TELESPACE
Satellite Ground Stations From EEC

OBERON

XL & XLE

XL EOS Direct broadcast polar-orbiting satellite reception ground stations

REMOTE SENSING

POWERED BY EEC EECWEATHERTECH.COM

OBERON-XL PERFORMANCE SPECIFICATIONS

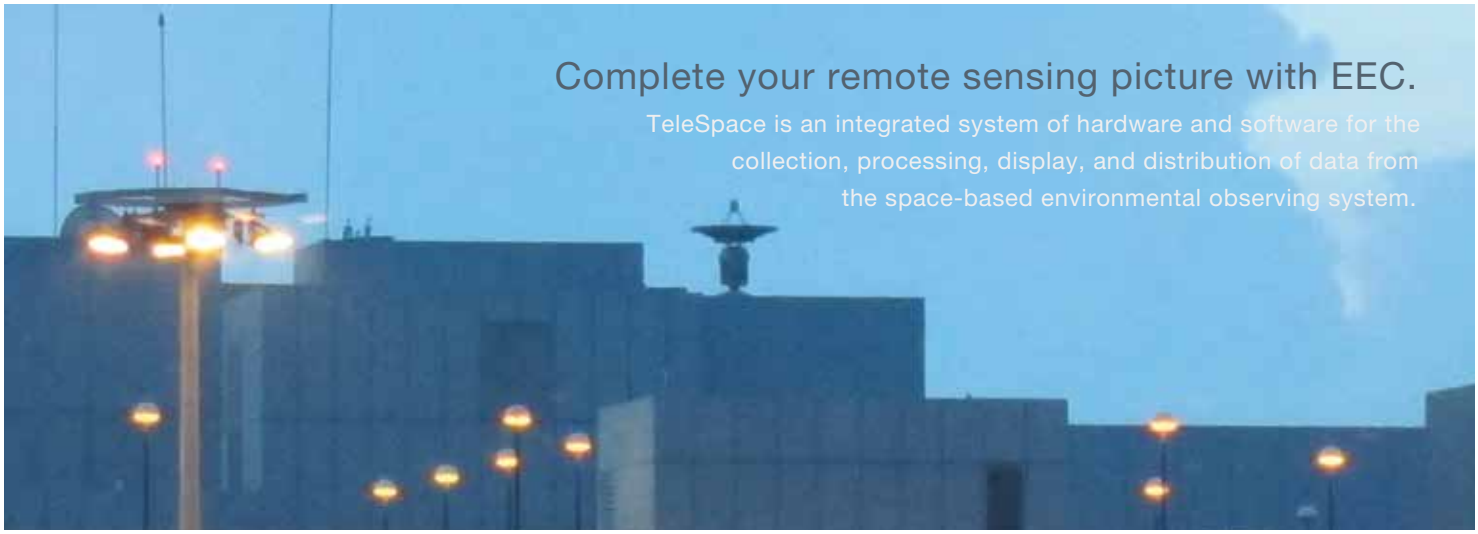
PEDESTAL	
Pedestal Configuration	X/Y
Antenna Diameter	2.4m
Pointing Accuracy	0.05 deg
Wind Loading	120 kph operational, without radome
Slew Rate	> 5 deg/sec
Environmental	IP65
Mains Supply	110/220/240 AC
Temperature Range	-35 to 50C
Encoder Accuracy	0.01 deg

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



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