

USN Support Galileo L15 Tracking Campaign from South Point / Hawaii USHI01 & USHI02 Using Galileo GSAT0208 and GSAT0209 Including Preparations and Connectivity tests of Galileo L15 in October 2026.

Mission Description:

SSC Space (USN) seeks a 30-day STA commencing on October 12th 2026 to support the mission.

Galileo is the global navigation satellite system (GNSS) that went live in 2016, created by the European Union (EU) through the European Union Agency for the Space Programme (EUSPA), headquartered in Prague, Czech Republic, with two ground operations centers in Oberpfaffenhofen (DLR GfR) in Germany and Fucino in Italy.

DLR GfR mbH is a core team member of the Galileo Service Operator (GSOp), operating and managing the constellation of Galileo satellites from the Galileo Control Center in Oberpfaffenhofen (GCC-D).

GfR has been selected to take over the preparation and execution of LEOP operations for launches 12, 13, 14, and 15.

Navigation dual satellite in the European constellation Galileo. Galileo is the global navigation satellite system (GNSS) that went live in 2016, created by the European Union (EU) through the European Union Agency for the Space Programme (EUSPA), headquartered in Prague, Czech Republic, with two ground operations centers in Oberpfaffenhofen (DLR GfR) in Germany and Fucino in Italy.

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GfR has contracted the German Space Operation Center (GSOC) to provide Network Operation Center (NOC) service, including Ground Station Network (GSN).

The GSAT (Galileo Satellites) in the GALILEO L15 mission are part of the Galileo constellation. These satellites are placed in Medium Earth Orbit (MEO) with Navigation dual satellite in the European constellation Galileo.

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The GSAT (Galileo Satellites) in the GALILEO L15 mission are part of the Galileo constellation. These satellites are placed in Medium Earth Orbit (MEO) with the following characteristics:

The frequency coordination report will be delivered as soon as it is ready.

Additional Information

NGSO

Commercial satellite name: GSAT0208 and GSAT0209

Location of data source: Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR)
Oberpfaffenhofen, 82234 Weßling Germany

Satellite Name as published at ITU: GALILEO-M-NAVSTAR (A1a)

Administration (Country) I / GLS

ITU publication reference

API/A 2259 (BR14)

BR IFIC 2652 (BR20)

PART II-S publication reference BR IFIC 2639 (BR20)

Uplink Parameters

Polarization ¹ and Frequencies ² (C6a)					
Beam Designation	Polarization	Center Freq. [MHz]	Min Freq. [MHz]	Max Freq. [MHz]	Occupied BW [kHz]
Error! Reference source not found.	M	2040,399075	2039,9991	2040,7991	400
Error! Reference source not found.	M	2 057,3553	2056,9553	2057,7553	400

Data Rate and Modulation ³					
Beam Designation	Design. of Emission ⁴ (C7a)	Data Rate ⁵		Modulation	PCM code
SBU3	400KG7W	2000	bps	PCM/PSK/PM	NRZ-L
SBU9	400KG7W	2000	bps	PCM/PSK/PM	NRZ-L

Data Rate and Modulation (cont'd)			
TC Subcarrier Frequency	Ranging YES/NO?	RNG Subcarrier Freq.	
8000 kHz	YES	100kHz	
8000 kHz	YES	100 kHz	

Earth Station Output Power	
Output EIRP (C10d3 + C8a1/C8b1)	68 dBW
Output power at the Antenna Feed (C8a1/C8b1)	25 dBW

Downlink Parameters

Polarization ¹ and Frequencies ² (C6a)					
Beam Designation	Polarization	Center Freq. [MHz]	Min Freq. [MHz]	Max Freq. [MHz]	Occupied BW [kHz]
Error! Reference source not found.	M	2215,818	2215,0180	2216,618	800
Error! Reference source not found.	M	2234,232	2233,432	2235,032	800

