



OBERON

XL & XLE

XL EOS Direct broadcast polar-orbiting satellite reception ground stations



Oberon-XL gives you the complete picture

Designed for more than 160 ocean, land, and atmospheric analysis applications, the Oberon-XL ground station is a comprehensive and turn key remote sensing solution.

OBERON-XL ADVANTAGES

- High precision X/L-band reception
- XY tracking mount
- Flexible and upgradeable
- Robust design can be used without a radome
- Excellent demodulation performance
- Utilizes the ESS3000 multi-mode receiver
- Fully automatic operation
- Interfaces with EEC's powerful Proteus satellite image processing package

The complete satellite data collection system

The Oberon-XL ground station gives you the tools you need to collect data from a wide range of polar-orbiting environmental observation satellite systems, including those operated by NASA and NOAA, and analyze that information depending on the system configuration that fits your specific needs. Covering land, sea, and air, it provides the highest-quality imagery and sounding data profiles for use by meteorological, oceanographical and disaster-relief agencies, military applications, and research organizations.

Integrated software offers both high- and low-resolution options for the collection and processing of X and L-band data, and provides baseline services in a seamless manner.

From manufacturing and engineering to final installation and training, the Oberon-XL ground station is a turn key system created specifically to deliver the complete picture from meteorological, environmental, and military direct-broadcast satellites.

APPLICATIONS

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



DATA SOURCES:

- NASA Terra and Aqua
- US NOAA
- EUMETSAT - METOP
- NSMC Fengyun
- Suomi NPP
- JPSS-1

LEVEL-2 SCIENCE PRODUCTS DERIVED FROM:

- Terra/Aqua MODIS
- NOAA/MetOp AVHRR and ATOVS payloads
- MetOp IASI science products are generated if on site GTS feed available
- Suomi NPP VIIRS

Oberon-XL is a reliable, high-performance and fully automated permanent satellite reception system

OBERON-XL PERFORMANCE SPECIFICATIONS

PEDESTAL

Pedestal Configuration	X/Y
Antenna Diameter	2.4m
Pointing Accuracy	0.05 deg
Wind Loading	120 kph operational, without radome
Slew Rate	> 5 deg/sec
Environmental	IP65
Mains Supply	110/220/240 AC
Temperature Range	-35 to 50C
Encoder Accuracy	0.01 deg

FEED

Frequency Range	7.45 to 8.4 GHz
Polarization	Input – Circular, Output – Linear
Axial Ratio	± 0.25 dB
Insertion Loss	0.1 dB

LOW NOISE AMPLIFIER

Frequency Range	7.45 to 8.4 GHz
Gain	45 dB
Gain Flatness	± 1 dB
Noise Figure	0.7 dB (50K)

L-BAND DOWNCONVERTER

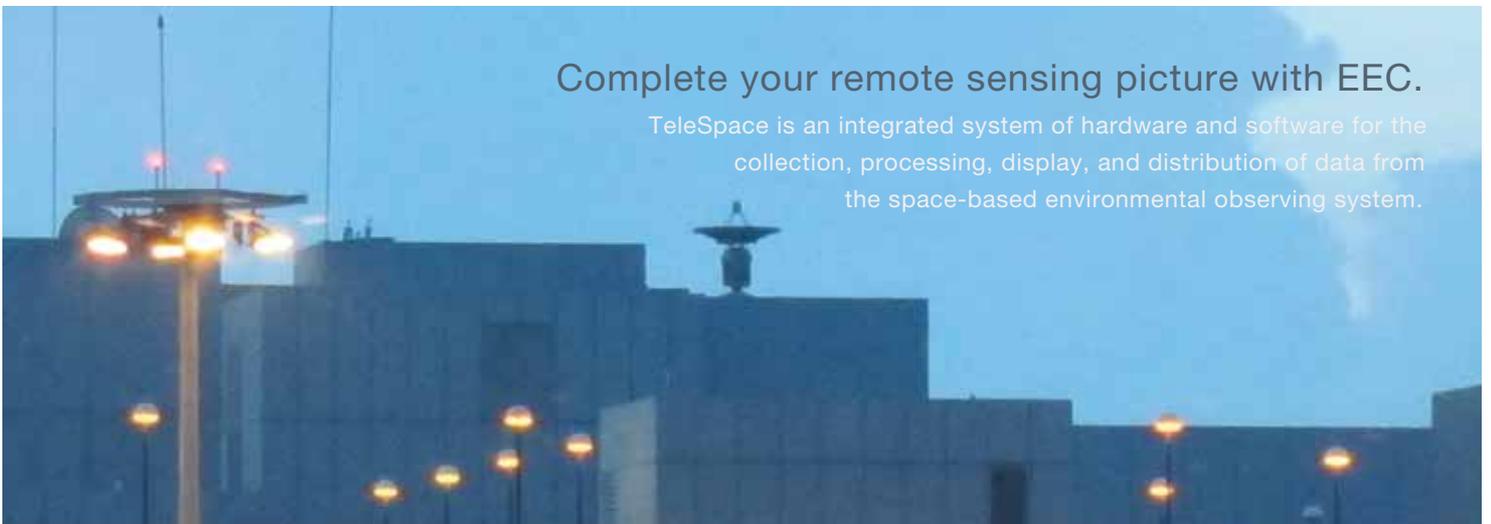
Input Frequency:	1687-1707MHz
Output Frequency:	140MHz
Bandwidth:	15MHz

X-BAND DOWNCONVERTER

Type	Dual Conversion, Synthesized
Input Frequency:	7.7 - 8.3GHz
Output Frequency:	140MHz
Bandwidth:	20MHz

Complete your remote sensing picture with EEC.

