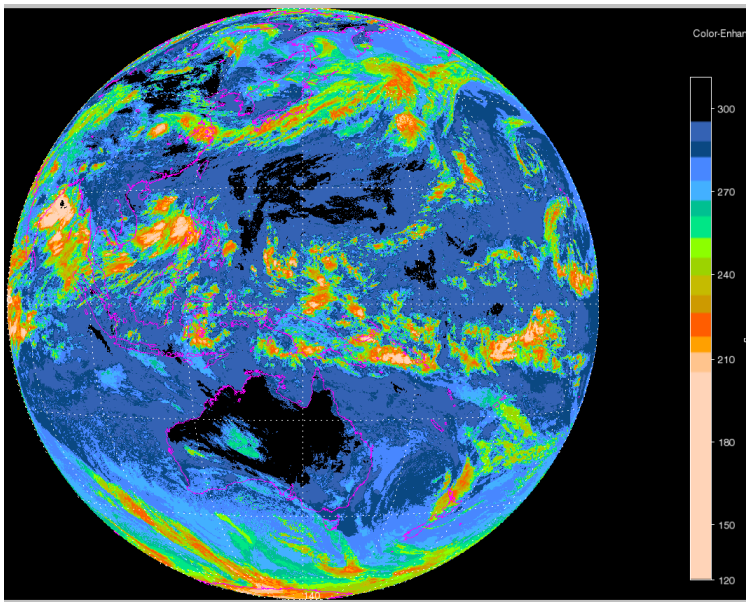
GEOSAT500

geostationary satellite ground station



Features

- Complete turnkey system for use by forecasters with integrated reception and processing
- All MT-SAT modes and all channels received and processed
- Intuitive easy-to-use interface
- Full range of forecasting tools with Dvorak technique, topography, overlays, zooming and panning
- Integration and display of multiple data sources including GRIB, Synops
- Level 2 products such as SST, cloud classification
- All common satellite formats such as HDF, NetCDF, Level 1B, PDS

Applications

The ES&S GEOSAT500 groundstation is a high-performance system designed to receive data from the Japanese Meteorological Agency's MTSAT spacecraft. It is a complete turn-key system, providing all hardware and software necessary to receive CCSDS transmissions from the spacecraft and process the data into image files.

The MTSAT spacecraft is a geostationary satellite which produces detailed images of the earth for weather forecasting, cyclone tracking and research.

This satellite transmits regular images of the earth, allowing forecasters to make weather predictions and follow the path of cyclones.

The GEOSAT500 MTSAT groundstation comprises a fixed parabolic dish, LNA, downconverter, and three or more computers:

1. Acquisition Workstation. Houses the receiver and pre-processes the raw data.

2. Data Processing Workstation. Receives pre-processed data from the Acquisition Workstation and produces final image products according to user-defined setups.

3. One or more Display Workstations. Each Display Workstation runs the ES&S METEOR product for the display and analysis of satellite imagery.

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Technical Specifications

Antenna

Aperture	3.6/3.7m
3dB Beamwidth	3.6 Degrees
Antenna gain at 1.7GHz	34dB
Material	Aluminium
Coating	Polyester Powder Coating

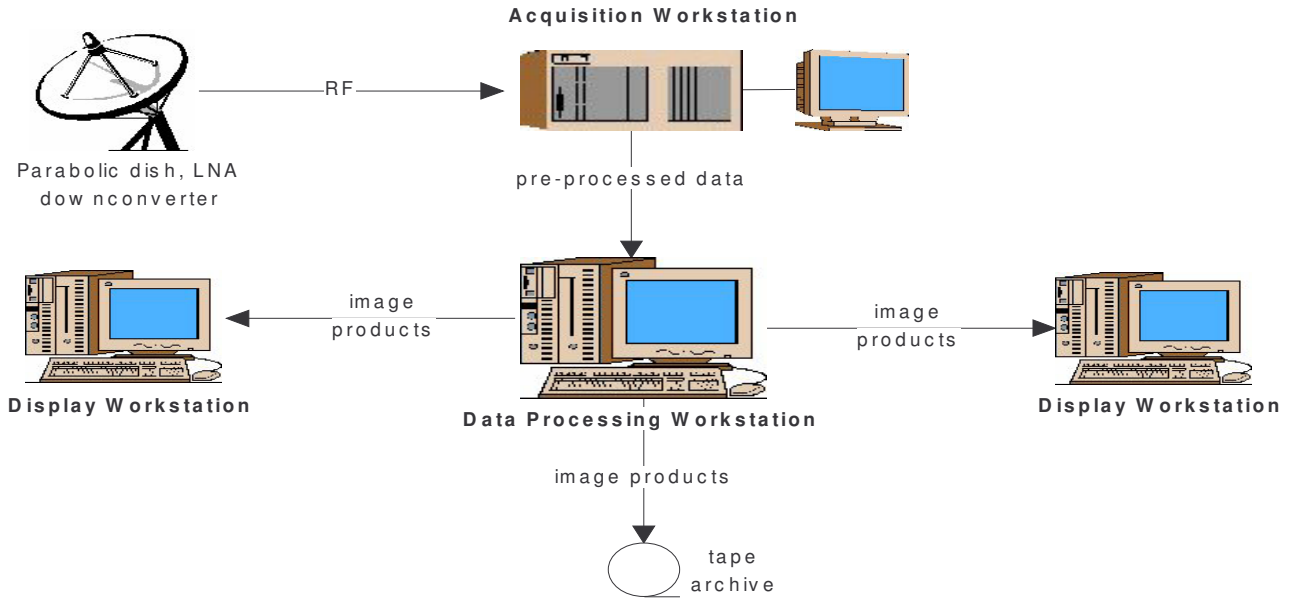
Downconverter

Noise Figure	1.2dB typical
Input center frequency	1691.000 MHz
Output center frequency	137.500 MHz
Conversion gain	>50dB, 52dB typical
Output impedance	50 ohms
Temperature (operating)	-40 to 60 degrees C

Receiver

Input frequency	126 to 154MHz
Input dynamic range	-90 to -50dBm
Input impedance	50 ohms
Demodulation modes	QPSK, BPSK, PSK
Support symbol rates	0.1 to 2.7 MSPS
Temperature (operating)	0 to 50 degrees C non-condensing
Control interface	RS-232 at 9600 baud

Typical System Configuration



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