

**Summary of Maximum Allowable Transmit Power from COMSEARCH
Interference Analysis 2-17-04**

			Allowable EIRP Building E (dBm)	
GSM Channel	Mobile/UL Frequency (MHz)	Base/DL Frequency (MHz)	EIRP (dBm)	EIRP (W)
90	908	953	32.9	1.95
91	908.2	953.2	28	0.63
92	908.4	953.4	28	0.63
101	910.2	955.2	32.9	1.95
102	910.4	955.4	38.9	7.76
115	913	958	23	0.2
116	913.2	958.2	42.9	19.5
119	913.8	958.8	42.9	19.5
122	914.4	959.4	31	1.26

			Allowable EIRP Building L (dBm)	
GSM Channel	Mobile/UL Frequency (MHz)	Base/DL Frequency (MHz)	EIRP (dBm)	EIRP (W)
90	908	953	22	0.16
91	908.4	953.4	28	0.63
101	910.2	955.2	32.9	1.95
102	910.4	955.4	25	0.32
115	913	958	42.9	19.5
116	913.2	958.2	42.9	19.5
117	913.4	958.4	42.9	19.5
122	914.4	959.4	31	1.26



19700 Janelia Farm Boulevard
Ashburn, VA 20147
703.726.5500
Fax 703.726.5600

February 17, 2004

Mr. JOHN FORRESTER
QUALCOMM INCORPORATED
5775 MOREHOUSE DRIVE
OFFICE: R-220G
SAN DIEGO, CA 92121

RE: QUALCOMM INCORPORATED
Job Number: 040217COMSKD01
BLDG E ----- MOBILE, BLDG L ----- MOBILE, CA 960 MHZ PATHS
REITERATIONS FOR EXPERIMENTAL PATHS

Dear Mr. Forrester:

Comsearch has completed the interference analysis for the system referenced above according to your specifications. The following items are enclosed:

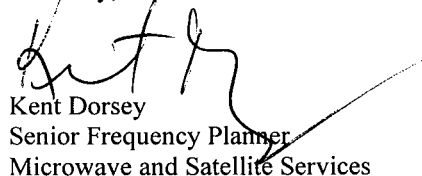
- (1) The path data sheets containing the coordinated frequencies;
- (2) The client's copy of the Prior Coordination Notice (PCN) dated February 17, 2004; and
- (3) The Supplemental Showing Pursuant to Part 101.103(d)

The Supplemental Showing must be included in your FCC filing.

Pursuant to the interference criteria recommended in the T.I.A. Bulletin 10F, the results of the study indicate that the proposed frequencies will not interfere with any existing or applied-for systems within the industry defined area.

Please review the information carefully. Should you have any questions, or require additional information, please call me at (703) 726-5826. Thank you for the opportunity to provide you with our services.

Sincerely,



Kent Dorsey
Senior Frequency Planner
Microwave and Satellite Services

Enclosures

Microwave Path Data Sheet

Page 1 of 15

COMSEARCH

19700 Janelia Farm Boulevard, Ashburn, VA, 20147

(703)726-5826 www.comsearch.com

PCN Date: 02/17/2004

Job Number: 040217COMSKD01

Previous PCN Date: 08/25/2003

RCN Number: 04021705

Administrative Information

Status / License Basis

Call Sign

Licensee Code

Licensee Name

Radio Service / Station Class

BLDG E CA

PROPOSED / PRIMARY OPERATION

QUAINC

QUALCOMM INCORPORATED

MG - Microwave Industrial/Business Pool

MOBILE CA

PROPOSED / PRIMARY OPERATION

QUAINC

QUALCOMM INCORPORATED

FXO - Fixed

Site Information

Latitude (NAD 83)

Longitude (NAD 83)

Ground Elevation (m/ft-AMSL)

Antenna Structure Registration #

Path Azimuth (°)

Path Length (km / miles)

32 ° 52' 46.7" N

117 ° 12' 10.0" W

149.04 / 489.0

87.561

41.336 / 25.685

32 ° 53' 41.0" N

116 ° 45' 41.0" W

30.48 / 100.0

267.801

Transmit Antenna

Manufacturer

Model

Gain (dBi) / Beamwidth (°) / Tilt (°)

Centerline (m / ft - AGL)

03900K

SCALA ELECTRONICS

OGB3-900K

5.2 / 20.00 / -0.35

36.58 / 120.0

Receive Antenna

Manufacturer

Model

Gain (dBi) / Beamwidth (°)

Centerline (m / ft - AGL)

S00000

SCALA ELECTRONICS

MF-960B

16.2 / 14.00

6.10 / 20.0

Diversity Receive Antenna

Manufacturer

Model

Gain (dBi) / Beamwidth (°)

Centerline (m / ft - AGL)

Radio Information

Manufacturer

Model

Model Description

Emission Designator / Modulation

Loading

Stability (%)

Power (dBm)

Received Level (dBm)