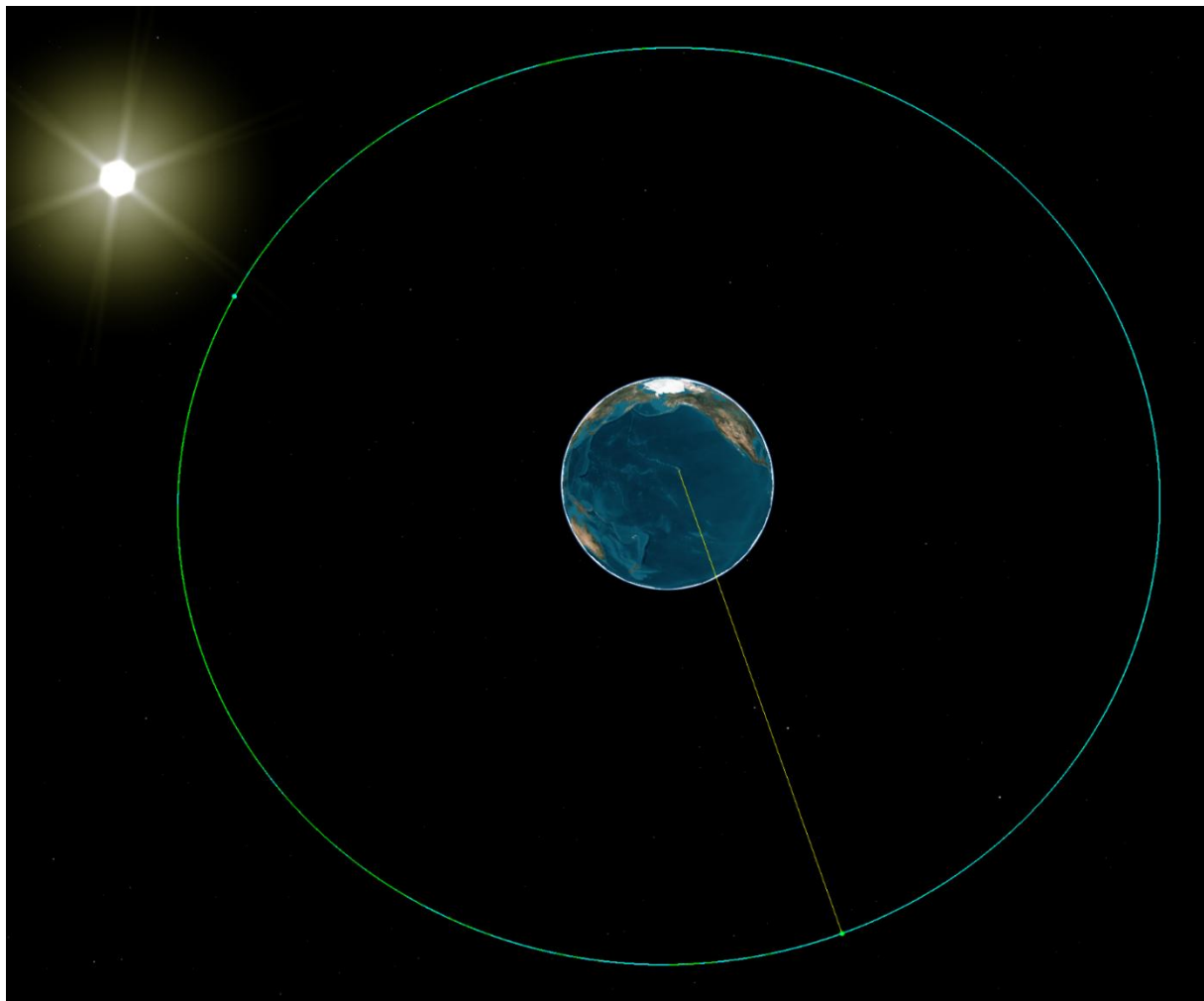
Data Rate and Modulation ³				
Design. of Emission ⁴ (C7a)	Data Rate ⁵ (not in ITU)		Modulation (not in ITU)	TM Subcarrier Freq. (not in ITU)
800KG7W	50 955	kbps	PCM/PSK/PM	225kHz
800KG7W	50 955	kbps	PCM/PSK/PM	225 kHz

Satellite EIRP and Maximum Power Density	
Satellite EIRP (C8a1/C8b1 + B3a1)	Maximum Power Density (C8a2/C8b2)
5 dBW	-59.7 dBW/Hz
5 dBW	-59.7 dBW/Hz

Spacecraft Output Power	
Maximum spacecraft output power (C8a1/C8b1)	5 dBW
Maximum downlink EIRP (C8a1/C8b1 + B3a1)	18.5 dBW

