



2.4M C/KU BAND FLYAWAY ANTENNA

Feature

AST 2.4M Flyaway antenna system consists of a lightweight, rigid, double offset-axis reflectors supported on an aluminum pedestal assembly. The pedestal assembly provides good stability by use of three outrigger legs pinned to the central column. Atop this column sits the T-head assembly, which permits rotation about both the azimuth and elevation axes. The backspine structure supports the hexagonal carbon-fiber reflector and the feed boom independently. Easily assembled by joining the center panel and eight removable petals to each other with rugged integral knobs, the reflector mounts firmly to the backspine with a four point connection arrangement.

Azimuth positioning can cover 360° by proper orientation of the antenna pedestal, with a fine adjustment mechanism having a $\pm 25^\circ$ travel. A linear actuator is attached between the back of the reflector backspine and the rear trunnion on the T-head, providing elevation support and adjustment.

The feed boom structure is formed from three removable spars which rigidly fix the phase center of the feed at the reflector's focal point. RF equipment can be fastened anywhere along the feed boom.

- * Carbon fiber composite reflector;
- * Tripod base mount;
- * Less than 25-minute setup;
- * No tools require;
- * Quick adjust positioner

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ELECTRICAL SPECIFICATION

| Type | FA240-C | | | | FA240-KU | |
|-------------------------------------|------------------|-------------|--------------------|-------------|------------------|-------------|
| | C-Band 2-Port | | C-Band 2-Pot | | Ku-Band 2-Port | |
| | Linear Polarized | | Circular Polarized | | Linear Polarized | |
| | Receive | Transmit | Receive | Transmit | Receive | Transmit |
| Frequency (GHz) | 3.4-4.2 | 5.850-6.725 | 3.4-4.2 | 5.850-6.725 | 10.950-12.75 | 13.750-14.5 |
| Antenna Gain at Minband (dBi) | 38 | 42 | 38 | 42 | 47.8 | 49.1 |
| Antenna Noise Temperature | | | | | | |
| 5° Elevation | 45K | | 45K | | 62K | |
| 10° Elevation | 32K | | 32K | | 48K | |
| 20° Elevation | 24K | | 24K | | 38K | |
| 40° Elevation | 20K | | 20K | | 34K | |
| Axial Ratio | 1.3 | 1.09 | 1.23 | 1.09 | | |
| Cross Polarization Isolation | | | | | | |
| On Axis,dB | 35 | 35 | | | 35 | 35 |
| Within 1.0 dB Beamwidth,dB | 30 | 30 | | | 30 | 30 |
| VSWR | 1.25: 1 | | | | | |
| 3 dB Beam Width, Mid-band | 2.2° | 1.4° | 2.2° | 1.4° | 0.71° | 0.63° |
| Feed Interface | CPR-229G | CPR-137G | CPR229G | CPR-137G | WR75 | |
| Feed Intertion loss, (dB) | 0.2 | | | | 0.2 | |
| Port to port isoiation Tx to Rx(dB) | ≥85 | | | | ≥85 | |

MECHANICAL SPECIFICATION

| | |
|----------------------------|-----------------------------------|
| Materials of Reflectors | Nine-piece carbon fiber composite |
| Surface Accuracy (RMS) | ≤0.5mm |
| Antenna Optics | Double offset, 0.5 F/D ratio |
| Antenna net Weight | 90kgs |
| Drive Mode | Manual |
| Elevation Adjustment Range | 5°~90°(Continuous) |
| Azimuth Adjustment Range | 360°(Continuous) |

ENVIRONMENTAL SPECIFICATION

| | |
|--------------------------------|---|
| Wind Loading Operational | 25 mph (40 km/h), gusting to 45mph (72 km/h), with ballast or anchors |
| Survival | 71 mph (115 km/h), with ballast or anchors |
| Temperature Range(operational) | -40°C~+60°C |
| Rain (operational) | 1/2 in/h (12 mm/h) |
| Ice(operational) | 1/2 in(12 mm) |
| Relative Humidity | 0% to 100% |
| Solar Radiation | 360 BTU/h/ft ² (1000 Kcal/h/m ²) |