



HITEC-LM-130-C

13 meter limited-motion C-band
TT&C Satellite Ground Antenna System

KEY FEATURES

High rigidity pedestal and high accuracy Monopulse tracking system

High system availability of > 99.91%

Designed for harsh environments with survival speeds up to 250 km/h

Large working platform and easy access to main antenna components

13.5-METER LIMITED MOTION ANTENNA FOR TELEMETRY, TRACKING & CONTROL (TT&C)

The LM-130-C is a low maintenance and future proof antenna system, providing a robust, reliable and high performance solution to our international client base. The system is designed to cope with harsh environmental conditions such as heavy rain and high winds. The entire system ensures full performance at wind loads up to 75 km/h and can survive wind loads of up to 250 km/h.

The reflector, 13.5 meters in diameter, has shaped Cassegrain optics for high efficiency and is constructed of bonded aluminium panels, offering state-of-the-art transmission capabilities.

REFERENCES

Client:

VNPT - Vietnamese Posts and Telecommunications Corporation

Location:

Que Duong, Ha Tay near to Hanoi City, Vietnam

Ben Cat Binh Duong near to Ho Chi Minh City, Vietnam

Use & deployment:

TT&C of VINASAT-1 GEO satellite

Operating in C-Band, the system is ideally suited to control geostationary earth orbit satellites. Two LM-130-C high end satellite ground antenna systems are in use for telemetry, tracking and control of Vietnam's first satellite communication system controlling VINASAT-1 at 132° East.



Copyright © 2012 HITEC Luxembourg S.A. All rights reserved.
HITEC Luxembourg and the HITEC Luxembourg logo are registered trademarks of HITEC Luxembourg. Specifications and fact sheets are subject to change without notification.

ANTENNA SYSTEM CHARACTERISTICS: HITEC-LM-130-C

SYSTEM PERFORMANCE

Tracking	Program Track Step Track Monopulse (autotrack)
Frequency bands	Designed for C-band (Tx 5.925 to 6.725 GHz; Rx 3.4 to 4.2 GHz) Adaptable to frequency bands from S- to Ku-band (2 - 18 GHz)
Antenna gain (ref. feed horn)	> 51.8 dBi @ 3.4 GHz > 57.2 dBi @ 6.73 GHz
Antenna Noise Temperature (ref. feed horn) @ 3.4 GHz	67.3 K @ 5° Elevation 62.2 K @ 20° Elevation 60.5 K @ 30° Elevation
Radiation pattern	Complies with ITU-S 580-6, ITU-R S.465-5
Accuracy	Tracking, no wind: 0.005° Pointing, no wind: 0.015° Tracking, at 45 km/h and 60 km/h gusting: 0.015° Pointing, at 45 km/h and 60 km/h gusting: 0.020°

ANTENNA OPTICS

Configuration	Cassegrain optics
Reflector diameter	Designed for 13.5 m Adaptable to other diameters from 11 m to 15 m
Reflector surface accuracy	< 0.4 mm RMS
Polarization	Tx: Linear polarization Rx: Linear polarization
VSWR	≤ 1.3:1

HUB CHARACTERISTICS

Available space for housing RF equipment	~ 1.4 m x 1.6 m x 1.7 m
Environment	Closed sealed space Temperature controlled

AXIS DESIGN

- Limited motion elevation over azimuth mount
- Dual backlash compensated drives on azimuth
- High precision screw jack on elevation
- Controlled polarization axis

ELEVATION

Operational travel range	0 to 90 deg
Maximum rate	0.5 deg/sec

AZIMUTH

Operational travel range	180 deg
Maximum rate	0.5 deg/sec

POLARIZATION

Range	+/- 55°
-------	---------

ENVIRONMENTAL CONDITIONS

Drive limit	120 km/h
Wind operational limit	Mean 50 km/h Peak 75 km/h
Survival wind	250 km/h
Temperature	Operational +5°C to 45°C Survival +5°C to 45°C
Rain	Max. 300 mm/h
Power supply	3x400 V
Corrosion	Region: Coastal, Continental
De-Icing	Optional

CONTACT

HITEC Luxembourg S.A.
5, rue de l'Eglise
L-1458 Luxembourg
www.hitec.lu

Tel: +352 498478-1
Fax: +352 401303
info@hitec.lu
www.hitec-luxembourg.com

