



**UNITED STATES OF AMERICA
FEDERAL COMMUNICATIONS COMMISSION**

RADIO STATION REGISTRATION

Name: ARRIS Enterprises LLC

Call Sign: E181589

Authorization Type: Registration

File Number: SES-REG-20180718-02476

Non Common Carrier

Grant date: 01/03/2019

Expiration Date: 07/18/2033

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)	3	6450 Sequence Drive San Diego, San Diego, CA 92121	32°54'31.5"N	117°10'50.2"W	106	83
2)	4	2450/2500 Walsh Avenue Santa Clara, Santa Clara, CA 95051	37°22'8.5"N	121°58'15.8"W	22.6	83
3)	5	101 Tournament Drive Horsham, Montgomery, PA 19044	40°12'6.5"N	75°9'42.5"W	88	83

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 registrant is registered to operate the radio facilities described below for radio communications for the term beginning July 18, 2018 (3 AM Eastern Standard Time) and ending July 18, 2033 (3 AM Eastern Standard Time). The required date of commencement of operation is 00/00/0000. Registrant must file with the Commission a certification upon 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)	3700.0000-4200.0000	H, V, L, R	36M0G7W	Rx			10		Broadcast TV reception
2)	3700.0000-4200.0000	H, V, L, R	36M0G7W	Rx			11		Broadcast TV reception



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3)	3700.0000-4200.0000	H, V, L, R	36M0G7W	Rx			12		Broadcast TV reception
4)	3700.0000-4200.0000	H, V, L, R	36M0G7W	Rx			13		Broadcast TV reception
5)	3700.0000-4200.0000	H, V, L, R	36M0G7W	Rx			14		Broadcast TV reception
6)	3700.0000-4200.0000	H, V, L, R	36M0G7W	Rx			15		Broadcast TV reception
7)	3700.0000-4200.0000	H, V, L, R	36M0G7W	Rx			16		Broadcast TV reception
8)	3700.0000-4200.0000	H, V, L, R	36M0G7W	Rx			17		Broadcast TV reception
9)	3700.0000-4200.0000	H, V, L, R	36M0G7W	Rx			18		Broadcast TV reception
10)	3700.0000-4200.0000	H, V, L, R	36M0G7W	Rx			19		Broadcast TV reception
11)	3700.0000-4200.0000	H, V, L, R	36M0G7W	Rx			20		Broadcast TV reception
12)	3700.0000-4200.0000	H, V, L, R	36M0G7W	Rx			21		Broadcast TV reception
13)	3700.0000-4200.0000	H, V, L, R	36M0G7W	Rx			22		Broadcast TV reception
14)	3700.0000-4200.0000	H, V, L, R	36M0G7W	Rx			6		Broadcast TV reception
15)	3700.0000-4200.0000	H, V, L, R	36M0G7W	Rx			7		Broadcast TV reception
16)	3700.0000-4200.0000	H, V, L, R	36M0G7W	Rx			8		Broadcast TV reception
17)	3700.0000-4200.0000	H, V, L, R	36M0G7W	Rx			8		Broadcast TV reception
18)	3700.0000-4200.0000	H, V, L, R	36M0G7W	Rx			9		Broadcast TV reception

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)	3700.0000-4200.0000	61.0W	-160.0W	19.7	-30.5	110.2	-216.3		6
2)	3700.0000-4200.0000	61.0W	-160.0W	19.7	-30.5	110.2	-216.3		7
3)	3700.0000-4200.0000	72.0W	-139.0W	28.7	-45.1	118.4	-216.4		8
4)	11700.0000-12200.0000	72.0W	-139.0W	28.7	-45.1	118.4	-216.4		8



