



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

Name: GCL Licensee LLC

Call Sign: E990337

Authorization Type: Modification of License

File Number: SES-MOD-20170112-00030

Non Common Carrier

Grant date: 02/07/2017

Expiration Date: 06/23/2025



Nature of Service: Mobile 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)	LPMA-1	Road 303 INT. KM 12.1 Cabo Rojo, Caba Rojo, PR 00623	17°58'48.0"N	67°8'15.0"W	55	27

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 23, 2010 (3 AM Eastern Standard Time) and ending June 23, 2025 (3 AM Eastern Standard Time) . The required date of completion of construction and commencement of operation is February 7, 2018 (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)	6900.0000-7055.0000	L,R	1M23G7W	Rx			LPMA-1		CDMA VOICE AND DATA
2)	6900.0000-7055.0000	L,R	1M23G7W	Rx			LPMA-1		CDMA VOICE AND DATA
3)	6900.0000-7055.0000	L,R	N0N	Rx			LPMA-1		UNMODULATED CW FOR TESTING
4)	6900.0000-7055.0000	L,R	N0N	Rx			LPMA-1		UNMODULATED CW FOR TESTING
5)	6900.0000-7055.0000	L,R	2M46G7W	Rx			LPMA-1		WIDEBAND CDMA VOICE AND DATA
6)	6900.0000-7055.0000	L,R	2M46G2W	Rx			LPMA-1		WIDEBAND CDMA FOR SINGLE-CARRIER AMSS
7)	6900.0000-7055.0000	L,R	1M23XXX	Rx			LPMA-1		WHITE NOISE MODULATED CARRIER FOR TESTING
8)	6900.0000-7055.0000	L,R	1M23XXX	Rx			LPMA-1		WHITE-NOISE MODULATED CARRIER FOR TESTING



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9)	6900.0000-7055.0000	L,R	1M23G2W	Rx			LPMA-1		DIRECT-SEQUENCE CDMA FOR SINGLE-CARRIER AMSS
10)	6900.0000-7055.0000	L,R	1M23G2W	Rx			LPMA-1		DIRECT-SEQUENCE CDMA FOR SINGLE-CARRIER AMSS
11)	6900.0000-7055.0000	L,R	1M23G7W	Rx			LPMA-1		FEEDER LINK & TELEMETRY - CDMA 1.23 MC/SEC/QPSK
12)	6900.0000-7055.0000	L,R	2M50G2D	Rx			LPMA-1		DIRECT-SEQUENCE CDMA FOR SINGLE-CARRIER TELEMETRY DATA
13)	5096.0000-5250.0000	L,R	1M23G7W	Tx	55.00	30.10	LPMA-1		CDMA VOICE AND DATA
14)	5096.0000-5250.0000	L,R	1M23G7W	Tx	55.00	30.10	LPMA-1		CDMA VOICE AND DATA
15)	5096.0000-5250.0000	L,R	2M46G7W	Tx	55.00	27.10	LPMA-1		WIDEBAND CDMA VOICE AND DATA
16)	5096.0000-5250.0000	L,R	2M46G2W	Tx	55.00	27.10	LPMA-1		WIDEBAND CDMA FOR SINGLE-CARRIER AMSS
17)	5096.0000-5250.0000	L,R	1M23XXX	Tx	59.00	34.10	LPMA-1		WHITE-NOISE MODULATED CARRIER FOR TESTING
18)	5096.0000-5250.0000	L,R	1M23XXX	Tx	59.00	34.10	LPMA-1		WHITE-NOISE-MODULATED CARRIER FOR TESTING
19)	5096.0000-5250.0000	L,R	1M23G2W	Tx	55.00	30.10	LPMA-1		DIRECT-SEQUENCE CDMA FOR SINGLE-CARRIER AMSS
20)	5096.0000-5250.0000	L,R	1M23G2W	Tx	55.00	30.10	LPMA-1		DIRECT-SEQUENCE CDMA FOR SINGLE-CARRIER AMSS
21)	5096.0000-5250.0000	L,R	NON	Tx	59.00	59.00	LPMA-1		UNMODULATED CW FOR TESTING; MAXIMUM EIRP DENSITY PER CARRIER IS 59.0 dBW IN ANY BANDWIDTH.
22)	5096.0000-5250.0000	L,R	NON	Tx	59.00	59.00	LPMA-1		UNMODULATED CW FOR TESTING; MAXIMUM EIRP DENSITY PER CARRIER IS 59.0 dBW IN ANY BANDWIDTH.
23)	5091.0000-5250.0000	L,R	1M23G7W	Tx	55.00	30.10	LPMA-1		FEEDER LINK & TELEMETRY - CDMA 1.23 MC/SEC/QPSK