Additional information about downlink <i>in ITU</i>			<i>(not</i>
PCM code	NRZ-L		
Specify coding (if applied. Viterbi, Turbo, Reed Solomon)	Viterbi + Reed Solomon		
Symbol rate (if coding is applied	50 955	kbps	

Galileo GSAT0208 and GSAT0209 Visibility & Access Summary Reports





Facility-USHI01-To-Satellite-GSAT0208: Access Summary Report

USHI01-To-GSAT0208 - Alaska_USAK01

	Access	Start Time (YYYY:MM:DD)	Stop Time (YYYY:MM:DD)	Duration
(sec)				
	1	2026:10:12:10:00:00.000	2026:10:12:18:35:43.551	30943.551
	2	2026:10:13:15:39:34.589	2026:10:14:03:27:02.389	42447.800
	3	2026:10:15:00:34:15.747	2026:10:15:16:08:58.985	56083.238
	4	2026:10:16:13:32:56.659	2026:10:17:01:06:44.698	41628.039
	5	2026:10:17:21:09:56.945	2026:10:18:06:55:25.131	35128.185
	6	2026:10:18:09:33:18.240	2026:10:18:13:50:16.696	15418.456

7	2026:10:19:04:37:30.653	2026:10:19:08:28:35.257	13864.604
8	2026:10:19:11:30:10.251	2026:10:19:21:38:50.409	36520.158
9	2026:10:20:17:23:38.563	2026:10:21:04:52:10.966	41312.403
10	2026:10:22:02:17:35.873	2026:10:22:17:55:24.333	56268.460
11	2026:10:23:14:59:15.947	2026:10:24:02:46:43.181	42447.234
12	2026:10:24:23:53:58.335	2026:10:25:15:28:39.629	56081.294
13	2026:10:26:12:52:35.703	2026:10:27:00:26:24.165	41628.462
14	2026:10:27:20:29:39.212	2026:10:28:06:15:00.262	35121.050
15	2026:10:28:08:52:50.711	2026:10:28:13:09:53.217	15422.506
16	2026:10:29:03:57:05.101	2026:10:29:07:48:06.801	13861.700
17	2026:10:29:10:49:46.274	2026:10:29:20:58:25.207	36518.933
18	2026:10:30:16:43:11.268	2026:10:31:04:11:42.565	41311.297
19	2026:11:01:01:37:08.549	2026:11:01:17:14:55.669	56267.120
20	2026:11:02:14:18:50.138	2026:11:03:02:06:16.806	42446.669
21	2026:11:03:23:13:34.756	2026:11:04:14:48:15.521	56080.766
22	2026:11:05:12:12:14.036	2026:11:05:23:46:02.107	41628.071
23	2026:11:06:19:49:20.821	2026:11:07:05:34:34.414	35113.593
24	2026:11:07:08:12:27.256	2026:11:07:12:29:32.449	15425.193
25	2026:11:08:03:16:42.153	2026:11:08:07:07:39.261	13857.108
26	2026:11:08:10:09:26.157	2026:11:08:20:18:06.485	36520.328
27	2026:11:09:16:02:48.831	2026:11:10:03:31:18.229	41309.398

Global Statistics

Min Duration	25	2026:11:08:03:16:42.153	2026:11:08:07:07:39.261	13857.108
Max Duration	10	2026:10:22:02:17:35.873	2026:10:22:17:55:24.333	56268.460
Mean Duration			36690.949	
Total Duration			990655.617	

9 Jul 2026 10:39:25

Facility-USHI01-To-Satellite-GSAT0209: Access Summary Report

USHI01-To-GSAT0209 - Alaska_USAK01

Access (sec)	Start Time (YYYY:MM:DD)	Stop Time (YYYY:MM:DD)	Duration
-----	-----	-----	-----
1	2026:10:13:01:16:09.441	2026:10:13:16:47:51.026	55901.585
2	2026:10:14:14:08:04.573	2026:10:15:01:48:30.408	42025.835

