UNITED STATES OF AMERICA
FEDERAL COMMUNICATIONS COMMISSION

RADIO STATION AUTHORIZATION

Name: Orbital Media Networks, Inc.
Call Sign: E050143
Authorization Type: Modification of License
File Number: SES-MOD-20170817-00925
Non Common Carrier **Grant date:** 07/17/2018 **Expiration Date:** 08/30/2020

Nature of Service: Fixed Satellite Service

Class of Station: VSAT Network

A) Site Location(s)

#	Site ID	Address	Latitude	Longitude	Elevation (Meters)	NAD	Special Provisions (Refer to Section H)
1)	CCSS INV 6.1A	76 INVERNESS DR. EAST, STE.B 6.1M. HUB ENGLEWOOD, ARAPAHOE, CO 80112	39°34'47.0"N	104°51'35.0"W	1751	83	
		Licensee certifies antenna(s) comply with gain patterns specified in Section 25.209					
2)	CM2_4X100	2.4M CONUS,	39°34'49.0"N	104°51'35.0"W	1751	27	
		Licensee certifies antenna(s) comply with gain patterns specified in Section 25.209					
3)	SCM1_8X2_4	76 INVERNESS DRIVE EAST SUITE C ENGLEWOOD, ARAPAHOE, CO 80112	39°34'49.0"N	104°51'35.0"W	1751	27	
		Licensee certifies antenna(s) comply with gain patterns specified in Section 25.209					
4)	SMN3_7X150	76 INVERNESS DRIVE EAST, SUITE C ENGELWOOD, ARAPAHOE, CO 80112	39°34'47.0"N	104°51'35.0"W	1751	27	
		Licensee certifies antenna(s) comply with gain patterns specified in Section 25.209					
5)	TT0.9816	VSAT .98M. CONUS,				NA	
		Licensee certifies antenna(s) do not comply with Section 25.209. Please refer to Section E for special conditions placed upon antennas at this site.					
6)	TT0753 .75M	VSAT .75M. CONUS,	0°0'0.0"N	0°0'0.0"W	0	NA	
		Licensee certifies antenna(s) do not comply with Section 25.209. Please refer to Section E for special conditions placed upon antennas at this site.					

FCC Form 488

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A) Site Location(s)

#	Site ID	Address	Latitude	Longitude	Elevation (Meters)	NAD	Special Provisions (Refer to Section H)
7)	TT09612 .96M	VSAT .96M. CONUS,	0°0'0.0"N	0°0'0.0"W	0	NA	
		Licensee certifies antenna(s) do not comply with Section 25.209. Please refer to Section E for special conditions placed upon antennas at this site.					
8)	TT1016R	VSAT, 1.0M. CONUS,				NA	
		Licensee certifies antenna(s) do not comply with Section 25.209. Please refer to Section E for special conditions placed upon antennas at this site.					
9)	TT1240DR	VSAT 1.2M. DR CONUS,				NA	
		Licensee certifies antenna(s) comply with gain patterns specified in Section 25.209					
10)	TT1240TV	VSAT 1.2M. TV CONUS,				NA	
		Licensee certifies antenna(s) comply with gain patterns specified in Section 25.209					
11)	TT2_4X100	2.4M CONUS,				NA	
		Licensee certifies antenna(s) comply with gain patterns specified in Section 25.209					
12)	TT3_7X150	(3.7M 15 UNITS) CONUS				NA	
		Licensee certifies antenna(s) comply with gain patterns specified in Section 25.209					

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A) Site Location(s)

#	Site ID	Address	Latitude	Longitude	Elevation (Meters)	NAD	Special Provisions (Refer to Section H)
13)	TTAVL.852	VSAT .85M CONUS,				NA	
		Licensee certifies antenna(s) do not comply with Section 25.209. Please refer to Section E for special conditions placed upon antennas at this site.					
14)	TTCM1_850DR	VSAT 1.8M. CONUS,				NA	
		Licensee certifies antenna(s) comply with gain patterns specified in Section 25.209					
15)	TTRVN_9808	VSAT .98M. CONUS,				NA	
		Licensee certifies antenna(s) do not comply with Section 25.209. Please refer to Section E for special conditions placed upon antennas at this site.					