EIRP (dBm)

Fixed Loss: Tx / Common (dB)

Free Space Loss (dB)

TEMB31

INTERWAVE COMMUNICATIONS

GSM BTS

270KGXW 16 QAM

DIGITAL DIG 0.000

0.00015

Nominal Coordinated Maximum

38.5

28.0

15.0 / 0.7

124.4

999999

RECEIVE

ONLY

DIGITAL DIG 0.000

0.00015

Nominal Coordinated Maximum

-81.2

0.0 / 1.0

Transmit Frequencies (MHz)

953.2000V(5)

953.4000V(7)

Microwave Path Data Sheet

Page 2 of 15

COMSEARCH

19700 Janelia Farm Boulevard, Ashburn, VA, 20147

(703)726-5826 www.comsearch.com

PCN Date: 02/17/2004

Job Number 040217COMSKD01

Previous PCN Date: 08/25/2003

RCN Number: 04021705

Administrative Information

Status / License Basis

Call Sign

Licensee Code

Licensee Name

Radio Service / Station Class

BLDG L CA

PROPOSED / PRIMARY OPERATION

QUAINC

QUALCOMM INCORPORATED

MG -- Microwave Industrial/Business Pool

MOBILE CA

PROPOSED / PRIMARY OPERATION

QUAINC

QUALCOMM INCORPORATED

FXO -- Fixed

Site Information

Latitude (NAD 83)

Longitude (NAD 83)

Ground Elevation (m/ft-AMSL)

Antenna Structure Registration #

Path Azimuth (°)

Path Length (km / miles)

32 ° 53' 30.7" N

117 ° 11' 43.7" W

161.23 / 529.0

89.435

40.617 / 25.238

32 ° 53' 41.0" N

116 ° 45' 41.0" W

30.48 / 100.0

269.670

Transmit Antenna

Manufacturer

Model

Gain (dBi) / Beamwidth (°) / Tilt (°)

Centerline (m / ft - AGL)

03900K

SCALA ELECTRONICS

OGB3-900K

5.2 / 20.00 / -0.36

36.58 / 120.0

Receive Antenna

Manufacturer

Model

Gain (dBi) / Beamwidth (°)

Centerline (m / ft - AGL)

S00000

SCALA ELECTRONICS

MF-960B

16.2 / 14.00

6.10 / 20.0

Diversity Receive Antenna

Manufacturer

Model

Gain (dBi) / Beamwidth (°)

Centerline (m / ft - AGL)

Radio Information

Manufacturer

Model

Model Description

Emission Designator / Modulation

Loading

Stability (%)

Power (dBm)

Received Level (dBm)

EIRP (dBm)

Fixed Loss: Tx / Common (dB)

Free Space Loss (dB)

TEMB31

INTERWAVE COMMUNICATIONS

GSM BTS

270KGXW 16 QAM

DIGITAL DIG 0.000

0.00015

Nominal Coordinated Maximum

38.5

22.0

21.0 / 0.7

124.3

999999

RECEIVE

ONLY

DIGITAL DIG 0.000

0.00015

Nominal Coordinated Maximum

-87.1

0.0 / 1.0

Transmit Frequencies (MHz) 953.0000V(3)

Microwave Path Data Sheet

Page 3 of 15

COMSEARCH

19700 Janelia Farm Boulevard, Ashburn, VA, 20147

(703)726-5826 www.comsearch.com

PCN Date: 02/17/2004

Previous PCN Date: 08/25/2003

Job Number 040217COMSKD01

RCN Number: 04021705

Administrative Information

BLDG E CA

MOBILE CA

Status / License Basis

PROPOSED / PRIMARY OPERATION

PROPOSED / PRIMARY OPERATION

Call Sign

Licensee Code

Licensee Name

Radio Service / Station Class

QUAINC

QUALCOMM INCORPORATED

MG - Microwave Industrial/Business Pool

QUAINC

QUALCOMM INCORPORATED

FXO -- Fixed

Site Information

Latitude (NAD 83)

32 ° 52' 46.7" N

32 ° 53' 41.0" N

Longitude (NAD 83)

117 ° 12' 10.0" W

116 ° 45' 41.0" W

Ground Elevation (m/ft-AMSL)

149.04 / 489.0

30.48 / 100.0

Antenna Structure Registration #

Path Azimuth (°)

87.561

267.801

Path Length (km / miles)

41.336 / 25.685

Transmit Antenna

03900K

Manufacturer

SCALA ELECTRONICS

Model

OGB3-900K

Gain (dBi) / Beamwidth (°) / Tilt (°)

5.2 / 20.00 / -0.35

Centerline (m / ft - AGL)

36.58 / 120.0

Receive Antenna

S00000

Manufacturer

SCALA ELECTRONICS

Model

MF-960B

Gain (dBi) / Beamwidth (°)

16.2 / 14.00

Centerline (m / ft - AGL)

