



UNITED STATES OF AMERICA  
FEDERAL COMMUNICATIONS COMMISSION  
**RADIO STATION AUTHORIZATION**

DISH Satellite Services Corporation

Call Sign: E170094

Authorization Type: Modification of License

File Number: SES-MFS-20210602-00889

Non Common Carrier

Grant date:

Expiration Date: 06/27/2032

Nature of Service: Fixed Satellite Service

Class of Station: Fixed Earth Stations

**A) Site Location(s)**

| #  | Site ID | Address                                                  | Latitude     | Longitude    | Elevation<br>(Meters) | Special Provisions<br>NAD (Refer to Section H) |
|----|---------|----------------------------------------------------------|--------------|--------------|-----------------------|------------------------------------------------|
| 1) | 1       | 1335 Wissler Road<br>Quicksburg, Shenandoah, VA<br>22847 | 38°43'23.1"N | 78°39'57.8"W | 282.2                 | 83                                             |

Licensee certifies antenna(s) comply with gain patterns specified in Section 25.209

*Subject to the provisions of the Communications Act of 1934, The Communications Satellite Act of 1962, subsequent acts and treaties, and all present and future regulations made by this Commission, and further subject to the conditions and requirements set forth in this license, the grantee is authorized to construct, use and operate the radio facilities described below for radio communications for the term beginning June 27, 2017 (3 AM Eastern Standard Time) and ending June 27, 2032 (3 AM Eastern Standard Time) . The required date of completion of construction and commencement of operation is August 26, 2026 (3 AM Eastern Standard Time) . Grantee must file with the Commission a certification upon completion of construction and commencement of operation.*

**B) Particulars of Operations**

The General Provision 1010 applies to all receiving frequency bands.

The General Provision 1900 applies to all transmitting frequency bands.

For the text of these provisions, refer to Section H.

| #  | Frequency<br>(MHz)    | Polarization<br>Code | Emission | Tx/Rx<br>Mode | Max<br>EIRP<br>/Carrier<br>(dBW) | Max EIRP<br>Density<br>/Carrier<br>(dBW/4kHz) | Associated<br>Antenna | Special<br>Provisions<br>(Refer to<br>Section H) | Modulation/<br>Services  |
|----|-----------------------|----------------------|----------|---------------|----------------------------------|-----------------------------------------------|-----------------------|--------------------------------------------------|--------------------------|
| 1) | 17300.0000-17800.0000 | L,R                  | 1M50G2D  | Tx            | 87.40                            | 61.66                                         | 1                     |                                                  | Command Carrier (TT&C)   |
| 2) | 17300.0000-17800.0000 | L,R                  | 24M0G7W  | Tx            | 87.40                            | 49.62                                         | 1                     |                                                  | Digital Compressed Video |
| 3) | 12200.0000-12700.0000 | L,R                  | 300KG2D  | Rx            |                                  |                                               | 1                     |                                                  | Telemetry Beacon (TT&C)  |
| 4) | 12200.0000-12700.0000 | L,R                  | 24M0G7W  | Rx            |                                  |                                               | 1                     |                                                  | Digital Compressed Video |

**C) Frequency Coordination Limits**

| #  | Frequency Limits<br>(MHz) | Satellite Arc<br>(Deg. Long.) |               | Elevation<br>(Degrees) |               | Azimuth<br>(Degrees) |               | Max EIRP<br>Density toward<br>Horizon<br>(dBW/4kHz) | Associated<br>Antenna(s) |
|----|---------------------------|-------------------------------|---------------|------------------------|---------------|----------------------|---------------|-----------------------------------------------------|--------------------------|
|    |                           | East<br>Limit                 | West<br>Limit | East<br>Limit          | West<br>Limit | East<br>Limit        | West<br>Limit |                                                     |                          |
| 1) | 17300.0000-17800.0000     | 34.0W-151.0W                  |               | 25.9-05.0              |               | 122.3-258.7          |               | 9.1                                                 | 1                        |



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**C) Frequency Coordination Limits**

| #  | Frequency Limits<br>(MHz) | Satellite Arc<br>(Deg. Long.) |               | Elevation<br>(Degrees) |               | Azimuth<br>(Degrees) |               | Max EIRP<br>Density toward<br>Horizon<br>(dBW/4kHz) | Associated<br>Antenna(s) |
|----|---------------------------|-------------------------------|---------------|------------------------|---------------|----------------------|---------------|-----------------------------------------------------|--------------------------|
|    |                           | East<br>Limit                 | West<br>Limit | East<br>Limit          | West<br>Limit | East<br>Limit        | West<br>Limit |                                                     |                          |
| 2) | 12200.0000-12700.0000     | 34.0W-151.0W                  |               | 25.9-05.0              |               | 122.3-258.7          |               |                                                     | 1                        |

**D) Points of Communications**

The following stations located in the Satellite orbits consistent with Sections B and C of this Entry:

