

Guidelines / Instructions to Telecom Service Providers (TSP)
For Satellite Communications

1. New Applicant : New applicant willing to have either Commercial CUG VSAT licence / Captive VSAT licence or any other licence/permission for operation using satellites shall apply for the same to Satellite Cell of DoT in the prescribed application form along with all technical details. The application shall be got examined and the licence issued after observing all pre-requisite conditions for issue of licence.

OR

Existing Telecom Service Providers(TSPs) : Existing TSP having valid license issued by DoT shall approach Satellite cell of DoT with complete proposal for starting a new service on satellite or carrying out major reconfiguration in existing network on satellite. The proposal will be examined for technical compliance as well as from regulatory angle and will be issued in-principle clearance.

2. The Licensee, then, shall get space segment allocated or reserved from DoS or other authorized Satellite operator.
3. Then Licensee shall approach WPC for obtaining SACFA & FA clearance.
4. The services can be started after obtaining NOCC (Network Operations Control Center) clearance.
5. Date of Commissioning of services shall be communicated to Licensor and Satellite Cell of DoT.
6. The Licensee shall submit monthly operation report to Licensor, Satellite Cell of DoT and NOCC by 7th of following month.
7. The operation, control, coordination and monitoring of space segment shall be done by NOCC. The licensee shall pay the NOCC charges, as fixed by DoT, to NOCC.
8. The licensee shall create a separate ground segment for new service and shall not use the ground segment infrastructure created for its VSAT CUG network.
9. The Licensee shall ensure that the telecom services shall not be used for public broadcasting of any television signals.

10. The Services shall not violate any other license issued by DoT or MI&B or law of land.
11. There will not be any limit on data rates in general, unless and otherwise limited by the Licensor or TEC document.
12. The Off-axis radiation pattern of antenna and Maximum permissible off-axis EIRP shall follow ITU-R Recommendations S.580-5 and S.524-7 respectively.
13. In case space segment is taken on INSAT system following restrictions on antenna size and psd limits shall apply , which are purely because of technical reasons and bound to be followed for co-ordination with other international satellites :

A. The equipment shall meet the following psd limits:

- (a) Maximum uplink psd limits at the input to the earth station antenna:
 - 35 dBW/Hz for C-band (-38 dBW/Hz for slot 74 deg. E)
(-42 dBW/Hz for slot 55 deg. E)
 - 42 dBW/Hz for Extended C-band
 - 39 dBW/Hz for ku-band
- (b) Maximum downlink psd limits at the inputs to the satellite antenna:
 - 51 dBW/Hz for C-band (-65 dBW/Hz for slot 74 deg. E)
(-68 dBW/Hz for slot 55 deg.E)
 - 64.5 dBW/Hz for Extended C-band (-65 dBW/Hz for slot 55 deg.E)
-53.9 dBW/Hz for ku-band
- (c) Maximum downlink eirp density limits at the output of the satellite antenna:
 - 20 dBW/Hz for C-band (-34 dBW/Hz for slots 74 deg.E)
(-37 dBW/Hz for slot 55 deg.E)
 - 33.5 dBW/Hz for Extended C-band(-34 dBW/Hz for slots 55 deg.E)
 - 23.9 dBW/Hz for ku-band

B. VSAT Antenna Sizes

Normal C-band*

- a. For Star Network: 1.2 m (for 83 deg.E, 93.5 deg.E slots)

slots) 1.8 m (for 55 deg.E and 74 deg. E

- b. For Mesh Network: 2.4m (for 83 and 93.5 deg. E slots)
3.8 m (for 55 deg. E, 74 deg. E slots)

* Antenna sizes are applicable wherever there are no BSNL microwave links either operational or planned.

Extended C-band**

- a. For Star network : 1.2 m (for 55, 74, 83 and 93.5 deg. E slots)
- b. For Mesh network : 2.4 m (for 55,74,83 and 93.5 deg. E slots)

** Applicable to the frequency bands 6735/4510 - 6835/4610 MHz and 6935/4710 to 6995/4770 MHz. In case of other frequency bands in the Upper Extended C-band (6725 - 7025 MHz), these antenna sizes apply wherever there are no BSNL microwave links either operational or planned.

Ku-band

- a: For Star network : 1.0 m (for 83 and 93.5 deg.E slots)
- b: For Mesh network : 2.4 m (for 83 and 93.5 deg.E slots)

C. HUB Antenna size

Normal C & Ext. C- band 9.0 meter or more (G/T as 31.7 dB/K minimum)

Ku band 8.0 meter or more (G/T as 37.0 dB/K minimum)

14. In case space segment is taken on satellite other than INSAT system then restriction on antenna size and psd limits shall be as specified by the Satellite Operator and approved by DoT.