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 August 30, 2005 (3 AM Eastern Standard Time) and ending August 30, 2020 (3 AM Eastern Standard Time) . The required date of completion of construction and commencement of operation is July 17, 2019 (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)	14000.0000-14500.0000	H,V	186KG1D	Tx	50.68	35.30	CM2_4X100		QPSK
2)	14000.0000-14500.0000	H,V	400KG1D	Tx	54.50	35.30	CM2_4X100		QPSK
3)	14000.0000-14500.0000	H,V	930KG7W	Tx	57.66	35.30	CM2_4X100		QPSK

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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
4)	11700.0000-12200.0000	H,V	400KG1D	Rx			CM2_4X100		QPSK
5)	14000.0000-14500.0000	H,V	3M80G7D	Tx	59.00	30.00	INV 6.1		QPSK, Data
6)	14000.0000-14500.0000	H,V	7M60G7D	Tx	60.00	28.00	INV 6.1		QPSK, Data
7)	11700.0000-12200.0000	H,V	5M50G7D	Rx			INV 6.1		QPSK, DATA
8)	11700.0000-12200.0000	H,V	1M50G7D	Rx	0.00	0.00	INV 6.1		QPSK, Data
9)	11700.0000-12200.0000	H,V	3M80G7D	Rx	0.00	0.00	INV 6.1		QPSK, Data
10)	14000.0000-14500.0000	H,V	186KG1D	Tx	48.18	32.80	SCM18050		QPSK
11)	14000.0000-14500.0000	H,V	400KG1D	Tx	51.48	32.80	SCM18050		QPSK
12)	14000.0000-14500.0000	H,V	930KG7W	Tx	55.16	32.80	SCM18050		QPSK
13)	14000.0000-14500.0000	H,V	186KG1D	Tx	50.68	35.30	SCM2_4100		QPSK
14)	14000.0000-14500.0000	H,V	400KG1D	Tx	53.64	35.30	SCM2_4100		QPSK
15)	14000.0000-14500.0000	H,V	930KG7W	Tx	57.66	35.30	SCM2_4100		QPSK
16)	14000.0000-14500.0000	H,V	186KG1D	Tx	53.68	38.30	SMN3_7150		QPSK
17)	14000.0000-14500.0000	H,V	400KG1D	Tx	56.64	38.30	SMN3_7150		QPSK
18)	14000.0000-14500.0000	H,V	930KG7W	Tx	60.66	38.30	SMN3_7150		QPSK
19)	11700.0000-12200.0000	H,V	400KG1D	Rx			SMN3_7150		QPSK
20)	14000.0000-14500.0000	H,V	3M80G1D	Tx	53.00	23.32	TT0.9816		QPSK
21)	11700.0000-12200.0000	H,V	4M60G1D	Rx			TT0.9816		QPSK
22)	14000.0000-14500.0000	H,V	1M50G7D	Tx	45.00	20.00	TT0753 .7		QPSK, Data
23)	11700.0000-12200.0000	H,V	7M60G7D	Rx			TT0753 .7		QPSK, DATA
24)	11700.0000-12200.0000	H,V	3M80G7D	Rx	0.00	0.00	TT0753 .7		QPSK, Data
25)	14000.0000-14500.0000	H,V	3M80G7D	Tx	52.50	22.00	TT09612 .9		QPSK, Data
26)	14000.0000-14500.0000	H,V	5M50G7D	Tx	54.00	24.00	TT09612 .9		QPSK, DATA
27)	11700.0000-12200.0000	H,V	7M60G7D	Rx	0.00	0.00	TT09612 .9		QPSK, Data