6.10 / 20.0

Diversity Receive Antenna

Manufacturer

Model

Gain (dBi) / Beamwidth (°)

Centerline (m / ft - AGL)

Radio Information

TEMB31

999999

Manufacturer

INTERWAVE COMMUNICATIONS

RECEIVE

Model

GSM BTS

ONLY

Model Description

Emission Designator / Modulation

270KGXW 16 QAM

Loading

DIGITAL DIG 0.000

DIGITAL DIG 0.000

Stability (%)

0.00015

0.00015

Nominal Coordinated Maximum

Nominal Coordinated Maximum

Power (dBm)

38.5

Received Level (dBm)

-76.2

EIRP (dBm)

32.9

Fixed Loss: Tx / Common (dB)

10.0 / 0.7

0.0 / 1.0

Free Space Loss (dB)

124.4

Transmit Frequencies (MHz) 955.2000V(12)

Microwave Path Data Sheet

Page 4 of 15

COMSEARCH

19700 Janelia Farm Boulevard, Ashburn, VA, 20147

(703)726-5826 www.comsearch.com

PCN Date: 02/17/2004

Previous PCN Date: 08/25/2003

Job Number 040217COMSKD01

RCN Number: 04021705

Administrative Information		BLDG E CA	MOBILE CA
Status / License Basis	PROPOSED / PRIMARY OPERATION		PROPOSED / PRIMARY OPERATION
Call Sign			
Licensee Code	QUAINC		QUAINC
Licensee Name	QUALCOMM INCORPORATED		QUALCOMM INCORPORATED
Radio Service / Station Class	MG - Microwave Industrial/Business Pool		FXO -- Fixed
Site Information			
Latitude (NAD 83)	32 ° 52' 46.7" N		32 ° 53' 41.0" N
Longitude (NAD 83)	117 ° 12' 10.0" W		116 ° 45' 41.0" W
Ground Elevation (m/ft-AMSL)	149.04 / 489.0		30.48 / 100.0
Antenna Structure Registration #			
Path Azimuth (°)	87.561		267.801
Path Length (km / miles)	41.336 / 25.685		
Transmit Antenna		03900K	
Manufacturer	SCALA ELECTRONICS		
Model	OGB3-900K		
Gain (dBi) / Beamwidth (°) / Tilt (°)	5.2 / 20.00 / -0.35		
Centerline (m / ft - AGL)	36.58 / 120.0		
Receive Antenna		S00000	
Manufacturer	SCALA ELECTRONICS		
Model	MF-960B		
Gain (dBi) / Beamwidth (°)	16.2 / 14.00		
Centerline (m / ft - AGL)	6.10 / 20.0		
Diversity Receive Antenna			
Manufacturer			
Model			
Gain (dBi) / Beamwidth (°)			
Centerline (m / ft - AGL)			
Radio Information		TEMB31	999999
Manufacturer	INTERWAVE COMMUNICATIONS		RECEIVE
Model	GSM BTS		ONLY
Model Description			
Emission Designator / Modulation	270KGXW 16 QAM		
Loading	DIGITAL DIG 0.000		DIGITAL DIG 0.000
Stability (%)	0.00015		0.00015
	Nominal	Coordinated Maximum	Nominal Coordinated Maximum
Power (dBm)		38.5	
Received Level (dBm)			-66.3
EIRP (dBm)		42.9	
Fixed Loss: Tx / Common (dB)	0.0 / 0.7		0.0 / 1.0
Free Space Loss (dB)			124.4
Transmit Frequencies (MHz)		958.2000V(6)	958.8000V(12)

Microwave Path Data Sheet

Page 5 of 15

COMSEARCH

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PCN Date: 02/17/2004

Job Number 040217COMSKD01

Previous PCN Date: 08/25/2003

RCN Number: 04021705

Administrative Information

Status / License Basis

Call Sign

Licensee Code

Licensee Name

Radio Service / Station Class

BLDG L CA

PROPOSED / PRIMARY OPERATION

QUAINC

QUALCOMM INCORPORATED

MG - Microwave Industrial/Business Pool

MOBILE CA

PROPOSED / PRIMARY OPERATION

QUAINC

QUALCOMM INCORPORATED

FXO -- Fixed

Site Information

Latitude (NAD 83)

Longitude (NAD 83)

Ground Elevation (m/ft-AMSL)

Antenna Structure Registration #

Path Azimuth (°)

Path Length (km / miles)

32 ° 53' 30.7" N

117 ° 11' 43.7" W

161.23 / 529.0

89.435

40.617 / 25.238

32 ° 53' 41.0" N

116 ° 45' 41.0" W

30.48 / 100.0

269.670

Transmit Antenna

Manufacturer

Model

Gain (dBi) / Beamwidth (°) / Tilt (°)

Centerline (m / ft - AGL)

03900K

SCALA ELECTRONICS

OGB3-900K

5.2 / 20.00 / -0.36

36.58 / 120.0

Receive Antenna

Manufacturer

Model

Gain (dBi) / Beamwidth (°)