- 1) 1 to ECHOSTAR 16 @ 61.5 W.L. (S2844) of the Direct Broadcast Satellite system (U.S.-licensed)
- 2) 1 to ECHOSTAR 11 @ 110° W.L. (S2738)
- 3) 1 to ECHOSTAR 23 @ 109.9 W.L. (S3093) of the Direct Broadcast satellite system (U.S.-licensed)

**E) Antenna Facilities**

| Site<br>ID                                                  | Antenna<br>ID | Units | Diameter<br>(meters) | Manufacturer | Model number | Site<br>Elevation<br>(Meters) | Max<br>Antenna Height<br>(Meters) | Special<br>Provisions<br>(Refer to<br>Section H) |
|-------------------------------------------------------------|---------------|-------|----------------------|--------------|--------------|-------------------------------|-----------------------------------|--------------------------------------------------|
| 1                                                           | 1             | 1     | 13.2                 | GDSATCOM     | 13.2 Meter   | 282.2                         | 13.2 AGL/ 295.44<br>AMSL          |                                                  |
| Max Gains(s): 62.0 dBi @ 12.2000 GHz 65.0 dBi @ 17.3000 GHz |               |       |                      |              |              |                               |                                   |                                                  |
| Maximum total input power at antenna flange (Watts) =       |               |       |                      |              | 1,600.00     |                               |                                   |                                                  |
| Maximum aggregate output EIRP for all carriers (dBW) =      |               |       |                      |              | 97.04        |                               |                                   |                                                  |

**G) Antenna Structure marking and lighting requirements:**

None unless otherwise specified under Special and General Provisions

**H) Special and General Provisions**

A) This RADIO STATION AUTHORIZATION is granted subject to the following special provisions and general conditions:

- 4 --- Licensee must ensure that a current listing of the name, title, mailing address, email address, and telephone number of the responsible point of contact are on file at the FCC. Any changes must be filed electronically in the International Communications Filing System (ICFS) using the "Pleadings and Comments" link on the ICFS homepage within 10 days of the change.
- 5 --- Licensee must notify the Commission when this earth station is no longer operational or when it has not been used to provide any service during any 6-month operation.



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## **H) Special and General Provisions**

**A)** This RADIO STATION AUTHORIZATION is granted subject to the following special provisions and general conditions:

521 --- The grant of this application is subject to Licensee submitting an acceptable radiation hazard analysis report with the new near field power density formula in accordance with IEEE Std. C95.3-2021, Section D.4.4. "S<sub>nf</sub> limit  $16P/((\text{Eta})(\text{Pi})(\text{Dsquared}))$ ", within 180 calendar days of the publishing of the updated radiation hazard in OET's Bulletin 65. Licensee should not contemplate extension-of-time to meet this condition.

90900 --- Grant of the instant application is subject to the terms and condition of all associated current or future space station authorization(s) or grant(s) of market access. Operations pursuant to the instant authorization must be consistent with the associated space station(s) authorizations(s) or grant(s) of market access.



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**B) This RADIO STATION AUTHORIZATION is granted subject to the additional conditions specified below:**

This authorization is issued on the grantee's representation that the statements contained in the application are true and that the undertakings described will be carried out in good faith.

This authorization shall not be construed in any manner as a finding by the Commission on the question of marking or lighting of the antenna system should future conditions require. The grantee expressly agrees to install such marking or lighting as the Commission may require under the provisions of Section 303(q) of the Communications Act. 47 U.S.C. § 303(q).

Neither this authorization nor the right granted by this authorization shall be assigned or otherwise transferred to any person, firm, company or corporation without the written consent of the Commission. This authorization is subject to the right of use or control by the government of the United States conferred by Section 706 of the Communications Act. 47 U.S.C. § 706. Operation of this station is governed by Part 25 of the Commission's Rules. 47 C.F.R. Part 25.

This authorization shall not vest in the licensee any right to operate this station nor any right in the use of the designated frequencies beyond the term of this license, nor in any other manner than authorized herein.

This authorization is issued on the grantee's representation that the station is in compliance with environmental requirements set forth in Section 1.1307 of the Commission's Rules. 47 C.F.R. § 1.1307.

This authorization is issued on the grantee's representation that the station is in compliance with the Federal Aviation Administration (FAA) requirements as set forth in Section 17.4 of the Commission's Rules. 47 C.F.R. § 17.4.

The following condition applies when this authorization permits construction of or modifies the construction permit of a radio station.

This authorization shall be automatically forfeited if the station does not meet each required construction deadline by the required date of completion unless, before such date(s), a specific application is timely filed to request an extension of the construction deadline(s), supported with good cause why that failure to construct by the required date was due to factors not under control of the grantee.

**Licensees are required to pay annual regulatory fees related to this authorization. The requirement to collect annual regulatory fees from regulatees is contained in Public Law 103-66, "The Omnibus Budget Reconciliation Act of 1993." These regulatory fees, which are likely to change each fiscal year, are used to offset costs associated with the Commission's enforcement, public service, international and policy and rulemaking activities. The Commission issues a Report and Order each year, setting the new regulatory fee rates. Receive only earth stations are exempt from payment of regulatory fees.**