

Diameter 21 M Radio Telescope for the Astronomic Observation

Model No. 21M - RT



Options

- Frequency 2GHz to 230GHz Antenna System
- HXAC System
- Serve System
- Turnkey Installation and Testing
- Packing for Sea and Air Transport

Electrical Specifications

Item	Specifications
Frequency (GHz)	2 ~ 230GHz
Aperture Efficiency	≥60 % (≥30% at 230 GHz)
Beam Width(3 dB)	0.53 ° ~ 0.005 °
Panel Accuracy (each panel)	≤60um (RMS) ~ ≤40um (RMS)
Pointing Accuracy	<4 arcsec(@ wind 10 m/sec)
Reflector Surface Accuracy	<100um (0.01mm) RMS

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Mechanical Specifications

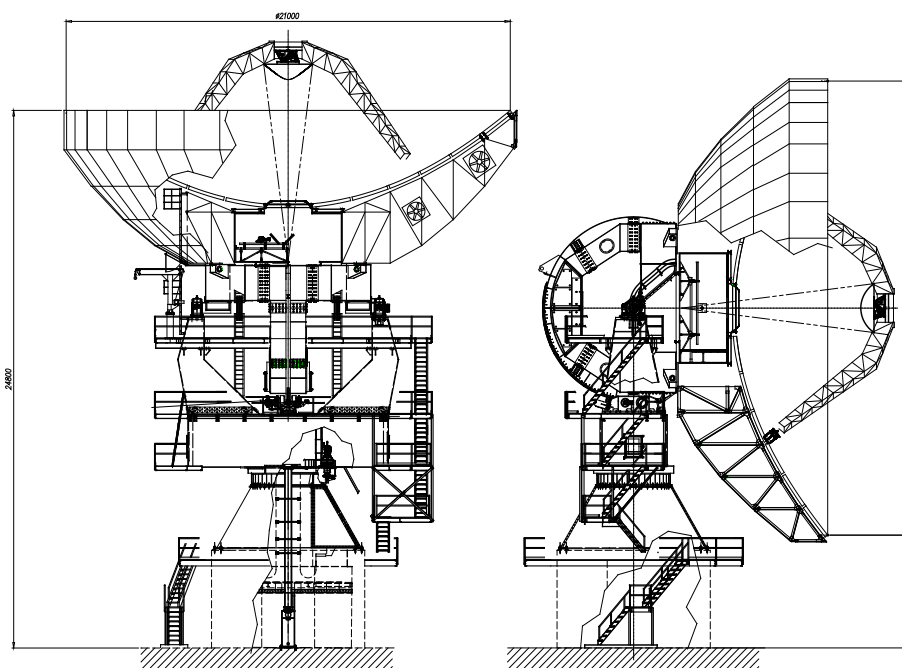
Antenna Diameter	21 Meter
Antenna Type	Cassegrain dual reflector and FSS reflector for band selector
Reflector	Shapingformed aluminum panels, welded steel back-up structure frequency selective mirror
Pedestal Configuration	Elevation over azimuth pedestal, constructed of steel yoke tower
Azimuth Travel	$\pm 270^\circ$
Elevation Travel	$0 \sim 90^\circ$
Azimuth Travel Rate	$3^\circ / \text{sec}$
Elevation Travel Rate	$3^\circ / \text{sec}$
Foundation (L x W x D)	Base W15000xW15000x2000H, Yoke \varnothing 7000x4700H

Environmental Specifications

Survival Wind Loading	70m/sec
Operational Wind Loading	10m/sec
Operational Temperature	-20° to $+40^\circ\text{C}$
Survival Temperature	-30° to $+60^\circ\text{C}$
Rain	up to 100 mm/h
Relative Humidity	$0 \sim 100\%$
Solar Radiation	1000 kcal/h/m ²
Ice (Survival)	2cm on all surfaces or 1.3 cm on all surfaces with 130 km/h wind gusts

※ Without active elements and components.

Antenna Drawing (unit : mm)



Front View

Side View