extent possible thus resulting in an adaptable front-end solution to users' applications.

In addition to the front-end equipment, data processing software will be required. These software applications are provided as free and open source utilities here. Links to other providers can be obtained from EUMETSAT.

Note that from the second half of 2014, the EUMETCast Europe service will migrate from DVB-S to DVB-S2. Latest developments are provided by [EUMETSAT](#).