

Ka-Band Earth Station – Simi Valley, CA

Frequency Coordination Report

28 GHz



Prepared on Behalf of
L-3 Communications /
Datron Advanced
Technologies

May 30, 2012



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1. Summary of Results

On behalf of L-3 Datron Advanced Technologies's proposed earth station transmitting at 28 GHz¹, Comsearch performed a frequency search considering all existing and proposed terrestrial licenses within the coordination contours of the Ka-Band station in Simi Valley, California. The search results identified licensees in the local multipoint distribution service (LMDS), common carrier fixed microwave service and local television transmission service (LTTS). Prior notification letters were sent to the licensees and a copy of the notification data is provided in section four of this report. The earth station coordination was finalized on May 30, 2012.

No objections were received from any of the incumbent 28 GHz licensees. Our notification to the LMDS incumbents was performed under the assumption that the earth station would be operating on a co-primary basis to LMDS Block A operations and a contact at L-3 Datron Advanced Technologies has been provided in case any concerns may arise in the future. A summary of the responses from the LMDS licensees in the primary geographic market, Los-Angeles, is provided below.

- Nextlink sent a response stating that they have no objection to the deployment of the Simi Valley earth station at this time.

2. 28 GHz Common Carrier and LTTS Coordination

In accordance with FCC Rules and Regulations, a Ka-Band earth station in Simi Valley, CA was prior coordinated by Comsearch. The notification letters and datasheet for this earth station were sent to the following 28 GHz common carrier fixed microwave licensees on March 28, 2012. These licensees are authorized to operate temporary fixed operations from 27.5 – 29.5 GHz on a statewide or nationwide basis.

Licensee	Authorized Geographic Area
AT&T California	Statewide: California & Nevada
GTE Southwest Inc. dba Verizon Southwest	Continental US
M.U.T. Licensing, LLC	Statewide: California
Verizon California Inc.	Statewide: California

¹ The proposed earth station will operate in the 29,100 – 29,249 MHz portion of the Ka-Band.

A notification letter and datasheet for the Ka-Band earth station in Simi Valley, CA was also sent to the following 28 GHz local television transmission licensee on March 28, 2012. This licensee is authorized to operate temporary fixed operations from 27.5 – 29.5 GHz on a nationwide basis.

Licensee	Authorized Geographic Area
Information Super Station, LLC	Continental US

No objections were received from the common carrier or local television transmission service incumbents.

3. 28 GHz LMDS Coordination

Notification letters were sent to the following 28 GHz LMDS licensees and lessees on March 28, 2012. The proposed earth station will operate on frequencies that overlap Block A of the LMDS service. The band plan for LMDS is as follows:

Block A: 27.500-28.350 GHz
29.100-29.250 GHz
31.075-31.225 GHz

Licensee	Market	Market Name
None	BTA028	Bakersfield, CA
Nextlink Wireless, LLC	BTA262	Los Angeles, CA
Nextlink Wireless, LLC	BTA405	San Luis Obispo, CA
Nextlink Wireless, LLC	BTA406	Santa Barbara-Santa Maria, CA
NextWeb, Inc. d/b/a TelePacific Communications ²	BTA262	Los Angeles, CA

No objections were received from the LMDS incumbents.

² NextWeb Inc. d/b/a TelePacific Communications is leasing LMDS spectrum from Nextlink Wireless in the Los Angeles Basic Trading Area (BTA).



4. Earth Station Coordination Data

This section presents the data pertinent to the proposed Ka-Band earth station in Simi Valley, CA. This data was circulated to all incumbent licensees in the 28 GHz shared frequency ranges.