3	2026:10:15:22:18:50.958	2026:10:16:07:32:10.524	33199.565
4	2026:10:16:09:28:58.194	2026:10:16:14:29:47.101	18048.907
5	2026:10:17:05:20:07.437	2026:10:17:08:22:37.338	10949.902
6	2026:10:17:12:05:19.338	2026:10:17:22:49:08.887	38629.549
7	2026:10:18:18:10:42.517	2026:10:19:05:26:58.887	40576.370
8	2026:10:19:10:26:35.183	2026:10:19:11:44:31.609	4676.426
9	2026:10:20:02:55:55.008	2026:10:20:09:12:36.277	22601.269
10	2026:10:20:09:46:14.540	2026:10:20:18:41:59.792	32145.253
11	2026:10:21:15:36:54.712	2026:10:22:03:23:02.480	42367.767
12	2026:10:23:00:35:50.487	2026:10:23:16:07:31.340	55900.853
13	2026:10:24:13:27:44.934	2026:10:25:01:08:10.988	42026.053
14	2026:10:25:21:38:34.846	2026:10:26:06:51:47.937	33193.092
15	2026:10:26:08:48:30.964	2026:10:26:13:49:25.718	18054.755
16	2026:10:27:04:39:45.103	2026:10:27:07:42:08.727	10943.624
17	2026:10:27:11:24:56.254	2026:10:27:22:08:47.399	38631.145
18	2026:10:28:17:30:17.473	2026:10:29:04:46:31.831	40574.358
19	2026:10:29:09:46:05.698	2026:10:29:11:04:08.423	4682.725
20	2026:10:30:02:15:27.451	2026:10:30:08:31:57.294	22589.844
21	2026:10:30:09:06:00.183	2026:10:30:18:01:30.288	32130.105
22	2026:10:31:14:56:26.652	2026:11:01:02:42:33.742	42367.089
23	2026:11:01:23:55:23.400	2026:11:02:15:27:03.681	55900.282
24	2026:11:03:12:47:20.269	2026:11:04:00:27:45.402	42025.133
25	2026:11:04:20:58:11.884	2026:11:05:06:11:16.533	33184.649
26	2026:11:05:08:08:12.427	2026:11:05:13:09:02.681	18050.254
27	2026:11:06:03:59:19.007	2026:11:06:07:01:43.665	10944.659
28	2026:11:06:10:44:35.461	2026:11:06:21:28:25.773	38630.313
29	2026:11:07:16:49:54.458	2026:11:08:04:06:07.125	40572.667
30	2026:11:08:09:05:35.253	2026:11:08:10:23:51.380	4696.127
31	2026:11:09:01:35:03.794	2026:11:09:07:51:18.375	22574.581
32	2026:11:09:08:25:49.483	2026:11:09:17:21:06.301	32116.817

Global Statistics

Min Duration	8	2026:10:19:10:26:35.183	2026:10:19:11:44:31.609	4676.426
Max Duration	1	2026:10:13:01:16:09.441	2026:10:13:16:47:51.026	55901.585
Mean Duration			30653.486	
Total Duration			980911.551	

Flux Density impinging on the ground in Hawaii from Galileo GSAT0208 and GSAT0209

The Flux density is calculated as:

$$\text{flux density} = \text{EIRP} / (4\pi RSE^2)$$

where RSE is the distance from spacecraft to the ground,
and EIRP is the Effective Isotropic Radiated Power of the spacecraft.

Data from the spacecraft vendor indicates that the nominal EIRP of the Galileo GSAT0208 and GSAT0209 spacecrafts is 18.5 dBW. The closest distance to earth during an overhead pass is = 23220 km.

Converting 18.5 dBW to scalar watts = 71 Watts transmitted at 2215.818/2234.232 MHz.

Therefore:

$$\text{flux density} = 71 / (4\pi(23220000)^2)$$

$$\text{Flux density} = 1.047 \times 10^{-14} \text{ Watts/meter}^2$$

Or

$$\text{Flux density} = 1.047 \times 10^{-15} \text{ mW/cm}^2$$

Number of Satellites	2
Number of Orbital Planes	No. of Orbital Planes
Inclination	56 °
Apogee	23 220 km
Perigee	23 220 km

Exhibit C

PETITION FOR WAIVER OF SECTION 25.137 AND 25.114 AND OF THE U.S. TABLE OF FREQUENCY ALLOCATIONS

I. TO THE EXTENT THEY APPLY, GOOD CAUSE EXISTS FOR A WAIVER OF CERTAIN PORTIONS OF SECTIONS 25.137 AND 25.114

Universal Space Network, Inc. (USN) is provided limited legal and technical information for the Galileo L15 Satellite.¹ Pursuant to Section 25.137 of the Federal Communications Commission's ("Commission" or "FCC") rules, the same technical information required by Section 25.114 for U.S.-

licensed space station, and certain legal information, must be submitted by earth station applicants “requesting authority to operate with a non-U.S. licensed space station to serve the United States...”² USN seeks authority to support a critical event of Galileo L15 spacecraft, and not commercial service to the United States, and thus believes that Section 25.137 does not apply.

