

Eutelsat s.A. Auto-Pointing Summary Sheet

**Applicant:**

THRANE & THRANE A/S trading as COBHAM
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**Antenna model:**
EXPLORER 6100**Diameter:**
1.0 m**Standard:**
M**Characterization date:**
23-01-2020**Validity period:**
See remark 5**Last test data submitted on:**
09-12-2019**System Description:**

Antenna system based on 7 piece carbon fibre reflector, Axisymmetric 1.0 m Ku antenna, with one Tx and two Rx ports linear polarization feed, manufactured by Thrane & Thrane A/S trading as Cobham Satcom, for fly-away applications with HPA maximum permissible rating as per remark 4.

Maximum Allowed EIRP: For digital carriers transmitted at the satellite receive contour of 0 dB/K (EESS 502 refers):

In the 14.00 - 14.50 GHz band:

35.2 dBW / 40 kHz for an orbital separation from the adjacent satellite $\geq 1.5^\circ$

38.3 dBW / 40 kHz for an orbital separation from the adjacent satellite $\geq 2.0^\circ$

40.7 dBW / 40 kHz for an orbital separation from the adjacent satellite $\geq 2.5^\circ$

In the 13.75 - 14.00 GHz band:

33.5 dBW / 40 kHz for an orbital separation from the adjacent satellite $\geq 1.5^\circ$

36.8 dBW / 40 kHz for an orbital separation from the adjacent satellite $\geq 2.0^\circ$

39.2 dBW / 40 kHz for an orbital separation from the adjacent satellite $\geq 2.5^\circ$

Tx Frequency:
13.75 - 14.50 GHz**Rx Frequency:**
10.70 - 12.75 GHz**Pointing error:**
 $\leq 0.1^\circ$ **Polarization error:**
 $\leq 3.5^\circ$ **Tx XPD:**
 ≥ 25.0 dB within -1 dB contour**Rx XPD:**
 ≥ 34.1 dB within -1 dB contour**Remarks:**

- 1 Auto-pointing tests were performed via satellite from Lyngby with the ERS of Aflenz on the 09 December 2019. RF performance tests were performed on one antenna unit at the Politecnico di Torino test range on the 3-5 September 2019.
- 2 The EXPLORER ACU system has been validated with three different Eutelsat satellites, with angles of the polarization plane equal to 3.5° .
- 3 Transmission is not authorized until the peaking process is completed.
- 4 The EXPLORER 6100 comes in three standard configurations: without BUC, 8 and 20W BUC. Installation of HPAs with a power >50 W is not authorized.
- 5 The Characterisation's validity is granted as far as the static system, and is subject to regular submission of patterns to confirm that the system remains compliant with the Eutelsat standard at the inspection date.
- 6 Any change to the characterised configuration need to be notified to Eutelsat and may be subject to further tests.
- 7 The transmission in the band 13.75-14.00 GHz for antennas with a diameter < 1.2 m is subject to the ITU radio regulations in force.