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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)	5091.0000-5250.0000	NGSO		10.0-10.0		000.0-360.0		-10.5	LPMA-1
2)	6900.0000-7055.0000	NGSO		10.0-10.0		000.0-360.0			LPMA-1
3)	5091.0000-5250.0000	NGSO		10.0-10.0		-360.0		22.9	LPMA-1

D) Points of Communications

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

- 1) LPMA-1 to IRIDIUM NGSO MSS (S2110) (U.S.-licensed)
- 2) LPMA-1 to GLOBALSTAR 2.0 NGSO MSS (France-licensed)

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)
LPMA-1	LPMA-1	1	5.5	Alcatel	9775	55	8.15 AGL/ 63.2 AMSL	
Max Gains(s):			47.6 dBi @	5.1500 GHz	50.2 dBi @	6.9750 GHz		
Maximum total input power at antenna flange (Watts) =					110.00			
Maximum aggregate output EIRP for all carriers (dBW) =					68.00			

F) Remote Control Point:

LPMA-1	461 S. Milpitas Blvd. Milpitas, Santa Clara, CA 95035 408-933-4600	Call Sign:
LPMA-1	1340 Treat Blvd., Suite 500 Walnut Creek, Contra Costa, CA 94596 925-988-4549	Call Sign:

G) Antenna Structure marking and lighting requirements:

None unless otherwise specified under Special and General Provisions



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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:

- 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.
- 2010 --- This authorization is issued pursuant to the Commission's Second Report and Order adopted June 16, 1972 (35 FCC 2d 844) and Memorandum, Opinion and Order adopted December 21, 1972 (38 FCC 2d 665) in Docket No. 16495 and is subject to the policies adopted in that proceeding.
- 2300 --- Authority is granted to operate this station by remote control provided that: (1) the parameters of the transmissions of this station monitored at the remote control point, and the operational functions sufficient to ensure that the operations of this station are in full compliance with the station authorization at all times; (2) upon detection by the grantee, or upon notification from the Commission, of a deviation of the operation of this station, transmissions shall be immediately suspended until the deviation is corrected, except that transmissions concerning the immediate safety of life or property may be conducted for the duration of such emergency; and (3) the grantee shall have available, at all times, the technical personnel necessary to perform the technical servicing and maintenance of this station expeditiously. See also Public Notice "The International Bureau Provides Guidance Concerning the Relocation of Earth Station Remote Control Points", DA 06-978 (rel. May 4, 2006).
- 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.
- 3213 --- All existing transmitting facilities, operations and devices must be in compliance with RF by September 1, 2000 or, if not, file an Environmental Assessment (EA). See 47 CFR 1.1307 (b) (5).
- 3424 --- The authority granted here is subject to the outcome of the Commission's rulemaking proceeding in OET Docket No. 98-142, concerning domestic allocations in the 5/7 GHz frequency bands. No harmful interference shall be caused by the operations of this station to other lawfully operated radio stations and interference protection from authorized stations shall not be claimed. Operations shall terminate immediately upon notification of harmful interference.
- 3428 --- This authorization is not to be construed as including any uplink or downlink authority in other countries.



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

- 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.
- 5012 --- The authority granted here is limited to the operation of the facilities described above and does not include any authority to install and operate channelizing equipment or any other authority under Section 214 of the Communications Act of 1934, as amended, to establish channels of communications.
- 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.
- 5017 --- Operation of this station is governed by the terms, conditions and limitations in Part 25 of the Commission's Rules and Regulations and the following additional conditions: 1. This license shall not vest in the Licensee(s) any right to operate the station or any right in the use of the frequencies designated in the license beyond its term or in any other manner than authorized in the license; 2. Neither the license nor the right granted under it shall be assigned or otherwise transferred in violation of the Commission's Rules and Regulations issued under it; and 3. This station is subject to the right of use or control conferred by Section 706 of the Communications Act of 1934, as amended.
- 5018 --- This license shall be forfeited automatically if this station is not ready for operation within the time specified unless, prior to the expiration date of this license, the Commission receives an Application for Additional Time to Construct a Radio Station (FCC Form 701) filed by the Licensee(s) showing good cause why the Licensee(s) could not complete construction on time.
- 5019 --- This authorization is not to be construed as permitting the provision of any service between earth station locations within the United States.
- 5216 --- All operations shall be on a non-common carrier basis.
- 90009 --- 1) Operation shall be in compliance with any restrictions established in the course of international coordination for Globalstar second generation satellites pursuant to ITU regulations.



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90010 --- 2) The authority to operate granted in connection with these earth station applications shall become effective upon grant by France of an authorization for space operations under the June 3, 2008 French law n° 2008-518 relative to space operations, and only for communications with space stations for which France grants authority and undertakes to register under the United Nations Registration Convention. Globalstar shall notify the Commission immediately of any disposition by French officials of its request for such authorization. This authorization shall immediately cease in the event of denial of such request, or other action by Globalstar or France that would result in space operations by Globalstar second generation satellites becoming no longer subject to French supervision.



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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.