To the extent the Commission determines, however, that USN’s request for authority to provide critical spacecraft support on a special temporary basis is a request to serve the United States with a non-U.S.-licensed satellite, USN respectfully requests a waiver of Sections 25.137 and 25.114 of the Commission’s rules, to the extent that USN has not herein provided the information required by these rules.³ The Commission may grant a waiver for good cause shown.⁴ A waiver is therefore appropriate if special circumstances warrant a deviation from the general rule, and such a deviation will serve the public interest. The US public interest is supported by the sharing of collected data with the US GPS system. In this case, good cause for a waiver of portions of Section 25.114 exists. USN seeks authority to conduct support of testing, preparation and tracking campaign of Galileo L15 using Galileo GSAT0208 and GSAT0209. Thus, any information sought by Section 25.114 that is not relevant to the critical support – e.g., antenna patterns, energy and propulsion and orbital debris - USN does not have. In addition, USN would not easily be able to obtain such information because USN is not the operator of the Galileo L15 satellite, nor is USN in contractual privity with that operator. Rather, USN has contracted with Swedish Space Corporation, Solna Sweden (SSC) to support the LEOP operation of Galileo L14 satellite.

¹ FCC Form 312 Section B

² 47 C.F.R. § 25.137(a)

³ 47 C.F.R. §§25.137 and 25.114

⁴ 47 C.F.R. §1.3

Because it is not relevant to the service for which USN seeks authorization, and because obtaining the information would be a hardship, USN seeks a waiver of all the technical and legal information required by Section 25.114, to the extent it is not provided herein. As noted above, USN has provided the required information to the extent that it is relevant to the testing service for which USN seeks authorization.

Good cause also exists to waive portions of Section 25.137, to the extent the information required is not herein provided. Section 25.137 is designed to ensure that “U.S.-licensed satellite systems have effective competitive opportunities to provide analogous services” in other countries. Here, there is no commercial service being provided by the satellite; USN is providing TT&C data while the satellite is moving to its orbit. Thus, the purpose of the information required by Section 25.137 is not implicated here. For example, Section 25.137(d) requires earth station applicants requesting authority to operate with a non-U.S.-licensed space station that is not in orbit and operating to post a bond.⁵ The underlying purpose in having to post a bond – i.e., to prevent warehousing of orbital locations by operators seeking to serve the United States – would not be served by requiring USN to post a bond in order to conduct the 30 days critical support of the Galileo L15 satellite using GSAT0208 and GSAT0209

It is USN’s understanding that Galileo L15 is licensed by Galileo and the country of Italy. Galileo L15 is spacecraft meant to serve Europe, US, and global navigation system, with data shared with the US. Thus, the purpose of Section 25.137 – to ensure that U.S. satellite operators enjoy “effective competitive opportunities” to serve foreign markets and to prevent warehousing of orbital locations service the United States – will not be undermined by grant of this waiver request.

Finally, USN notes that it expects to communicate with the Galileo GSAT0208 and GSAT0209 satellite using its U.S. for a limited period. earth station. Requiring USN to obtain technical and legal information from an unrelated party, where there is no risk of interference. Given these particular facts, the waiver sought herein is appropriate.

II. GOOD CAUSE EXISTS FOR A WAIVER OF THE UNITED STATES TABLE OF FREQUENCY ALLOCATIONS

USN further requests a waiver of the United States Table of Frequency Allocations (“U.S. Table”) as described in section 2.106 of the rules for the frequency bands 2025 – 2110 MHz (Earth-to-Space) and 2200 – 2290 MHz (Space-to-Earth).⁶ Section footnote US96 allow for non-federal Government use of these bands in the United States on a case-by-case non-interference basis. Such use by USN necessitates a waiver of the U.S. Table.