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		East Limit	West Limit	East Limit	West Limit	East Limit	West Limit		
5)	3700.0000-4200.0000	72.0W	139.0W	28.7	45.1	118.4	216.4	9	
6)	3700.0000-4200.0000	61.0W	160.0W	20.0	45.1	110.2	216.3	10	
7)	3700.0000-4200.0000	72.0W	139.0W	28.7	45.1	118.4	216.4	11	
8)	3700.0000-4200.0000	72.0W	139.0W	28.7	45.1	118.4	216.4	12	
9)	3700.0000-4200.0000	61.4W	139.0W	14.6	43.1	108.9	206.8	13	
10)	3700.0000-4200.0000	61.4W	139.0W	14.6	43.1	108.9	206.8	14	
11)	3700.0000-4200.0000	61.4W	139.0W	14.6	43.1	108.9	206.8	15	
12)	11700.0000-12700.0000	61.4W	139.0W	14.6	43.1	108.9	206.8	16	
13)	3700.0000-4200.0000	61.4W	139.0W	14.6	43.1	108.9	206.8	17	
14)	3700.0000-4200.0000	61.4W	139.0W	14.6	43.1	108.9	206.8	18	
15)	3700.0000-4200.0000	61.4W	139.0W	14.6	43.1	108.9	206.8	19	
16)	3700.0000-4200.0000	50.0W	139.0W	36.8	11.1	144.0	252.4	20	
17)	3700.0000-4200.0000	50.0W	139.0W	36.8	11.1	144.0	252.4	21	
18)	3700.0000-4200.0000	50.0W	139.0W	36.8	11.1	144.0	252.4	22	

D) Points of Communications

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

- 1) 3 to Permitted Space Station List
- 2) 4 to Permitted Space Station List
- 3) 5 to Permitted Space Station List

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)
3	10	6	2.5	unknown	unknown	106	3 AGL/ 109 AMSL	
Max Gains(s):		39.0 dBi @		4.0000 GHz				
Maximum total input power at antenna flange (Watts) =								
Maximum aggregate output EIRP for all carriers (dBW) =								



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Site ID	Antenna ID	Units	Diameter (meters)	Manufacturer	Model number	Site Elevation (Meters)	Max Antenna Height (Meters)	Special Provisions (Refer to Section H)
3	11	1	3.7	Prodelin	Series 1374	106	3 AGL/ 110 AMSL	
		Max Gains(s): 40.9 dBi @ 4.0000 GHz		Maximum total input power at antenna flange (Watts) =		Maximum aggregate output EIRP for all carriers (dBW) =		
3	12	1	3.8	Challenger	Prime Focus	106	3 AGL/ 110 AMSL	
		Max Gains(s): 41.5 dBi @ 4.0000 GHz		Maximum total input power at antenna flange (Watts) =		Maximum aggregate output EIRP for all carriers (dBW) =		
4	13	3	3.2	unknown	unknown	22.6	3.5 AGL/ 26 AMSL	
		Max Gains(s): 38.5 dBi @ 4.0000 GHz		Maximum total input power at antenna flange (Watts) =		Maximum aggregate output EIRP for all carriers (dBW) =		
4	14	1	3.7	unknown	unknown	22.6	4.45 AGL/ 27 AMSL	
		Max Gains(s): 41.2 dBi @ 4.0000 GHz		Maximum total input power at antenna flange (Watts) =		Maximum aggregate output EIRP for all carriers (dBW) =		
4	15	1	1.8	unknown	unknown	22.6	2.4 AGL/ 25 AMSL	
		Max Gains(s): 32.5 dBi @ 4.0000 GHz		Maximum total input power at antenna flange (Watts) =		Maximum aggregate output EIRP for all carriers (dBW) =		
4	16	1	1.2	unknown	unknown	22.6	1.5 AGL/ 24 AMSL	
		Max Gains(s): 21.0 dBi @ 12.2000 GHz		Maximum total input power at antenna flange (Watts) =		Maximum aggregate output EIRP for all carriers (dBW) =		



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4	17	1	3.2	KTI (Kaul Tronics Inc)	mesh style	22.6	3.5 AGL/ 26 AMSL	
		Max Gains(s): 38.0 dBi @ 4.0000 GHz		Maximum total input power at antenna flange (Watts) =		Maximum aggregate output EIRP for all carriers (dBW) =		
4	18	1	3.2	Winegard	mesh style	22.6	3.5 AGL/ 26 AMSL	
		Max Gains(s): 38.0 dBi @ 4.0000 GHz		Maximum total input power at antenna flange (Watts) =		Maximum aggregate output EIRP for all carriers (dBW) =		
4	19	1	2.4	unknown	unknown	22.6	14.3 AGL/ 43 AMSL	
		Max Gains(s): 35.0 dBi @ 4.0000 GHz		Maximum total input power at antenna flange (Watts) =		Maximum aggregate output EIRP for all carriers (dBW) =		
5	20	10	3	Comtech	3.0 Meter	88	17 AGL/ 106 AMSL	
		Max Gains(s): 39.5 dBi @ 4.0000 GHz		Maximum total input power at antenna flange (Watts) =		Maximum aggregate output EIRP for all carriers (dBW) =		
5	21	3	3.8	Comtech	3.8 Meter	88	17.8 AGL/ 107 AMSL	
		Max Gains(s): 41.0 dBi @ 4.0000 GHz		Maximum total input power at antenna flange (Watts) =		Maximum aggregate output EIRP for all carriers (dBW) =		
5	22	3	5	DH Satellite	Gibraltar	88	19 AGL/ 108 AMSL	
		Max Gains(s): 44.3 dBi @ 4.0000 GHz		Maximum total input power at antenna flange (Watts) =		Maximum aggregate output EIRP for all carriers (dBW) =		