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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
28)	14000.0000-14500.0000	H,V	1M00G7W	Tx	49.50	25.50	TT1016R	233 234	QPSK, DIGITAL CARRIER
29)	14000.0000-14500.0000	H,V	500KG7W	Tx	46.50	25.50	TT1016R	233 234	QPSK, DIGITAL CARRIER
30)	11700.0000-12200.0000	H,V	10M0G7W	Rx			TT1016R		QPSK, DVB-S2 DIGITAL CARRIER
31)	11700.0000-12200.0000	H,V	6M00G7W	Rx			TT1016R		QPSK, DVB-S1 DIGITAL CARRIER
32)	14000.0000-14500.0000	H,V	1M00G7W	Tx	49.50	25.50	TT1240DR		QPSK, DIGITAL CARRIER
33)	14000.0000-14500.0000	H,V	2M00G7W	Tx	52.50	25.50	TT1240DR		QPSK, DIGITAL CARRIER
34)	11700.0000-12200.0000	H,V	10M0G7W	Rx			TT1240DR		QPSK, DVB-S2 DIGITAL CARRIER
35)	11700.0000-12200.0000	H,V	6M00G7W	Rx			TT1240DR		QPSK, DVB-S1 DIGITAL CARRIER
36)	14000.0000-14500.0000	H,V	5M60G7W	Tx	55.50	24.04	TT1240TV		QPSK
37)	14000.0000-14500.0000	H,V	4M60G7W	Tx	55.00	24.39	TT1240TV		QPSK, DIGITAL CARRIER
38)	14000.0000-14500.0000	H,V	520KG7W	Tx	45.00	23.86	TT1240TV		QPSK, DIGITAL CARRIER
39)	11700.0000-12200.0000	H,V	10M0G7W	Rx			TT1240TV		QPSK, DVB-S2 DIGITAL CARRIER
40)	11700.0000-12200.0000	H,V	6M00G7W	Rx			TT1240TV		QPSK, DVB-S1 DIGITAL CARRIER
41)	14000.0000-14500.0000	H,V	186KG1D	Tx	50.38	35.00	TT2_4X100		QPSK
42)	14000.0000-14500.0000	H,V	400KG1D	Tx	53.34	35.00	TT2_4X100		QPSK
43)	14000.0000-14500.0000	H,V	930KG7W	Tx	57.36	35.00	TT2_4X100		QPSK
44)	11700.0000-12200.0000	H,V	400KG1D	Rx			TT2_4X100		QPSK
45)	14000.0000-14500.0000	H,V	10M0G7W	Tx	71.00	38.30	TT37150		QPSK
46)	14000.0000-14500.0000	H,V	186KG1D	Tx	53.68	38.30	TT37150		QPSK
47)	14000.0000-14500.0000	H,V	930KG7W	Tx	60.66	38.30	TT37150		QPSK, QPSK DVB-S
48)	11700.0000-12200.0000	H,V	186KG1D	Rx			TT37150		QPSK QPSK DVG-S
49)	11700.0000-12200.0000	H,V	10M0G7W	Rx			TT37150		QPSK, QPSK DVG-S

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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
50)	14000.0000-14500.0000	H,V	1M29G7W	Rx			TTAVL.852		QPSK
51)	14000.0000-14500.0000	H,V	1M29G7W	Tx	42.07	21.10	TTAVL.852		QPSK
52)	14000.0000-14500.0000	H,V	10M0G1D	Tx	56.29	36.27	TTCMI850D		QPSK
53)	11700.0000-12200.0000	H,V	10M0G1D	Rx			TTCMI850D		QPSK
54)	14000.0000-14500.0000	H,V	1M00G1D	Tx	45.76	27.00	TTRVN9808		QPSK
55)	11700.0000-12200.0000	H,V	1M00G1D	Rx			TTRVN9808		QPSK