Centerline (m / ft - AGL)

S00000

SCALA ELECTRONICS

MF-960B

16.2 / 14.00

6.10 / 20.0

Diversity Receive Antenna

Manufacturer

Model

Gain (dBi) / Beamwidth (°)

Centerline (m / ft - AGL)

Radio Information

Manufacturer

Model

Model Description

Emission Designator / Modulation

Loading

Stability (%)

Power (dBm)

Received Level (dBm)

EIRP (dBm)

Fixed Loss: Tx / Common (dB)

Free Space Loss (dB)

TEMB31

INTERWAVE COMMUNICATIONS

GSM BTS

270KGXW 16 QAM

DIGITAL DIG 0.000

0.00015

Nominal Coordinated Maximum

38.5

32.9

10.0 / 0.7

124.3

999999

RECEIVE

ONLY

DIGITAL DIG 0.000

0.00015

Nominal Coordinated Maximum

-76.1

0.0 / 1.0

Transmit Frequencies (MHz) 955.2000V(12)

Microwave Path Data Sheet

Page 6 of 15

COMSEARCH

19700 Janelia Farm Boulevard, Ashburn, VA, 20147

(703)726-5826 www.comsearch.com

PCN Date: 02/17/2004

Previous PCN Date: 08/25/2003

Job Number 040217COMSKD01

RCN Number: 04021705

Administrative Information**BLDG L CA****MOBILE CA**

Status / License Basis

PROPOSED / PRIMARY OPERATION

PROPOSED / PRIMARY OPERATION

Call Sign

Licensee Code

QUAINC

QUAINC

Licensee Name

QUALCOMM INCORPORATED

QUALCOMM INCORPORATED

Radio Service / Station Class

MG - Microwave Industrial/Business Pool

FXO - Fixed

Site Information

Latitude (NAD 83)

32 ° 53' 30.7" N

32 ° 53' 41.0" N

Longitude (NAD 83)

117 ° 11' 43.7" W

116 ° 45' 41.0" W

Ground Elevation (m/ft-AMSL)

161.23 / 529.0

30.48 / 100.0

Antenna Structure Registration #

Path Azimuth (°)

89.435

269.670

Path Length (km / miles)

40.617 / 25.238

Transmit Antenna

03900K

Manufacturer

SCALA ELECTRONICS

Model

OGB3-900K

Gain (dBi) / Beamwidth (°) / Tilt (°)

5.2 / 20.00 / -0.36

Centerline (m / ft - AGL)

36.58 / 120.0

Receive Antenna

S00000

Manufacturer

SCALA ELECTRONICS

Model

MF-960B

Gain (dBi) / Beamwidth (°)

16.2 / 14.00

Centerline (m / ft - AGL)

6.10 / 20.0

Diversity Receive Antenna

Manufacturer

Model

Gain (dBi) / Beamwidth (°)

Centerline (m / ft - AGL)

Radio Information

TEMB31

999999

Manufacturer

INTERWAVE COMMUNICATIONS

RECEIVE

Model

GSM BTS

ONLY

Model Description

Emission Designator / Modulation

270KGXW 16 QAM

Loading

DIGITAL DIG 0.000

DIGITAL DIG 0.000

Stability (%)

0.00015

0.00015

Nominal Coordinated Maximum

Nominal Coordinated Maximum

Power (dBm)

38.5

Received Level (dBm)

-66.1

EIRP (dBm)

42.9

Fixed Loss: Tx / Common (dB)

0.0 / 0.7

0.0 / 1.0

Free Space Loss (dB)

124.3

Transmit Frequencies (MHz)

958.0000V(4)

958.2000V(6)

958.4000V(8)

Microwave Path Data Sheet

Page 7 of 15

COMSEARCH

19700 Janelia Farm Boulevard, Ashburn, VA, 20147

(703)726-5826 www.comsearch.com

PCN Date: 02/17/2004

Previous PCN Date: 08/25/2003

Job Number 040217COMSKD01

RCN Number: 04021705

Administrative Information

BLDG E CA

MOBILE CA

Status / License Basis

PROPOSED / PRIMARY OPERATION

PROPOSED / PRIMARY OPERATION

Call Sign

Licensee Code

QUAINC

QUAINC

Licensee Name

QUALCOMM INCORPORATED

QUALCOMM INCORPORATED

Radio Service / Station Class

MG - Microwave Industrial/Business Pool

FXO - Fixed

Site Information

Latitude (NAD 83)

32 ° 52' 46.7" N

32 ° 53' 41.0" N

Longitude (NAD 83)

117 ° 12' 10.0" W

116 ° 45' 41.0" W

Ground Elevation (m/ft-AMSL)

149.04 / 489.0

30.48 / 100.0

Antenna Structure Registration #

Path Azimuth (°)

87.561

267.801

Path Length (km / miles)

