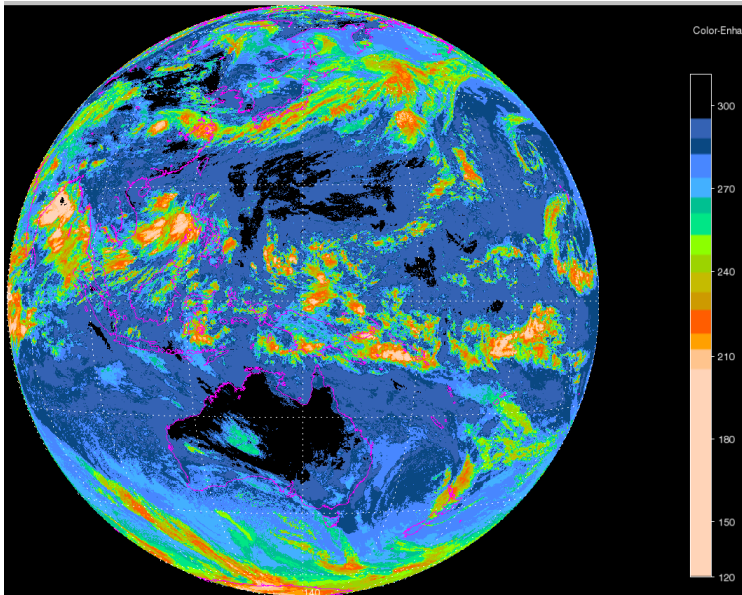


GEOSAT500

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:

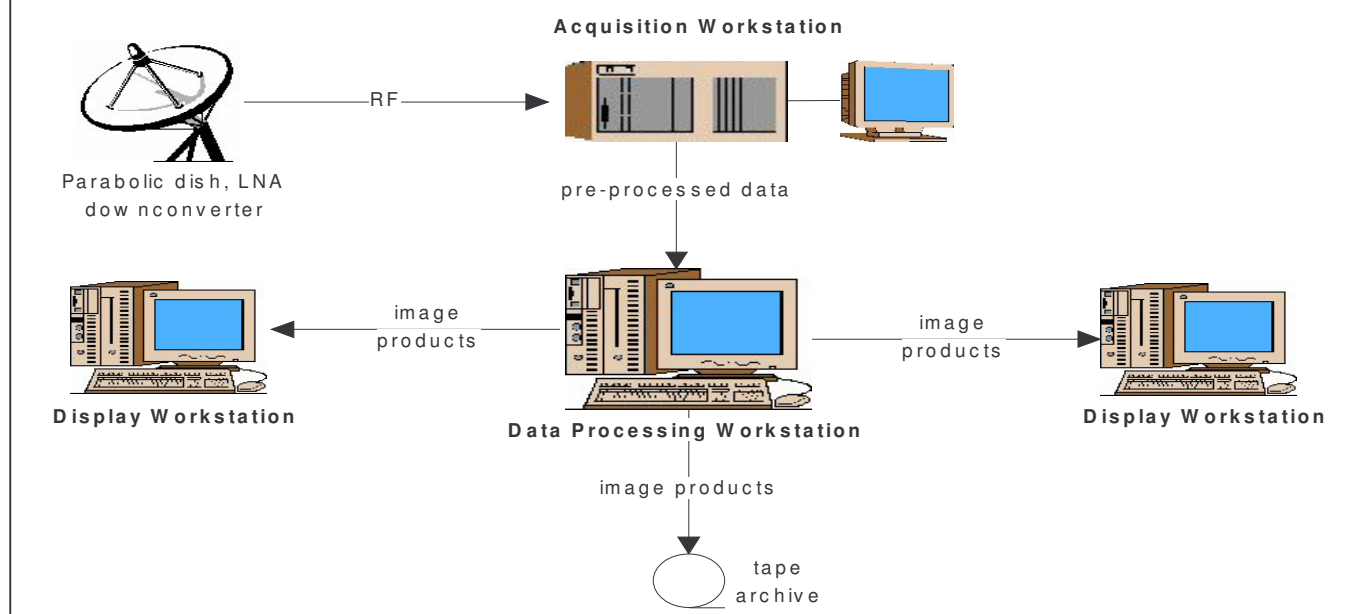
1. Acquisition Workstation. Houses the receiver and pre-processes the raw data.
2. Data Processing Workstation. Receives pre-processed data from the Acquisition Workstation and produces final image products according to user-defined setups.
3. One or more Display Workstations. Each Display Workstation runs the ES&S METEOR product for the display and analysis of satellite imagery.



Technical Specifications

Antenna		Receiver	
Aperture	3.6/3.7m	Input frequency	126 to 154MHz
3dB Beamwidth	3.6 Degrees	Input dynamic range	-90 to -50dBm
Antenna gain at 1.7GHz	34dB	Input impedance	50 ohms
Material	Aluminium	Demodulation modes	QPSK, BPSK, PSK
Coating	Polyester Powder Coating	Support symbol rates	0.1 to 2.7 MSPS
Downconverter		Temperature (operating)	0 to 50 degrees C non-condensing
Noise Figure	1.2dB typical	Control interface	RS-232 at 9600 baud
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		

Typical System Configuration



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