C) Frequency Coordination Limits

#	Frequency Limits (MHz)	Satellite Arc (Deg. Long.) East Limit	Satellite Arc (Deg. Long.) West Limit	Elevation (Degrees) East Limit	Elevation (Degrees) West Limit	Azimuth (Degrees) East Limit	Azimuth (Degrees) West Limit	Max EIRP Density toward Horizon (dBW/4kHz)	Associated Antenna(s)
1)	14000.0000-14500.0000	60.0W-143.0W		25.3-29.7		122.8-231.4		-3.22	INV 6.1
2)	11700.0000-12200.0000	60.0W-143.0W		25.3-29.7		122.8-231.4		0	INV 6.1
3)	11700.0000-12200.0000	60.0W-143.0W		10.0-10.0		000.0-000.0		0	TT09612 .9
4)	14000.0000-14500.0000	60.0W-143.0W		10.0-10.0		000.0-000.0		-6.1	TT09612 .9
5)	11700.0000-12200.0000	60.0W-139.0W		10.0-10.0		000.0-000.0		0	TT0753 .7
6)	14000.0000-14500.0000	60.0W-139.0W		10.0-10.0		000.0-000.0		-6.1	TT0753 .7
7)	14000.0000-14500.0000	60.0W-143.0W		10.0-10.0				-6.1	TT0.9816
8)	11700.0000-12200.0000	60.0W-143.0W		10.0-10.0					TT0.9816
9)	14000.0000-14500.0000	101.0W-103.0W		10.0-10.0				-12	TT1016R
10)	11700.0000-12200.0000	101.0W-103.0W		10.0-10.0					TT1016R
11)	14000.0000-14500.0000	60.0W-143.0W		10.0-10.0				-12	TT1240DR
12)	11700.0000-12200.0000	60.0W-143.0W		10.0-10.0					TT1240DR
13)	14000.0000-14500.0000	60.0W-143.0W		10.0-10.0				-12	TT1240TV
14)	11700.0000-12200.0000	60.0W-143.0W		10.0-10.0					TT1240TV
15)	14000.0000-14500.0000	72.0W-139.0W							TTRVN9808
16)	11700.0000-12200.0000	72.0W-139.0W							TTRVN9808
17)	14000.0000-14500.0000	72.0W-139.0W							TTCMI850D
18)	11700.0000-12200.0000	72.0W-139.0W							TTCMI850D

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C) Frequency Coordination Limits

#	Frequency Limits (MHz)	Satellite Arc (Deg. Long.) East Limit	Satellite Arc (Deg. Long.) West Limit	Elevation (Degrees) East Limit	Elevation (Degrees) West Limit	Azimuth (Degrees) East Limit	Azimuth (Degrees) West Limit	Max EIRP Density toward Horizon (dBW/4kHz)	Associated Antenna(s)
19)	14000.0000-14500.0000	72.0W-139.0W						-4.3	TT2_4X100
20)	11700.0000-12200.0000	72.0W-139.0W							TT2_4X100
21)	14000.0000-14500.0000	72.0W-139.0W		33.1-32.3		134.6-226.8		-4.3	CM2_4X100
22)	11700.0000-12200.0000	72.0W-139.0W		33.1-32.3		134.6-226.8			CM2_4X100
23)	14000.0000-14500.0000	72.0W-139.0W		33.1-32.3		134.6-226.8		-21.37	SMN3_7150
24)	11700.0000-12200.0000	72.0W-139.0W		33.1-32.3		134.6-226.8			SMN3_7150
25)	14000.0000-14500.0000	72.0W-139.0W		33.1-32.3		134.6-226.8		-19.73	SCM18050
26)	11700.0000-12200.0000	72.0W-139.0W		33.1-32.3		134.6-226.8			SCM18050
27)	14000.0000-14500.0000	72.0W-139.0W		33.1-32.3		134.6-226.8		-19.73	SCM2_4100
28)	11700.0000-12200.0000	72.0W-139.0W		33.1-32.3		134.6-226.8			SCM2_4100
29)	14000.0000-14500.0000	72.0W-139.0W		10.0-10.0				-10	TT37150
30)	11700.0000-12200.0000	72.0W-139.0W		10.0-10.0					TT37150
31)	14000.0000-14500.0000	72.0W-139.0W		33.1-32.3		134.6-226.8		-5.72	TTAVL.852
32)	11700.0000-12200.0000	72.0W-139.0W		33.1-32.3		134.6-226.8			TTAVL.852

D) Points of Communications

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

1) CCSS INV 6.1A to Permitted Space Station List
2) TT09612 .96M to AMC-4 (S2135)@ 134.9 degrees W.L. (U.S.-licensed)
3) TT09612 .96M to AMSC 1 satellite @ 103 degrees W.L. (U.S.-licensed)
4) TT0753 .75M to AMC-4 (S2135)@ 134.9 degrees W.L. (U.S.-licensed)
5) TT0753 .75M to AMSC 1 satellite @ 103 degrees W.L. (U.S.-licensed)
6) TT0.9816 to SES-1 (S2807) @ 101 degrees W.L. (U.S.-licensed)
7) TT1016R to AMC-4 (S2135)@ 134.9 degrees W.L. (U.S.-licensed)
8) TT1016R to SES-1 (S2807) @ 101 degrees W.L. (U.S.-licensed)
9) TT1240DR to Permitted Space Station List
10) TT1240TV to Permitted Space Station List
11) TTRVN_9808 to Permitted Space Station List
12) TTCM1_850DR to Permitted Space Station List
13) TT2_4X100 to Permitted Space Station List
14) CM2_4X100 to Permitted Space Station List
15) SMN3_7X150 to Permitted Space Station List
16) SCM1_8X2_4 to Permitted Space Station List