41.336 / 25.685

Transmit Antenna

03900K

Manufacturer

SCALA ELECTRONICS

Model

OGB3-900K

Gain (dBi) / Beamwidth (°) / Tilt (°)

5.2 / 20.00 / -0.35

Centerline (m / ft - AGL)

36.58 / 120.0

Receive Antenna

S00000

Manufacturer

SCALA ELECTRONICS

Model

MF-960B

Gain (dBi) / Beamwidth (°)

16.2 / 14.00

Centerline (m / ft - AGL)

6.10 / 20.0

Diversity Receive Antenna

Manufacturer

Model

Gain (dBi) / Beamwidth (°)

Centerline (m / ft - AGL)

Radio Information

TEMB31

999999

Manufacturer

INTERWAVE COMMUNICATIONS

RECEIVE

Model

GSM BTS

ONLY

Model Description

Emission Designator / Modulation

270KGXW 16 QAM

Loading

DIGITAL DIG 0.000

DIGITAL DIG 0.000

Stability (%)

0.00015

0.00015

Nominal Coordinated Maximum

Nominal Coordinated Maximum

Power (dBm)

38.5

Received Level (dBm)

-70.3

EIRP (dBm)

38.9

Fixed Loss: Tx / Common (dB)

4.0 / 0.7

0.0 / 1.0

Free Space Loss (dB)

124.4

Transmit Frequencies (MHz) 955.4000V(1)

Microwave Path Data Sheet

Page 8 of 15

COMSEARCH

19700 Janelia Farm Boulevard, Ashburn, VA, 20147

(703)726-5826 www.comsearch.com

PCN Date: 02/17/2004

Job Number 040217COMSKD01

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RCN Number: 04021705

Administrative Information

Status / License Basis

Call Sign

Licensee Code

Licensee Name

Radio Service / Station Class

BLDG E CA

PROPOSED / PRIMARY OPERATION

QUAINC

QUALCOMM INCORPORATED

MG - Microwave Industrial/Business Pool

MOBILE CA

PROPOSED / PRIMARY OPERATION

QUAINC

QUALCOMM INCORPORATED

FXO - Fixed

Site Information

Latitude (NAD 83)

Longitude (NAD 83)

Ground Elevation (m/ft-AMSL)

Antenna Structure Registration #

Path Azimuth (°)

Path Length (km / miles)

32 ° 52' 46.7" N

117 ° 12' 10.0" W

149.04 / 489.0

87.561

41.336 / 25.685

32 ° 53' 41.0" N

116 ° 45' 41.0" W

30.48 / 100.0

267.801

Transmit Antenna

Manufacturer

Model

Gain (dBi) / Beamwidth (°) / Tilt (°)

Centerline (m / ft - AGL)

03900K

SCALA ELECTRONICS

OGB3-900K

5.2 / 20.00 / -0.35

36.58 / 120.0

Receive Antenna

Manufacturer

Model

Gain (dBi) / Beamwidth (°)

Centerline (m / ft - AGL)

S00000

SCALA ELECTRONICS

MF-960B

16.2 / 14.00

6.10 / 20.0

Diversity Receive Antenna

Manufacturer

Model

Gain (dBi) / Beamwidth (°)

Centerline (m / ft - AGL)

Radio Information

Manufacturer

Model

Model Description

Emission Designator / Modulation

Loading

Stability (%)

Power (dBm)

Received Level (dBm)

EIRP (dBm)

Fixed Loss: Tx / Common (dB)

Free Space Loss (dB)

TEMB31

INTERWAVE COMMUNICATIONS

GSM BTS

270KGXW 16 QAM

DIGITAL DIG 0.000

0.00015

Nominal Coordinated Maximum

38.5

31.0

12.0 / 0.7

124.4

999999

RECEIVE

ONLY

DIGITAL DIG 0.000

0.00015

Nominal Coordinated Maximum

-78.2

0.0 / 1.0

Transmit Frequencies (MHz) 959.4000V(5)

Microwave Path Data Sheet

Page 9 of 15

COMSEARCH

19700 Janelia Farm Boulevard, Ashburn, VA, 20147

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PCN Date: 02/17/2004

Previous PCN Date: 08/25/2003

Job Number 040217COMSKD01

RCN Number: 04021705

Administrative Information

BLDG L CA

MOBILE CA

Status / License Basis

PROPOSED / PRIMARY OPERATION

PROPOSED / PRIMARY OPERATION

Call Sign

Licensee Code

QUAINC

QUAINC

Licensee Name

QUALCOMM INCORPORATED

QUALCOMM INCORPORATED

Radio Service / Station Class

MG -- Microwave Industrial/Business Pool

FXO -- Fixed

Site Information

Latitude (NAD 83)

32 ° 53' 30.7" N

32 ° 53' 41.0" N

Longitude (NAD 83)

117 ° 11' 43.7" W

116 ° 45' 41.0" W

Ground Elevation (m/ft-AMSL)