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Site ID	Antenna ID	Units	Diameter (meters)	Manufacturer	Model number	Site Elevation (Meters)	Max Antenna Height (Meters)	Special Provisions (Refer to Section H)
3	6	2	2.6	unknown	unknown	106	3 AGL/ 109 AMSL	
Max Gains(s): 39.0 dBi @ 4.0000 GHz Maximum total input power at antenna flange (Watts) = Maximum aggregate output EIRP for all carriers (dBW) =								
3	7	1	3.6	unknown	unknown	106	4 AGL/ 110 AMSL	
Max Gains(s): 43.0 dBi @ 4.0000 GHz Maximum total input power at antenna flange (Watts) = Maximum aggregate output EIRP for all carriers (dBW) =								
3	8	4	3.65	unknown	Patriot PRT380-style	106	5.5 AGL/ 112 AMSL	
Max Gains(s): 50.7 dBi @ 11.9000 GHz 41.7 dBi @ 3.9000 GHz Maximum total input power at antenna flange (Watts) = Maximum aggregate output EIRP for all carriers (dBW) =								
3	9	5	3.048	unknown	CM 10' mesh style	106	3.6 AGL/ 111 AMSL	
Max Gains(s): Maximum total input power at antenna flange (Watts) = Maximum aggregate output EIRP for all carriers (dBW) =								

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 Bureau Filing System (MyIBFS) using the "Pleadings and Comments" link on the MyIBFS 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:

6 --- Licensee must comply with the license modification and notification requirements of 47 CFR § 25.118 to change the coordinates of its authorized earth station.

9 --- Site location coordinates are based on the WGS84 datum.

90398 --- Changes to previously authorized transmitting facilities, operations and devices regulated by the Commission that may have significant environmental impact, and are not excluded by §1.1306, require the preparation of an Environmental Assessment (EA) by the licensee. (See 47 C.F.R. §§1.1307, 1.1308 and 1.1311)

90470 --- The application for this authorization was filed within the 194-day filing window for FSS earth stations operating in the 3700-4200 MHz frequency band as of April 19, 2018, as established by Public Notice DA 18-398 (rel. Apr. 19, 2018) and Public Notice DA-18-639 (rel. Jun. 21, 2018), and Public Notice DA 18-1061 (rel. Oct. 17, 2018).

90472 --- The application for this authorization was filed without a coordination report pursuant to the waiver granted in Public Notice DA 18-398 (rel. Apr. 19, 2018). Operations of this earth station in the 3700-4200 MHz band are not entitled to protection from stations operating in the fixed service.

90487 --- The application for this authorization was filed without a completed Schedule B. Authority was granted to receive from Permitted List satellites in the 3700-4200 MHz frequency band in the 15° W.L to 165 ° W.L. GSO satellite arc at an elevation angle no less than 5° above the visible horizon.

900407 --- The Permitted Space Station List (Permitted List) is a list of all geostationary space stations providing fixed-satellite service pursuant to a Commission license or grant of U.S. market access. The Permitted List currently includes the following frequency bands per §25.103 and §25.115(k)(1):

3600-4200 MHz (space-to-Earth)
5850-6725 MHz (Earth-to-space)
10.95-11.2 GHz (space-to-Earth)
11.45-12.2 GHz (space-to-Earth)
13.75-14.5 GHz (Earth-to-space)
18.3-18.8 GHz (space-to-Earth)
19.7-20.2 GHz (space-to-Earth)
24.75-25.25 GHz (Earth-to-space)
28.35-28.6 GHz (Earth-to-space)
29.25-30.0 GHz (Earth-to-space).

Earth stations with "Permitted List" designated as a point of communication may access any space station on the Permitted List, provided the operations comply with the applicable "routine" uplink and downlink limits, are within the specific frequency bands authorized in the earth station license, have completed coordination with terrestrial stations pursuant to §25.203, and otherwise comply with all terms and conditions of both the earth station license and the space station grant.



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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.

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.