



## Weather Satellite Receiving System NOAA HRPT, OrbiSat® Series

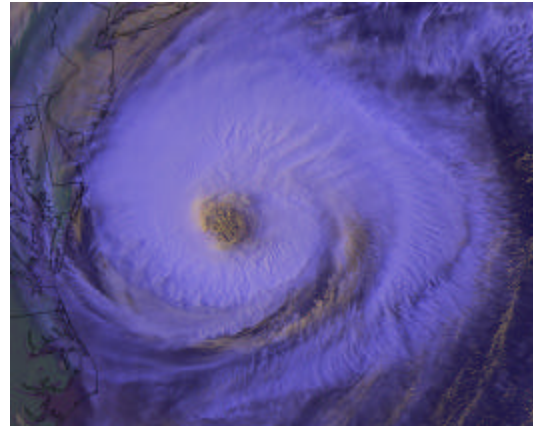
- **Receives real time NOAA HRPT data**
- **Complete professional system**
- **Easy set-up and configuration**
- **Background ingestion and multitasking**
- **Runs on Windows 95/98, NT or 2000 OS**
- **Upgrades for Fen-Yong and SeaWIFS**

The Morcom OrbiSat Series Digital Earth Station is a satellite acquisition and processing system for the real-time reception and display of the polar satellites AVHRR, high resolution images. The system is PC-based and operates in an interactive graphics environment. The system provides capability for tracking and receiving the signals of the NOAA polar orbiting satellites (versions are available for reception of other orbiting satellite transmissions). The system is ideal for tracking localized weather systems and viewing meteorological developments accurately.

The OrbiSat system receives the D Band digital signals from the NOAA satellites through the auto-tracking parabolic antenna and receiver module supplied with the system. The hardware is all integrated into a single high-quality PC-type workstation running Windows 95/98, NT or Windows 2000. In addition to the ingest software, the system is supplied with the SKYCEIVER VIEW® image processing software. This software allows the user to do complete multitasking, including background image ingest.

SKYCEIVER VIEW is a user friendly, customizable, icon-based application that has the following advanced features: 16-level color subscales, color bit slicing, zooming of any image up to 16 times of the original size, animation of images at programmable speeds, panning and scrolling, temperature and latitude/longitude readout by pointing the cursor, loop setup save and restore, multispectral image overlay capability,

alphanumeric and meteorological annotations, grid overlay on any loop can be enabled or disabled at the touch of a button, image cropping, file export, and flexible printing.



Hurricane "Emily" (NOAA HRPT)

Morcom offers a complete range of options for the OrbiSat System, like state of the art mass storage systems (for backup and archiving), network interface adapter card (10/100Mbps Ethernet), Uninterruptible Power Supply system (UPS available for 110VAC or 220 VAC, 60 or 50 Hz), black and white or full color laser printer, and additional workstations if required.

**About Morcom:** Our company was founded in 1984 and our staff has over 25 years of experience designing, building, and installing satellite ground stations to receive images from the meteorological satellites. With numerous systems installed and operating all over the world, Morcom is known for its reliability and quality of the products we sell. Morcom offers a wide range of satellite receiving ground stations for geostationary and polar orbiting satellites like GVAR and MODIS receiving systems.

**Our Warranty:** Morcom offers a one year warranty for this product. Our company supports this product with our worldwide service network.



# GOES GVAR, OrbiSat Series System Components and Specifications

## Parabolic Tracking Antenna

Our 4 ft. (1.2 m) parabolic antenna includes a computer controlled antenna positioner.  
Type: Solid aluminum  
Operating Frequency: 1.0-12.75 GHz  
Diameter: 4 ft. (1.2 m)  
Beamwidth: 0.375  
Finish: White powdercoat  
Azimuth Range: 358 degrees  
Elevation Range: 180 degrees  
Elevation speed: 3 degrees/second  
Gain: 23.7 dBi @ 1,700 MHz  
Weight: 120 lbs (59.4 Kg.)



## PC-HRPT-PSK AVHRR Receiver

This receiving module is integrated into the workstation and is used for reception of the digital weather image transmissions. The receiver is fed the signal from the feed/downconverter.  
IF Input Frequency: 128 to 145 MHz  
Frequency Step Size: 25 KHz  
Frequency Selection: Program controlled  
Demodulator Type: PSK-PLL demodulator  
Analog Output: BNC female -4Vpp  
Digital Output: RS-422 differential  
Size: ¾length ISA 8 bit card

## PC-HRPT-BFS AVHRR Synchronizer

For demodulation of the signal from the BPSK Receiver. This unit is integrated into the workstation.  
Input: RS-422 Differential from receiver  
Input Impedance: 120 Ohms  
Clock Recovery: DPLL  
Loop Bandwidth: Programmable  
Output: Word formatted to PC Bus  
Size: 1/2 size ISA 16 bit card

## Integrated Feed/Downconverter IFD-1700C

Receives the signals from the polar orbiting weather satellites. It is installed at the antenna.  
Noise Figure: 0.8dB (60K typical)  
Gain: 50 dB, typical  
RF Input Frequency: 1,693-1,710 MHz  
RF Input Bandwidth: 35 Mhz (3 pole filter)  
Output Freq.: 128-145 MHz  
Polarization: RHCP with antenna  
Frequency Stability: +/- 2 KHz, typical  
IF Output Connector: Type "N", female  
Finish: White powdercoat  
Power: 12 to 15 VDC @ 500 mA  
Weight: 2.2 lbs  
Environmental: -23 to +60 degrees C

## PC-STI/ATC-120 Antenna Positioner Controller

This PC controlled antenna positioner is used to accurately point the antenna during a pass to track the satellite.  
Power Requirements: 110/220VAC, 50-60Hz  
PC-STI/ATC-120 Interface: 9 pin "D" connector  
ATC-120/Positioner Interface: Custom Cable  
Tracking Modes: Current Position, Manual, Auto  
Readouts: Fault, LEDs for positioner's motors

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