161.23 / 529.0

30.48 / 100.0

Antenna Structure Registration #

Path Azimuth (°)

89.435

269.670

Path Length (km / miles)

40.617 / 25.238

Transmit Antenna

03900K

Manufacturer

SCALA ELECTRONICS

Model

OGB3-900K

Gain (dBi) / Beamwidth (°) / Tilt (°)

5.2 / 20.00 / -0.36

Centerline (m / ft - AGL)

36.58 / 120.0

Receive Antenna

S00000

Manufacturer

SCALA ELECTRONICS

Model

MF-960B

Gain (dBi) / Beamwidth (°)

16.2 / 14.00

Centerline (m / ft - AGL)

6.10 / 20.0

Diversity Receive Antenna

Manufacturer

Model

Gain (dBi) / Beamwidth (°)

Centerline (m / ft - AGL)

Radio Information

TEMB31

999999

Manufacturer

INTERWAVE COMMUNICATIONS

RECEIVE

Model

GSM BTS

ONLY

Model Description

Emission Designator / Modulation

270KGXW 16 QAM

Loading

DIGITAL DIG 0.000

DIGITAL DIG 0.000

Stability (%)

0.00015

0.00015

Nominal Coordinated Maximum

Nominal Coordinated Maximum

Power (dBm)

38.5

Received Level (dBm)

-84.1

EIRP (dBm)

25.0

Fixed Loss: Tx / Common (dB)

18.0 / 0.7

0.0 / 1.0

Free Space Loss (dB)

124.3

Transmit Frequencies (MHz)

955.4000V(1)

Microwave Path Data Sheet

Page 10 of 15

COMSEARCH

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Job Number 040217COMSKD01

Previous PCN Date: 08/25/2003

RCN Number: 04021705

Administrative Information

Status / License Basis

Call Sign

Licensee Code

Licensee Name

Radio Service / Station Class

BLDG L CA

PROPOSED / PRIMARY OPERATION

QUAINC

QUALCOMM INCORPORATED

MG -- Microwave Industrial/Business Pool

MOBILE CA

PROPOSED / PRIMARY OPERATION

QUAINC

QUALCOMM INCORPORATED

FXO -- Fixed

Site Information

Latitude (NAD 83)

Longitude (NAD 83)

Ground Elevation (m/ft-AMSL)

Antenna Structure Registration #

Path Azimuth (°)

Path Length (km / miles)

32 ° 53' 30.7" N

117 ° 11' 43.7" W

161.23 / 529.0

89.435

40.617 / 25.238

32 ° 53' 41.0" N

116 ° 45' 41.0" W

30.48 / 100.0

269.670

Transmit Antenna

Manufacturer

Model

Gain (dBi) / Beamwidth (°) / Tilt (°)

Centerline (m / ft - AGL)

03900K

SCALA ELECTRONICS

OGB3-900K

5.2 / 20.00 / -0.36

36.58 / 120.0

Receive Antenna

Manufacturer

Model

Gain (dBi) / Beamwidth (°)

Centerline (m / ft - AGL)

S00000

SCALA ELECTRONICS

MF-960B

16.2 / 14.00

6.10 / 20.0

Diversity Receive Antenna

Manufacturer

Model

Gain (dBi) / Beamwidth (°)

Centerline (m / ft - AGL)

Radio Information

Manufacturer

Model

Model Description

Emission Designator / Modulation

Loading

Stability (%)

Power (dBm)

Received Level (dBm)

EIRP (dBm)

Fixed Loss: Tx / Common (dB)

Free Space Loss (dB)

TEMB31

INTERWAVE COMMUNICATIONS

GSM BTS

270KGXW 16 QAM

DIGITAL DIG 0.000

0.00015

Nominal

Coordinated

Maximum

38.5

31.0

12.0 / 0.7

124.3

999999

RECEIVE

ONLY

DIGITAL DIG 0.000

0.00015

Nominal

Coordinated

Maximum

-78.1

0.0 / 1.0

Transmit Frequencies (MHz) 959.4000V(5)

Microwave Path Data Sheet

Page 11 of 15

COMSEARCH

19700 Janelia Farm Boulevard, Ashburn, VA, 20147

(703)726-5826 www.comsearch.com

PCN Date: 02/17/2004

Job Number 040217COMSKD01

Previous PCN Date: 08/25/2003

RCN Number: 04021705

Administrative Information	BLDG E CA	MOBILE CA
Status / License Basis	PROPOSED / PRIMARY OPERATION	PROPOSED / PRIMARY OPERATION
Call Sign		
Licensee Code	QUAINC	QUAINC
Licensee Name	QUALCOMM INCORPORATED	QUALCOMM INCORPORATED
Radio Service / Station Class	MG -- Microwave Industrial/Business Pool	FXO -- Fixed