TeleSpace is an integrated system of hardware and software for the collection, processing, display, and distribution of data from the space-based environmental observing system.



Oberon-XLE

Approved for European applications and designed to meet those specifications, Oberon-XLE offers the exact same robust and comprehensive applications as the Oberon-XL system.

OBERON-XLE ADVANTAGES

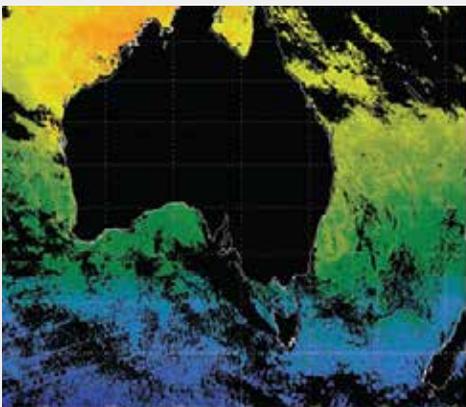
- A complete and fully integrated bundle that receives X and L band direct broadcast data and processes it to level 2
- Automatic TLE updates as well as remote diagnosis and software updates
- Simple and affordable installation
- Typical time from purchase to installed and operational system is 4 months

DATA SOURCES:

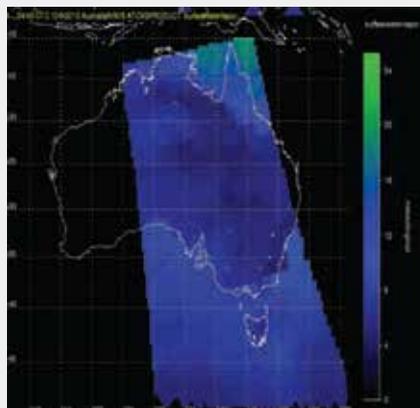
- X-Band Terra
- L-Band METOP EPS
- Aqua MODIS
- NOAA POES HRPT
- NPP VIIRS
- Feng Yun
- JPSS-1



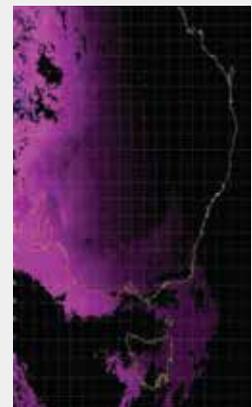
DISPLAY EXAMPLES



Sea Surface Temperature Mosaic (L-Band)



Surface Water Vapor (L-Band, ATOVS)



Moisture Profile (X-Band)

OBERON-XLE PERFORMANCE SPECIFICATIONS

ANTENNA:

Reflector	2.4m, solid spun aluminum		
F/D	360		
Feed	X-Band prime focus scalar with L-Band on axis feed		

X-BAND:

X-Band Operating Frequency	7700 MHz	thru	8500 MHz
Reflector 3 dB Beamwidth	1.05°		0.97°
Reflector Gain	43.5 dB		44.2 dB
*G/T Minimum With System Noise Temp <100 K	23.5 dB/K		24.2 dB/K
*G/T Typical Performance	24.0 dB/K		24.6 dB/K
LNC Noise Temperature	<50 K		
LNC Overall Conversion Gain X to IF	60 dB typical		
Synthesized Downconverter Step Size	100 KHz		
Local Oscillator Temperature Stability	+ 5 ppm		
IF Output	720 MHz		

L-BAND:

L-Band Operating Frequency	1682 MHz	thru	1710 MHz
Reflector 3 dB Beamwidth	4.9°		
Reflector Gain	30.0 dB		
*G/T Minimum With System Noise Temp <120 K	7 dB/K		
*G/T Typical Performance	7.5 dB/K		
LNB Noise Temperature	90 K (preselected)		
LNB Conversion Gain	60 dB typical		
Local Oscillator Frequency (Block Downconverter)	100 KHz		
Local Oscillator Temperature Stability	+ 2.5ppm		
IF Output	126 MHz	thru	154 MHz

DEMODULATORS:

Mechanical	1 U rack mounted
Interface	LVDS, TTL, RS422 clock and data, Ctrl via Ethernet
High Data Rate Modes	OQPSK, QPSK, BPSK
Low Data Rate Modes	QPSK, BPSK, PSK

OBERON-XL & OBERON-XLE

Turn key polar-orbiting satellite ground stations from EEC



A FULL RANGE OF FORECASTING HARDWARE AND SOFTWARE WITH AN EASY-TO-USE INTERFACE



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SIDPOL™ Radar is patented technology, covered by U.S. Patent No. 6,859,163 B2, U.S. Patent No. 7,049,997, U.S. Patent No. 7,439,899, U.S. Patent No. 7,551,123, U.S. Patent No. 7,683,828, U.S. Patent No. 7,750,573, U.S. Patent No. 7,760,129, U.S. Patent No. 7,880,665, U.S. Patent No. 7,450,693, U.S. Patent No. 7,369,082, 13041 (OAPI Region), 009250 (Eurasia) and 009249 (Eurasia).

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