

THE TYPE OF SATELLITE, GEOSTATIONARY OR NONGEOSTATIONARY

Non-Geostationary

IF ANY SATELLITES ARE NONGEOSTATIONARY, REPORT ITS INCLINATION ANGLE, APOGEE IN KILOMETERS, PERIGEE IN KILOMETERS, ORBITAL PERIOD IN HOURS AND FRACTIONS OF HOURS IN DECIMAL, THE NUMBER OF SATELLITES IN THE SYSTEM

Inclination	28.5 degrees
Apogee Altitude	860 km
Perigee Altitude	300 km
Orbital Period	1.6054 hours
Number of Satellites	1 satellite

THE SATELLITE TRANSMITTER (UHF) ANTENNA GAIN, BEAMWIDTH, AND PATTERN

Antenna Gain	-6.0 dBi
Beamwidth	180 degrees
Pattern	Linear

THE SATELLITE TRANSMITTER (UHF) ANTENNA AZIMUTH: NARROWBEAM (NB), EARTH COVERAGE (EC)

Earth Coverage (EC)

THE SATELLITE RECEIVER (VHF) ANTENNA GAIN, BEAMWIDTH, AND PATTERN

Antenna Gain	-6.0 dBi
Beamwidth	180 degrees
Pattern	RHCP

THE EARTH STATION TRANSMITTER (VHF) ANTENNA GAIN, BEAMWIDTH, AND PATTERN

Antenna Gain	14.4 dBi
Beamwidth	38 degrees
Pattern	RHCP

THE EARTH STATION RECEIVER (UHF) ANTENNA GAIN, BEAMWIDTH, PATTERN, AZIMUTHAL RANGE, THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS AND THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS

Receiver Gain	18.9 dBi
Beamwidth	21 degrees
Pattern	RHCP
Azimuthal Range	360 degrees
Site Elevation	256 meters

THE EARTH STATION RECEIVER (UHF) ANTENNA AZIMUTH, THE MINIMUM ANGLE OF ELEVATION (V00 TO V90)

Antenna Azimuth	180 degrees
Min angle of Elevation	V00

THE TRANSMITTER ANTENNA ORIENTATION (XAP), EXAMPLE XAP01 J , AND THE RECEIVER ANTENNA ORIENTATION (RAP), EXAMPLE RAP01 J , WHERE J REPRESENTS LINEAR POLARIZATION. OTHER POLARIZATIONS INCLUDE H FOR HORIZONTAL, V FOR VERTICAL, S FOR HORIZONTAL AND VERTICAL, L FOR LEFT HAND CIRCULAR, R FOR RIGHT HAND CIRCULAR, T FOR RIGHT

XAP01 T

RAP01 T

PROVIDE AN EMC ANALYSIS TO DEMONSTRATE COMPATIBILITY WITH AMATEUR OPERATION AND TO SHOW THAT THIS MISSION WILL NOT CAUSE INTERFERENCE TO EXISTING AMATEUR OPERATIONS

Satellite beacons data every 30 seconds and transmits directly to ground station no more than 15 minutes per 90 minute orbit in which the link can be established. Satellite does not transmit without command by ground station.

REASON FOR SATELLITE TO OPERATE UNDER AMATEUR LICENSE

Satellite acts as a digital repeater after mission lifetime (6-12 months) extending the range of amateur communications. IARU does allow non-amateur allocations for experimental stations (reference IARU document titled: "EXPERIMENTAL STATION FREQUENCY COORDINATION REQUEST1 USING FREQUENCIES ALLOCATED TO THE AMATEUR AND AMATEUR-SATELLITE SERVICES").