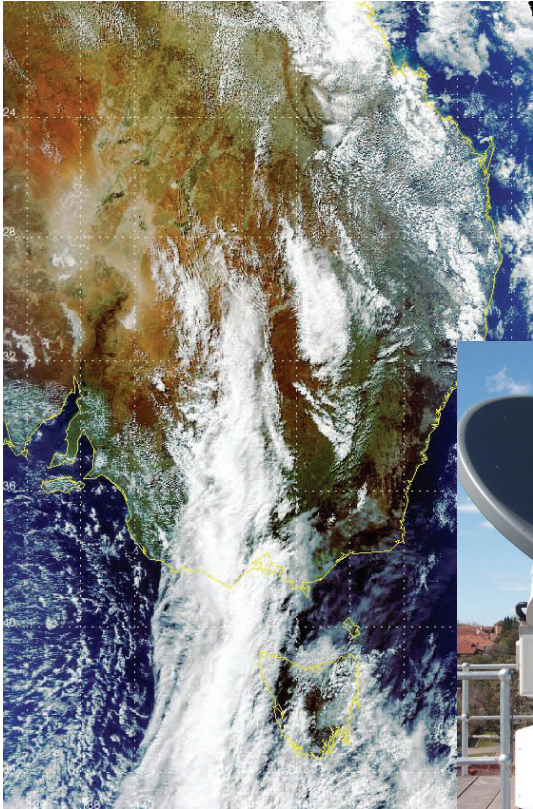


SATRAX700

X-band reception system

Features

- High performance X-band reception
- XY tracking mount
- Flexible and upgradeable
- Customisable
- Robust design for use without a radome
- Low demodulation loss
- Utilises the ESS3000 multi-mode receiver
- Compatible Windows and Linux operating systems



Applications

The es&s SATRAX700 X-band groundstation is a high performance groundstation designed to receive data from the new generation of X-band satellites.

The SATRAX700's rugged and precise design, designed entirely by es&s has applied the results of over 15 years experience in the area of satellite tracking.

The latest technologies and techniques have been used to produce a system which is able to implement all the functions required to automatically track, receive, demodulate and process remote sensing data in real time with minimum user intervention. In addition, high speed processing has been implemented on scientific workstations to allow the generation of user specified processing of selected regions of interest.

A fully automated system, the SATRAX700 earth station offers the latest in hardware and software technology for a wide variety of ocean, land, and atmosphere applications.

These applications include:

- Meteorology and Weather Forecasting
- Physical & Biological Oceanography
- Hydrology
- Fisheries
- Wildlife Research
- Agriculture & Forestry
- Naval & Coast Guard Operations
- Vulcanology
- Climate and Global Change Studies
- Land-based Change Detection Studies (e.g. urbanization, tropical deforestation, desertification)



Technical Specifications



MOUNT

Mount configuration	X/Y
Antenna diameter	2.4m
Pointing accuracy	0.1 deg
Wind loading (operational)	120 km/hr
Wind loading (survival)	200 km/hr
Slew rate	> 5 deg/sec
Environmental	IP65
Mains supply	110/220/240 AC
Temperature range	-10 to 45 degrees C



FEED and LNA

Gain	45 dB
Noise figure	45 deg K
Frequency	7.7 - 8.5 GHz
Polarization	RHCP
Input Freq	7.7 - 8.4 GHz
LNA Gain	45 dB
LNA NF	0.6 dB



ESS3000 MULTIMODE RECEIVER

Modes	QPSK, BPSK, PSK
Demodulation	fully digital (FPGA)
Configuration	file download
Internal OS	Linux
Data rates	0.5Mbits/s - 20 Mbits/s
Decoders	Viterbi (R=1/2, 3/4; K=7)
Output	TCP/IP

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