



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

Name: Comsat, Inc.

Call Sign: E980137

Authorization Type: Modification of License

File Number: SES-MOD-20151009-00733

Non Common Carrier

Grant date: 04/25/2016

Expiration Date: 10/09/2026



Nature of Service: Fixed Satellite Service

Class of Station: Fixed Earth Stations

A) Site Location(s)

#	Site ID	Address	Latitude	Longitude	Elevation (Meters)	Special Provisions NAD (Refer to Section H)
1)	1-16.4M	7676 PINE GROVE ROAD SANTA PAULA, VENTURA, CA 93060	34°24'6.0"N	119°4'21.8"W	229.2	27

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

2)	2-1.8M	7376 PINE GROVE ROAD SANTA PAULA, VENTURA, CA 93060	34°24'6.0"N	119°4'21.8"W	229.2	27
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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 October 9, 2011 (3 AM Eastern Standard Time) and ending October 9, 2026 (3 AM Eastern Standard Time). The required date of completion of construction and commencement of operation is April 25, 2017 (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 (MHz)	Polarization Code	Emission	Tx/Rx Mode	Max EIRP /Carrier (dBW)	Max EIRP Density /Carrier (dBW/4kHz)	Associated Antenna	Special Provisions (Refer to Section H)	Modulation/ Services
1)	1564.4200-1586.4200	R	22M0G7W	Rx			1.8M		OPERATIONAL C1 DIGITAL DATA FAA-WAAS
2)	1564.4200-1586.4200	R	22M0G7W	Rx			1.8M		IOT - DIGITAL DATA SYSTEM TESTING FAA-WAAS
3)	1165.4500-1187.4500	R	22M0G7W	Rx			1.8M		OPERATIONAL C5 DIGITAL DATA FAA-WAAS
4)	1165.4500-1187.4500	R	22M0G7W	Rx			1.8M		IOT - DIGITAL DATA SYSTEM TESTING FAA-WAAS



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5)	6679.4200-6701.4200	R	22M0G7W	Tx	78.00	40.60	16.4M		OPERATIONAL C5 DIGITAL DATA FEEDER FAA-WAAS
6)	6679.4200-6701.4200	R	22M0G7W	Tx	83.00	45.60	16.4M		IOT C5 DIGITAL DATA FEEDER LINK SYSTEM TESTING FAA-WAAS
7)	6628.2700-6650.2700	R	22M0G7W	Tx	78.00	40.60	16.4M		OPERATIONAL C1 DIGITAL DATA FEEDER FAA-WAAS
8)	6628.2700-6650.2700	R	22M0G7W	Tx	83.00	45.60	16.4M		IOT C1 DIGITAL DATA FEEDER LINK SYSTEM TESTING FAA-WAAS
9)	6454.4000-6456.6000	L,R	2M20G1D	Tx	83.00	55.60	16.4M		DIGITAL DATA & Feederlink to support FAA-WASS program
10)	6440.8000-6443.0000	L,R	2M20G1D	Tx	83.00	55.60	16.4M		DIGITAL DATA & Feederlink to support FAA-WASS program
11)	4199.6000-4200.0000	R	0M4KG7W	Rx			16.4M		BEACON-2 PCM
12)	4198.0000-4198.4000	R	0M4KG7W	Rx			16.4M		BEACON-1 PCM
13)	3629.4000-3631.6000	L,R	2M20G1D	Rx			16.4M		DIGITAL DATA & Feederlink to support FAA-WASS program
14)	1574.4000-1576.6000	L,R	2M20G1D	Rx			16.4M		DIGITAL DATA to support FAA-WASS program
15)	1545.8000-1548.0000	L,R	2M20G1D	Rx			16.4M		DIGITAL DATA to support FAA-WASS program

C) Frequency Coordination Limits

#	Frequency Limits (MHz)	Satellite Arc (Deg. Long.)		Elevation (Degrees)		Azimuth (Degrees)		Max EIRP Density toward Horizon (dBW/4kHz)	Associated Antenna(s)
		East Limit	West Limit	East Limit	West Limit	East Limit	West Limit		
1)	1164.4500-1188.4500	-116.0W	-118.0W	49.9	50.0	174.6	178.1	1.8M	
2)	1563.4200-1587.4200	-116.0W	-118.0W	49.9	50.0	174.6	178.1	1.8M	
3)	6440.8000-6443.0000	180.0W	181.0W	15.2	14.4	252.6	253.2	4.42	16.4M
4)	6454.4000-6456.6000	180.0W	181.0W	15.2	14.4	252.6	253.2	4.4	16.4M



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		East Limit	West Limit	East Limit	West Limit	East Limit	West Limit		
5)	3629.4000-3631.6000	180.0W	181.0W	15.2	14.4	252.6	253.2	0	16.4M
6)	1545.8000-1548.0000			15.2	14.4	252.6	253.2	0	16.4M
7)	1574.4000-1576.6000	180.0W	181.0W	15.2	14.4	252.6	253.2	0	16.4M
8)	6627.2700-6651.2700	-116.0W	-118.0W	49.9	50.0	174.6	178.1	-23.5	16.4M
9)	6678.4200-6702.4200	-116.0W	-118.0W	49.9	50.0	174.6	178.1	-23.5	16.4M
10)	4198.0000-4198.4000	-116.0W	-118.0W	49.9	50.0	174.6	178.1		16.4M
11)	4199.6000-4200.0000	-116.0W	-118.0W	49.9	50.0	174.6	178.1		16.4M