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D) Points of Communications

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

17) TT3_7X150 to Permitted Space Station List
18) TTAVL.852 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)
CM2_4X100	CM2_4X100	15	2.4	CHANNEL MASTER	TYPE 243	1751	3 AGL	
Max Gains(s):		47.6 dBi @	11.7200 GHz	49.3 dBi @	14.1200 GHz			
Maximum total input power at antenna flange (Watts) =					100.00			
Maximum aggregate output EIRP for all carriers (dBW) =					68.00			
CCSS INV 6.1	INV 6.1	2	6.1	VIASAT 8060	8060	1751	7 AGL/ 1758 AMSL	
Max Gains(s):		57.3 dBi @	14.2500 GHz					
Maximum total input power at antenna flange (Watts) =					100.00			
Maximum aggregate output EIRP for all carriers (dBW) =					77.30			
SCM1_8X2_4	SCM18050	2	1.8	CHANNEL MASTER	T83 TX/RX	1751	3 AGL/ 1754 AMSL	
Max Gains(s):		45.3 dBi @	11.7200 GHz	46.8 dBi @	14.1200 GHz			
Maximum total input power at antenna flange (Watts) =					50.00			
Maximum aggregate output EIRP for all carriers (dBW) =					58.00			
SCM1_8X2_4	SCM2_4100	2	2.4	CHANNEL MASTER	TYPE 243	1751	4 AGL/ 1755 AMSL	
Max Gains(s):		47.6 dBi @	11.7200 GHz	49.3 dBi @	14.1200 GHz			
Maximum total input power at antenna flange (Watts) =					100.00			
Maximum aggregate output EIRP for all carriers (dBW) =					66.80			
SMN3_7X150	SMN3_7150	3	3.7	SUMAN	SM-T3.7R	1751	4 AGL/ 1775 AMSL	
Max Gains(s):		51.5 dBi @	12.0000 GHz	52.3 dBi @	14.2500 GHz			
Maximum total input power at antenna flange (Watts) =					150.00			
Maximum aggregate output EIRP for all carriers (dBW) =					74.06			

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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)
TT0.9816	TT0.9816	1000	0.98	PRODELIN	1984			
Max Gains(s):		39.8 dBi @	11.8500 GHz	41.3 dBi @	14.2500 GHz			
Maximum total input power at antenna flange (Watts) =					16.00			
Maximum aggregate output EIRP for all carriers (dBW) =					53.00			
TT0753 .75M	TT0753 .7	50	0.75	AVL TECHNOLOGIES	750 IMOVSAT	0	0 AGL/ 0 AMSL	
Max Gains(s):		56.1 dBi @	11.9500 GHz	37.8 dBi @	11.8500 GHz		39.3 dBi @ 14.1250 GHz	
Maximum total input power at antenna flange (Watts) =					3.70			
Maximum aggregate output EIRP for all carriers (dBW) =					45.00			
TT09612 .96M	TT09612 .9	50	0.96	AVL TECHNOLOGIES	960 AVSAT	0	0 AGL/ 0 AMSL	
Max Gains(s):		39.7 dBi @	11.8500 GHz	41.2 dBi @	14.1250 GHz			
Maximum total input power at antenna flange (Watts) =					20.00			
Maximum aggregate output EIRP for all carriers (dBW) =					54.00			
TT1016R	TT1016R	1000	1	PATRIOT	TXINT-100KU		2 AGL	
Max Gains(s):		40.2 dBi @	11.7250 GHz	41.9 dBi @	14.1250 GHz			
Maximum total input power at antenna flange (Watts) =					12.00			
Maximum aggregate output EIRP for all carriers (dBW) =					52.70			
TT1240DR	TT1240DR	50	1.2	PRODELIN/DR	1132		2 AGL	
Max Gains(s):		41.7 dBi @	11.8500 GHz	43.2 dBi @	14.1250 GHz			
Maximum total input power at antenna flange (Watts) =					14.16			
Maximum aggregate output EIRP for all carriers (dBW) =					54.70			
TT1240TV	TT1240TV	50	1.2	PRODELIN/TV	1132		2 AGL	
Max Gains(s):		41.7 dBi @	11.8500 GHz	43.2 dBi @	14.1250 GHz			
Maximum total input power at antenna flange (Watts) =					22.30			
Maximum aggregate output EIRP for all carriers (dBW) =					56.70			