Site Information

Latitude (NAD 83)	32 ° 52' 46.7" N	32 ° 53' 41.0" N
Longitude (NAD 83)	117 ° 12' 10.0" W	116 ° 45' 41.0" W
Ground Elevation (m/ft-AMSL)	149.04 / 489.0	30.48 / 100.0
Antenna Structure Registration #		
Path Azimuth (°)	87.561	267.801
Path Length (km / miles)	41.336 / 25.685	

Transmit Antenna	03900K
Manufacturer	SCALA ELECTRONICS
Model	OGB3-900K
Gain (dBi) / Beamwidth (°) / Tilt (°)	5.2 / 20.00 / -0.35
Centerline (m / ft - AGL)	36.58 / 120.0

Receive Antenna	S00000
Manufacturer	SCALA ELECTRONICS
Model	MF-960B
Gain (dBi) / Beamwidth (°)	16.2 / 14.00
Centerline (m / ft - AGL)	6.10 / 20.0

Diversity Receive Antenna

Manufacturer	
Model	
Gain (dBi) / Beamwidth (°)	
Centerline (m / ft - AGL)	

Radio Information	TEMB31	999999
Manufacturer	INTERWAVE COMMUNICATIONS	RECEIVE
Model	GSM BTS	ONLY
Model Description		
Emission Designator / Modulation	270KGXW 16 QAM	
Loading	DIGITAL DIG 0.000	DIGITAL DIG 0.000
Stability (%)	0.00015	0.00015
	Nominal Coordinated Maximum	Nominal Coordinated Maximum
Power (dBm)	38.5	
Received Level (dBm)		-76.2
EIRP (dBm)	32.9	
Fixed Loss: Tx / Common (dB)	10.0 / 0.7	0.0 / 1.0
Free Space Loss (dB)		124.4

Transmit Frequencies (MHz) 953.0000V(3)

Microwave Path Data Sheet

Page 12 of 15

COMSEARCH

19700 Janelia Farm Boulevard, Ashburn, VA, 20147

(703)726-5826 www.comsearch.com

PCN Date: 02/17/2004

Job Number 040217COMSKD01

Previous PCN Date: 08/25/2003

RCN Number: 04021705

Administrative Information

BLDG L CA
Status / License Basis PROPOSED / PRIMARY OPERATION
Call Sign
Licensee Code QUAINC
Licensee Name QUALCOMM INCORPORATED
Radio Service / Station Class MG - Microwave Industrial/Business Pool

MOBILE CA

PROPOSED / PRIMARY OPERATION
QUAINC
 QUALCOMM INCORPORATED
FXO -- Fixed

Site Information

Latitude (NAD 83)	32 ° 53' 30.7" N	32 ° 53' 41.0" N
Longitude (NAD 83)	117 ° 11' 43.7" W	116 ° 45' 41.0" W
Ground Elevation (m/ft-AMSL)	161.23 / 529.0	30.48 / 100.0
Antenna Structure Registration #		
Path Azimuth (°)	89.435	269.670
Path Length (km / miles)	40.617 / 25.238	

Transmit Antenna

03900K
Manufacturer SCALA ELECTRONICS
Model OGB3-900K
Gain (dBi) / Beamwidth (°) / Tilt (°) 5.2 / 20.00 / -0.36
Centerline (m / ft - AGL) 36.58 / 120.0

Receive Antenna

S00000
Manufacturer SCALA ELECTRONICS
Model MF-960B
Gain (dBi) / Beamwidth (°) 16.2 / 14.00
Centerline (m / ft - AGL) 6.10 / 20.0

Diversity Receive Antenna

Manufacturer
Model
Gain (dBi) / Beamwidth (°)
Centerline (m / ft - AGL)

Radio Information

TEMB31	999999
Manufacturer INTERWAVE COMMUNICATIONS	RECEIVE
Model GSM BTS	ONLY
Model Description	
Emission Designator / Modulation 270KGXW 16 QAM	
Loading DIGITAL DIG 0.000	DIGITAL DIG 0.000
Stability (%) 0.00015	0.00015
Nominal Coordinated Maximum	Nominal Coordinated Maximum
Power (dBm) 38.5	
Received Level (dBm)	-81.1
EIRP (dBm) 28.0	
Fixed Loss: Tx / Common (dB) 15.0 / 0.7	0.0 / 1.0
Free Space Loss (dB) 124.3	

Transmit Frequencies (MHz) 953.4000V(7)

Microwave Path Data Sheet

Page 13 of 15

COMSEARCH

19700 Janelia Farm Boulevard, Ashburn, VA, 20147

(703)726-5826 www.comsearch.com

PCN Date: 02/17/2004

Job Number 040217COMSKD01

Previous PCN Date: 08/25/2003

RCN Number: 04021705

Administrative Information

Status / License Basis

Call Sign

Licensee Code

Licensee Name

Radio Service / Station Class

BLDG E CA

PROPOSED / PRIMARY OPERATION

QUAINC

QUALCOMM INCORPORATED

MG - Microwave Industrial/Business Pool

MOBILE CA

PROPOSED / PRIMARY OPERATION

QUAINC

QUALCOMM INCORPORATED

FXO - Fixed

Site Information

Latitude (NAD 83)