COMSEARCH**Earth Station Data Sheet**

19700 Janelia Farm Boulevard, Ashburn, VA 20147
 (703)726-5662 <http://www.comsearch.com>

Date: 03/28/2012

Administrative Information

Status ENGINEER PROPOSAL
 Call Sign <PCNCallSign>
 Licensee Code L3CDAT
 Licensee Name L-3 Communications - Datron Advanced Tech

Site Information**SIMI VALLEY, CA**

Venue Name
 Latitude (NAD 83) 34° 16' 55.0" N
 Longitude (NAD 83) 118° 48' 18.0" W
 Climate Zone A
 Rain Zone 4
 Ground Elevation (AMSL) 214.88 m / 705.0 ft

Link Information

Satellite Type Low Earth Orbit
 Mode TR - Transmit-Receive
 Modulation Digital
 Minimum Elevation Angle 5.0°
 Azimuth Range 0.0° to 360°
 Antenna Centerline (AGL) 2.35 m / 7.7 ft

Antenna Information**Receive - FCC32****Transmit - FCC32**

Manufacturer L-3 Comm. Datron
 Model 1001-00135-101
 Gain / Diameter 52.9 dBi / 3.0 m
 3-dB / 15-dB Beamwidth 0.30° / 0.60°

L-3 Comm. Datron
 1001-00135-101
 55.7 dBi / 3.0 m
 0.23° / 0.45°

Max Available RF Power (dBW/4 kHz)
 (dBW/MHz)

10.4
 34.4

Maximum EIRP (dBW/4 kHz)
 (dBW/MHz)

66.1
 90.1

Interference Objectives: Long Term -156.0 dBW/MHz 20%
 Short Term -146.0 dBW/MHz 0.01%

-151.0 dBW/4 kHz 20%
 -128.0 dBW/4 kHz 0.0025%

Frequency Information**Receive 18.0 GHz****Transmit 28.0 GHz**

Emission / Frequency Range (MHz) 20K0G2D - 7M50G7A / 19400.0 - 19600.0

20K0G2D - 7M50G7A / 29100.0 - 29249.0

Max Great Circle Coordination Distance 142.1 km / 88.3 mi
 Precipitation Scatter Contour Radius 100.0 km / 62.1 mi

100.0 km / 62.1 mi
 225.8 km / 140.3 mi

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Coordination Values**SIMI VALLEY, CA**

Licensee Name L-3 Communications - Datron Advanced Tech
 Latitude (NAD 83) 34° 16' 55.0" N
 Longitude (NAD 83) 118° 48' 18.0" W
 Ground Elevation (AMSL) 214.88 m / 705.0 ft
 Antenna Centerline (AGL) 2.35 m / 7.7 ft
 Antenna Model L-3 Datron – 3 Meter
 Antenna Mode Receive 18.0 GHz Transmit 28.0 GHz
 Interference Objectives: Long Term -156.0 dBW/MHz 20% -151.0 dBW/4 kHz 20%
 Short Term -146.0 dBW/MHz 0.01% -128.0 dBW/4 kHz 0.0025%
 Max Available RF Power 10.4 (dBW/4 kHz)

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 18.0 GHz		Transmit 28.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)	Horizon Gain (dBi)	Coordination Distance (km)
0	0.00	75.30	2.60	142.10	11.50	100.00
5	0.00	71.08	2.60	142.10	11.50	100.00
10	0.00	66.91	2.60	142.10	11.50	100.00
15	0.00	62.79	2.60	142.10	11.50	100.00
20	0.00	58.75	2.60	142.10	11.50	100.00
25	0.00	54.81	2.60	142.10	11.50	100.00
30	0.00	50.98	2.60	142.10	11.50	100.00
35	0.00	47.32	2.60	142.10	11.50	100.00
40	0.00	43.85	2.60	142.10	11.50	100.00
45	0.00	40.63	2.60	142.10	11.50	100.00
50	0.00	37.73	2.60	142.10	11.50	100.00
55	0.00	35.23	2.60	142.10	11.50	100.00
60	0.00	33.22	2.60	142.10	11.50	100.00
65	0.00	31.79	2.60	142.10	11.50	100.00
70	0.00	31.03	2.60	142.10	11.50	100.00
75	0.00	30.99	2.60	142.10	11.50	100.00
80	0.00	31.66	2.60	142.10	11.50	100.00
85	0.00	33.02	2.60	142.10	11.50	100.00
90	0.00	34.96	2.60	142.10	11.50	100.00
95	0.00	37.41	2.60	142.10	11.50	100.00
100	0.00	40.27	2.60	142.10	11.50	100.00
105	0.00	43.46	2.60	142.10	11.50	100.00
110	0.00	46.90	2.60	142.10	11.50	100.00
115	0.00	50.54	2.60	142.10	11.50	100.00
120	0.00	54.35	2.60	142.10	11.50	100.00
125	0.00	58.28	2.60	142.10	11.50	100.00
130	0.00	62.31	2.60	142.10	11.50	100.00
135	0.00	66.42	2.60	142.10	11.50	100.00
140	0.00	70.59	2.60	142.10	11.50	100.00
145	0.00	74.80	2.60	142.10	11.50	100.00
150	0.00	79.05	2.60	142.10	11.50	100.00
155	0.00	83.32	2.60	142.10	11.50	100.00
160	0.00	87.60	2.60	142.10	11.50	100.00
165	0.00	91.89	2.60	142.10	11.50	100.00
170	0.00	96.18	2.60	142.10	11.50	100.00
175	0.00	100.45	2.60	142.10	11.50	100.00
180	0.00	104.70	2.60	142.10	11.50	100.00
185	0.00	108.92	2.60	142.10	11.50	100.00

