

Experimental License Renewal Application Narrative

Vast, Inc. ("Vast") requests renewal of its experimental license from September 1, 2026 to September 1, 2028 to continue testing two ground-based inter-satellite data relay system ("IDRS") transceivers in 1626.5-1660.5 MHz (Earth-to-space).¹

The terminals will communicate with FCC-authorized Inmarsat satellites and will not communicate with each other.² The only satellite communication points are the following Inmarsat satellites on the FCC Approved Space Station List:

- INMARSAT 3F5 (S2949; SAT-PPL-20160111-00001);
- INMARSAT 5F2 (E120072; SES-LIC-20120426-00397);
- INMARSAT 4F3 (S2932; SES-MFS-20080228-00207, SES-AFS-20080410-00448, SES-AFS-20080915-01200);
- INMARSAT 5F3 (E150028; SES-LIC-20150402-00188, SES-AMD-20150910-00577); and
- INMARSAT 4F1 (KA25; SES-MFS-20080228-00207, SES-AFS-20080410-00448).

The directional antenna specifications are unchanged:

- half-power point beamwidth: 14 deg;
- horizontal plane orientation: 225 deg; and
- vertical plane orientation: 45 deg.

The experimental licensing process requires a stop buzzer contact. The contact is:

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Grant of this application serves the public interest. Vast plans to operate Haven-1, a commercial space station scheduled to launch in 2027, which will host human spaceflight participants.³ For that mission, telemetry transmission and telecommand reception will require the IDRS transceiver. Validating the IDRS transceiver on the ground, therefore, is a crucial step toward ensuring successful operations for Haven-1⁴ as it did for Haven Demo⁵ (completed mission as of February 2026). Vast has performed initial testing of the IDRS transceiver under its previous two STAs and existing experimental license and now seeks renewal authorization to continue this testing through the launch of Haven-1, as further testing will continue to reduce technical risk for this missions and allow Vast to troubleshoot any IDRS issues as needed during the Haven-1 mission.

¹ Vast currently operates under experimental license (0808-EX-CN-2024) and commits to satisfying the same license conditions for this renewal.

² Included below is a sketch of the antenna configuration with relevant measurements.

³ This request does not seek authority to communicate with Vast's Haven-1 space station.

⁴ See SAT-LOA-20260120-00035.

⁵ See SAT-LOA-20240702-00148.

Proposed Antenna Deployment