D) Points of Communications

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

- 1) 2-1.8M to SATMEX-9 (S2926) @ 117 degrees W.L. (Mexico-licensed) [awaiting UNOOSA registration]
- 2) 1-16.4M to INMARSAT Ltd.-3 satellite(s) @ 178 E.L. in POR (United Kingdom-licensed) (Non-U.S.-licensed)
- 3) 1-16.4M to All Inmarsat satellites on "ISAT List" authorized to access U.S. in the L-Band
- 4) 1-16.4M to SATMEX-9 (S2926) @ 117 degrees W.L. (Mexico-licensed) [awaiting UNOOSA registration]

E) Antenna Facilities

Site ID	Antenna ID	Units	Diameter (meters)	Manufacturer	Model number	Site Elevation (Meters)	Max Antenna Height (Meters)	Special Provisions (Refer to Section H)
2-1.8M	1.8M		1.8	PRODELIN		229.2	9.75 AGL/ 238.95 AMSL	
Max Gains(s): 25.0 dBi @ 1.5000 GHz Maximum total input power at antenna flange (Watts) = .00 Maximum aggregate output EIRP for all carriers (dBW) = .00								
1-16.4M	16.4M	1	16.4	COMSAT RSI	16.4M	229.2	17.1 AGL/ 246.3 AMSL	
Max Gains(s): 55.2 dBi @ 3.8000 GHz 59.0 dBi @ 6.2870 GHz Maximum total input power at antenna flange (Watts) = 537.00 Maximum aggregate output EIRP for all carriers (dBW) = 86.00								



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F) Remote Control Point:

1-16.4M

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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:

- 1010 --- Applicable to all receiving frequency bands. Emission designator indicates the maximum bandwidth of received signal at associated station(s). Maximum EIRP and maximum EIRP density are not applicable to receive operations.
- 1900 --- Applicable to all transmitting frequency bands. Authority is granted to transmit any number of RF carriers with the specified parameters on any discrete frequencies within associated band in accordance with the other terms and conditions of this authorization, subject to any additional limitations that may be required to avoid unacceptable levels of inter-satellite interference.
- 2916 --- Transmitter(s) must be turned off during antenna maintenance to ensure compliance with the FCC-specified safety guidelines for human exposure to radiofrequency radiation in the region between the antenna feed and the reflector. Appropriate measures must also be taken to restrict access to other regions in which the earth station's power flux density levels exceed the specified guidelines.
- 5011 --- The Licensee(s) shall maintain on file with the Commission a current list or plan of the precise frequencies in use at the station, specifying for each frequency the RF center frequency, polarization, emission designator, nominal EIRP (in dBW) and maximum EIRP density (in dBW/4kHz). This list or plan may be submitted either on a station-by-station basis or on a system-wide basis and shall be updated within seven (7) days of any changes in frequency usage at this station. The Licensee(s) need not notify the Commission of temporary usage of frequencies for periods of less than seven (7) days. However, the Licensee(s) shall maintain accurate station records of the times and particulars of such temporary frequency usage.
- 5014 --- With respect to potential co-channel interference to or from terrestrial microwave radio stations, the transmit and receive frequency bands listed in this license have been cleared for transmissions to and from satellites located in the geostationary or non-geostationary orbit for the emissions designated in Section B of this license.
- 5015 --- Upon completion of construction, each licensee must file with the Commission a certification including the following information: name of the licensee, file number of the application, call sign of the antenna, date of the license and certification that the facility as authorized has been completed, that each antenna facility has been tested and is within 2 dB of the pattern specified in Section 25.209 and that the station is operational including the date of commencement of service and will remain operational during the license period unless the license is submitted for cancellation.



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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:

5208 --- The licensee shall take all necessary measures to ensure that the antenna does not create potential exposure of humans to radiofrequency radiation in excess of the FCC exposure limits defined in 47 CFR 1.1307(b) and 1.1310 wherever such exposures might occur. Measures must be taken to ensure compliance with limits for both occupational/controlled exposure and for general population/uncontrolled exposure, as defined in these rule sections. Compliance can be accomplished in most cases by appropriate restrictions, such as fencing. Requirements for restrictions can be determined by predictions based on calculations, modeling, or by field measurements. The FCC's OET Bulletin 65 (available on-line at www.fcc.gov/oet/rfsafety) provides information on predicting exposure levels and on methods for ensuring compliance, including the use of warning and alerting signs and protective equipment for workers.

90204 --- Communications with the Satmex 9 space station are authorized based upon and subject to the conditions, waivers, and findings specified for Call Sign S2926.



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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 is not ready for operation by the required date of completion of construction unless an application for modification of authorization to request additional time to complete construction is filed by that date, together with a showing that failure to complete construction by the required date was due to factors not under control of the grantee.

Licenses 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.