Good cause exists to grant USN a limited waiver of the U.S. Table to allow critical support operations for the Galileo GSAT0208 and GSAT0209 satellites. In considering request for case-by-case spectrum uses, the Commission has indicated that it would generally grant such waivers “where there is little potential for interference into any service authorized under the Table of Frequency Allocations and when the case-by-case operator accepts any

interference from authorized services.”⁷ USN will coordinate with other parties operating communication systems in compliance with the Table of Frequency Allocations to ensure that no harmful interference is caused. USN seeks to operate only pursuant to special temporary authorization and thus agrees to accept any interference from

authorized services. In summary, USN’s operation on a non-interference, non-protected basis support waiver of the U.S. Table.

⁵ 47 C.F.R. §25.137(d)(4)

⁶ 47 C.F.R. §2.106

⁷ Previously approved STAs for Universal Space Network SES-STA-20020725-01174; SES-STA-20021112-02008; SES-STA-20040315-00475; SES-STA-20220512-00477

With respect to Space Launch Services

Pursuant to Section 1.3 of the Commission’s rules (47 CFR § 1.3), USN respectfully requests a waiver of certain provisions of Part 25 and Part 26 of the Commission’s rules to permit the licensing and operation of a satellite earth station using the 2025–2110 MHz and 2200–2290 MHz frequency bands for Part 25, telemetry, tracking, and command (TTC) operations of its Galileo L15, GSAT0208 and GSAT0209 satellites.

Under 47 CFR § 1.3, the Commission may waive its rules for good cause shown. USN submits that:

The proposed earth station will support tracking campaign, testing and preparations of Galileo L15 using Galileo GSAT0208 and GSAT0209 satellites , which cannot be accommodated in other bands due to technical/operational constraints. Besides these bands have been used in all previous STA applications for this spacecraft, they are also technically suitable due to their propagation characteristics and compatibility with existing ground infrastructure.

These bands have been partially reallocated to space launch services under Part 26.

As per 47 CFR § 25 section 2.106, this application would not comply without a waiver due to limitations on non-federal use or non-space launch service in these bands which currently restrict or limit the use of the referenced bands due to the reallocation referenced above. USN believe this is in the public interest, technically feasible, non-disruptive to existing services, improves global positioning, connectivity, emergency services. It is also consistent with the FCC's goals of promoting innovation, efficient use of spectrum and being in line with FCC orders and rulemakings that support flexible use of these bands (e.g., the FCC's 2023 Report and Order on commercial space launch operations 1).

This request is also consistent with prior FCC-authorized STAs, including:

Lynk Global, Inc. (File No. SES-STA-20220512-00477), which was granted temporary authority for TT&C in both bands;

Space Telecommunications, Inc. (CTC-0 CubeSat, File Number: 1082-EX-ST-2024) which was granted temporary authority for TT&C in both bands.

Geometric Energy Corporation, which received STA for TT&C in these bands for a lunar mission via a UK-based earth station.

These precedents demonstrate the FCC's established practice of granting temporary, coordinated use of these bands for TT&C under appropriate conditions.

USN request a waiver to permit temporary earth station operations and continued use of the referenced bands for Part 25 TT&C satellite communications. A waiver is necessary due to the relocation of these bands.

Summary of Technical Information For Coordination with NTIA/FAS/IRAC

Applicant: Universal Space Network, Inc.

File No.: _____

Call Sign: No Call Sign

Special Temporary Authority ("STA")

Purpose of operation: Support tracking campaign, testing, and preparations of Galileo L15 using Galileo GSAT0208 and GSAT0209 satellites

Start Date: Oct. 12th, 2026

End Date: Nov. 11th, 2026

Site Location:

Naalehu, HI

Latitude: 19 deg 00' 50.056" N (NAD-83)
 Longitude: 155 deg 39' 47.884" W (NAD-83)

 Transmit frequency: 2040,399075 / 2057,3553 MHz.
 Polarization: M
 Antenna manufacturer: Datron
 Antenna Size in meter: 13m
 Antenna model: 1453
 Antenna Gain Transmit: 46.3 dBi @ 2040,399075/2057,3553 MHz.

<u>Frequency Band</u> (MHz)	<u>Emissions</u>	<u>Max.EIRP</u> (dBW)	<u>Max.EIRP Density</u> (dBW/4KHz)
2039.9991–2040.7991	400KG7W	68	48
2056.9553–2057.7553	400KG7W	68	48

Satellite: Galileo GSAT0208 and GSAT0209 satellites