

7.3m Meteorological Antenna System

1 Main functions and features

- It has the ability to receive meteorological satellite information.
- It can implement baseband data acquisition and frame synchronization formatting after satellite demodulation, and generate sensor packet data.
- It can realize the splicing, de-duplication and optimization of multi-station receiving data.
- The satellite processed type below:
FYC/1D,FY3A-HRPT/MPT/DPT,FY4,HY1B/2A,NOAA16/17/18/19,EOS-AM/PM,
NPP,YH and support for extended custom satellites.



Fig1-1 7.3m antenna

2 Technical specification

2.1 Antenna specification

- a) Operating Frequency : L-band: 1.65~1.71GHz
- b) Gain: 40.0dBi+20lg(f/1.69GHz)
- c) Polarization: Vertical/horizontal double linear polarization

- d) VSMR: 1.25:1
- e) Port isolation: $\leq -30\text{dB}$
- f) First sidelobe: $\leq -14\text{dB}$
- g) G/T value: $18.2\text{ dBi} + 20\lg(f/1.7\text{GHz})(20^\circ\text{EL, gain of LNA } 40\text{dB, noise temperature } 0.8\text{dB})$
- h) Pedestal type: AZ/EL type(Full motorized or limited)
- i) Drive speed:
 - EL: $0.02^\circ/\text{s} \sim 0.5^\circ/\text{s}$ (Continuously variable speed)
 - AZ: $0.02^\circ/\text{s} \sim 0.5^\circ/\text{s}$ (Continuously variable speed)
- j) EL: $5^\circ \sim 90^\circ$ (Continuously)
- k) AZ: $0^\circ \sim 360^\circ$ (Continuous or sectoral)
- l) POL.: $0^\circ \sim 180^\circ$
- m) Axis angular position display resolution: 0.01°
- n) Pointing accuracy: $\leq 0.2^\circ$
- o) Control mode: Manual, pointing, program tracking , setting position and standby
- p) Remote control interface: network interface