

**United States of America
FEDERAL COMMUNICATIONS COMMISSION
EXPERIMENTAL
SPECIAL TEMPORARY AUTHORIZATION**

EXPERIMENTAL

(Nature of Service)

WS9XBS

(Call Sign)

XT MO

(Class of Station)

0751-EX-ST-2021

(File Number)

NAME GDC Technics LLC

This Special Temporary Authorization is granted upon the express condition that it may be terminated by the Commission at any time without advance notice or hearing if in its discretion the need for such action arises. Nothing contained herein shall be construed as a finding by the Commission that the authority herein granted is or will be in the public interest beyond the express terms hereof.

This Special Temporary Authorization shall not vest in the grantee any right to operate the station nor any right in the use of the frequencies designated in the authorization beyond the term hereof, nor in any other manner than authorized herein. Neither the authorization nor the right granted hereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934. This authorization is subject to the right of use of control the Government of the United States conferred by Section 706 of the Communications Act of 1934.

Special Temporary Authority is hereby granted to operate the apparatus described below:

Purpose Of Operation:

Demonstration and performance testing of a new Ka-band SATCOM terminal

Station Locations

(1) MOBILE: CONUS and US territorial waters: max altitude 41,000 ft. AGL

Frequency Information

MOBILE: CONUS and US territorial waters: max altitude 41,000 ft. AGL

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
29.25-30 GHz	MO	2M56G7W 5M12G7W	100 kW (ERP)	0.00001 %

Special Conditions:

- (1) Licensee is authorized to conduct demonstration and performance testing of a ThinkKom Ka2517 antenna and a Hughes Modman Ka-band modem aboard a U.S.-registered Boeing 737 aircraft (ESAA) in the 29.25-30 GHz frequency band via two Hughes Ka-band satellites ECHOSTAR XVII and ECHOSTAR 19.

This authorization effective May 28, 2021 and
will expire 3:00 A.M. EST November 28, 2021

**FEDERAL
COMMUNICATIONS
COMMISSION**



Special Conditions:

- (2) Point of communication: Hughes' ECHOSTAR XVII (Jupiter-1 satellite) @ 107.1° WL (S2753) and Hughes' ECHOSTAR 19 (Jupiter-2 satellite) @ 97.1° WL (S2834) operating in the 29.25-30 GHz frequency band.
- (3) The authorized GSO FSS ESAA transmissions must comport with the applicable off-axis EIRP spectral density limits in §25.218. The ESAA must operate in accordance with the requirements applicable to earth stations aboard aircraft (ESAAs) set forth in the Commission's sections 25.228 rule, 47 C.F.R. §25.228.
- (4) ESAAs in aircraft on the ground must not transmit at elevation angles less than three degrees. There is no minimum angle of antenna elevation for ESAAs while airborne.
- (5) ESAAs authorized herein must not be used to provide air traffic control communications.
- (6) Operations of the authorized earth stations aboard aircraft (ESAAs) operating in the 29.25-30 GHz band must comply with the following conditions:
 - a. Licensee's ESAA must employ a tracking algorithm that is resistant to capturing and tracking adjacent satellite signals, and each station must be capable of inhibiting its own transmission in the event it detects unintended satellite tracking.
 - b. Licensee's ESAA must be monitored and controlled by a ground-based network control and monitoring center. Such stations must be able to receive "enable transmission" and "disable transmission" commands from the network control center and must cease transmission immediately after receiving a "parameter change" command until receiving an "enable transmission" command from the network control center. The network control center must monitor operation of each earth station to determine if it is malfunctioning, and each earth station must self-monitor and automatically cease transmission on detecting an operational fault that could cause harmful interference to a fixed satellite service network.
 - c. Licensee must maintain a point of contact available 24 hours per day, seven days per week, with the authority and ability to terminate operations authorized herein, for discussing interference concerns with other licensees, and must submit a letter to be included in its license file with the name and telephone number of the point of contact prior to commencing operation.