UNITED STATES OF AMERICA
FEDERAL COMMUNICATIONS COMMISSION

RADIO STATION AUTHORIZATION

Name: Orbital Media Networks, Inc. **Call Sign:** E050143
Authorization Type: Modification of License **File Number:** SES-MOD-20170817-00925
Non Common Carrier **Grant date:** 07/17/2018 **Expiration Date:** 08/30/2020

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)
TT2_4X100	TT2_4X100	15	2.4	SUMAN	SM-T2.4R		3 AGL	
Max Gains(s):		47.7 dBi @	11.8500 GHz	49.0 dBi @	14.2500 GHz			
Maximum total input power at antenna flange (Watts) =				100.00				
Maximum aggregate output EIRP for all carriers (dBW) =				66.50				
TT3_7X150	TT37150	15	3.7	SUMAN	SM-T3.7R			
Max Gains(s):		51.5 dBi @	12.0000 GHz	52.3 dBi @	14.2500 GHz			
Maximum total input power at antenna flange (Watts) =				150.00				
Maximum aggregate output EIRP for all carriers (dBW) =				74.06				
TTAVL.852	TTAVL.852	5	0.85	AVL	890K MVSAT			
Max Gains(s):		38.6 dBi @	11.8500 GHz	40.1 dBi @	14.1250 GHz			
Maximum total input power at antenna flange (Watts) =				1.57				
Maximum aggregate output EIRP for all carriers (dBW) =				42.07				
TTCM1_850DR	TTCMI850D	100	1.8	CHANNEL MASTER	TYPE 183		0 AGL	
Max Gains(s):		46.8 dBi @	14.2500 GHz	45.3 dBi @	11.9500 GHz			
Maximum total input power at antenna flange (Watts) =				50.00				
Maximum aggregate output EIRP for all carriers (dBW) =				56.29				
TTRVN_9808	TTRVN9808	1000	0.98	RAVEN	GKU98		15 AGL	
Max Gains(s):		41.0 dBi @	14.1250 GHz	39.5 dBi @	11.8500 GHz			
Maximum total input power at antenna flange (Watts) =				8.00				
Maximum aggregate output EIRP for all carriers (dBW) =				47.78				

F) Remote Control Point:

TT0753 .75M 7042 S. REVERE PARKWAY, SUITE 450 **Call Sign:** E050143
CENTENNIAL, ARAPAHOE, CO 80112
303-925-1708

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F) Remote Control Point:

TT09612 .96M 7042 S. REVERE PARKWAY, SUITE 450 **Call Sign:** E050143
CENTENNIAL, ARAPAHOE, CO 80112
303-925-1708

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 (IBFS) in the "Other Filings" tab 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.

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.

102 --- 24 Hour Contact: Applicant has provided the name and telephone number of a contact person in the United States, available seven days a week, twenty-four hours a day, for cessation of emissions from suspected source of interference in the event of need to resolve interference issues, on direction from authority with jurisdiction for licensing in the area of operation.

233 --- If a good faith agreement cannot be reached between the satellite operator and the operator of a future 2° compliant satellite, the earth station operator shall reduce its power to those levels that would accommodate the 2° compliant satellite.

234 --- If a good faith agreement cannot be reached between the satellite operator and the operator of a future 2° compliant satellite, the earth station operator shall accept the power density levels that would accommodate the 2° compliant satellite.

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)

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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:

90399 --- The licensee shall, at all times, take all necessary measures to ensure that operation of this (these) authorized earth station(s) 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. Physical 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.

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.

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