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Short Term -146.0 dBW/MHz 0.01% -128.0 dBW/4 kHz 0.0025%
Max Available RF Power 10.4 (dBW/4 kHz)

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 18.0 GHz		Transmit 28.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)	Horizon Gain (dBi)	Coordination Distance (km)
190	0.00	113.09	2.60	142.10	11.50	100.00
195	0.00	117.21	2.60	142.10	11.50	100.00
200	0.00	121.25	2.60	142.10	11.50	100.00
205	0.00	125.19	2.60	142.10	11.50	100.00
210	0.00	129.02	2.60	142.10	11.50	100.00
215	0.00	132.68	2.60	142.10	11.50	100.00
220	0.00	136.15	2.60	142.10	11.50	100.00
225	0.00	139.37	2.60	142.10	11.50	100.00
230	0.00	142.27	2.60	142.10	11.50	100.00
235	0.00	144.77	2.60	142.10	11.50	100.00
240	0.00	146.78	2.60	142.10	11.50	100.00
245	0.00	148.21	2.60	142.10	11.50	100.00
250	0.00	148.97	2.60	142.10	11.50	100.00
255	0.00	149.01	2.60	142.10	11.50	100.00
260	0.00	148.34	2.60	142.10	11.50	100.00
265	0.00	146.98	2.60	142.10	11.50	100.00
270	0.00	145.04	2.60	142.10	11.50	100.00
275	0.00	142.59	2.60	142.10	11.50	100.00
280	0.00	139.73	2.60	142.10	11.50	100.00
285	0.00	136.54	2.60	142.10	11.50	100.00
290	0.00	133.10	2.60	142.10	11.50	100.00
295	0.00	129.46	2.60	142.10	11.50	100.00
300	0.00	125.65	2.60	142.10	11.50	100.00
305	0.00	121.72	2.60	142.10	11.50	100.00
310	0.00	117.69	2.60	142.10	11.50	100.00
315	0.00	113.58	2.60	142.10	11.50	100.00
320	0.00	109.41	2.60	142.10	11.50	100.00
325	0.00	105.20	2.60	142.10	11.50	100.00
330	0.00	100.95	2.60	142.10	11.50	100.00
335	0.00	96.68	2.60	142.10	11.50	100.00
340	0.00	92.40	2.60	142.10	11.50	100.00
345	0.00	88.11	2.60	142.10	11.50	100.00
350	0.00	83.82	2.60	142.10	11.50	100.00
355	0.00	79.55	2.60	142.10	11.50	100.00



5. Contact Information

For questions or information regarding the 28 GHz Frequency Coordination Report, please contact:

Contact person:	Joanna Lynch
Title:	Manager, Spectrum & Data Solutions
Company:	Comsearch
Address:	19700 Janelia Farm Blvd., Ashburn, VA 20147
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