Longitude (NAD 83)

Ground Elevation (m/ft-AMSL)

Antenna Structure Registration #

Path Azimuth (°)

Path Length (km / miles)

32 ° 52' 46.7" N

117 ° 12' 10.0" W

149.04 / 489.0

87.561

41.336 / 25.685

32 ° 53' 41.0" N

116 ° 45' 41.0" W

30.48 / 100.0

267.801

Transmit Antenna

Manufacturer

Model

Gain (dBi) / Beamwidth (°) / Tilt (°)

Centerline (m / ft - AGL)

03900K

SCALA ELECTRONICS

OGB3-900K

5.2 / 20.00 / -0.35

36.58 / 120.0

Receive Antenna

Manufacturer

Model

Gain (dBi) / Beamwidth (°)

Centerline (m / ft - AGL)

S00000

SCALA ELECTRONICS

MF-960B

16.2 / 14.00

6.10 / 20.0

Diversity Receive Antenna

Manufacturer

Model

Gain (dBi) / Beamwidth (°)

Centerline (m / ft - AGL)

Radio Information

Manufacturer

Model

Model Description

Emission Designator / Modulation

Loading

Stability (%)

Power (dBm)

Received Level (dBm)

EIRP (dBm)

Fixed Loss: Tx / Common (dB)

Free Space Loss (dB)

TEMB31

INTERWAVE COMMUNICATIONS

GSM BTS

270KGXW 16 QAM

DIGITAL DIG 0.000

0.00015

Nominal Coordinated Maximum

38.5

23.0

20.0 / 0.7

124.4

999999

RECEIVE

ONLY

DIGITAL DIG 0.000

0.00015

Nominal Coordinated Maximum

-86.2

0.0 / 1.0

Transmit Frequencies (MHz) 958.0000V(4)

Microwave Path Data Sheet

Page 14 of 15

COMSEARCH

19700 Janelia Farm Boulevard, Ashburn, VA, 20147

(703)726-5826 www.comsearch.com

PCN Date: 02/17/2004

Job Number 040217COMSKD01

Previous PCN Date: 08/25/2003

RCN Number: 04021705

Administrative Information	BLDG E CA	MOBILE CA
Status / License Basis	PROPOSED / PRIMARY OPERATION	PROPOSED / PRIMARY OPERATION
Call Sign		
Licensee Code	QUAINC	QUAINC
Licensee Name	QUALCOMM INCORPORATED	QUALCOMM INCORPORATED
Radio Service / Station Class	MG -- Microwave Industrial/Business Pool	FXO -- Fixed
Site Information		
Latitude (NAD 83)	32 ° 52' 46.7" N	32 ° 53' 41.0" N
Longitude (NAD 83)	117 ° 12' 10.0" W	116 ° 45' 41.0" W
Ground Elevation (m/ft-AMSL)	149.04 / 489.0	30.48 / 100.0
Antenna Structure Registration #		
Path Azimuth (°)	87.561	267.801
Path Length (km / miles)	41.336 / 25.685	
Transmit Antenna	03900K	
Manufacturer	SCALA ELECTRONICS	
Model	OGB3-900K	
Gain (dBi) / Beamwidth (°) / Tilt (°)	5.2 / 20.00 / -0.35	
Centerline (m / ft - AGL)	36.58 / 120.0	
Receive Antenna		S00000
Manufacturer		SCALA ELECTRONICS
Model		MF-960B
Gain (dBi) / Beamwidth (°)		16.2 / 14.00
Centerline (m / ft - AGL)		6.10 / 20.0
Diversity Receive Antenna		
Manufacturer		
Model		
Gain (dBi) / Beamwidth (°)		
Centerline (m / ft - AGL)		
Radio Information	TEMB31	999999
Manufacturer	INTERWAVE COMMUNICATIONS	RECEIVE
Model	GSM BTS	ONLY
Model Description		
Emission Designator / Modulation	270KGXW 16 QAM	
Loading	DIGITAL DIG 0.000	DIGITAL DIG 0.000
Stability (%)	0.00015	0.00015
	Nominal Coordinated Maximum	Nominal Coordinated Maximum
Power (dBm)	38.5	
Received Level (dBm)		-96.2
EIRP (dBm)	13.0	
Fixed Loss: Tx / Common (dB)	30.0 / 0.7	0.0 / 1.0
Free Space Loss (dB)		124.4
Transmit Frequencies (MHz)	959.2000V(3)	

Microwave Path Data Sheet

Page 15 of 15

COMSEARCH

19700 Janelia Farm Boulevard, Ashburn, VA, 20147

(703)726-5826 www.comsearch.com

PCN Date: 02/17/2004

Job Number 040217COMSKD01

Previous PCN Date: 08/25/2003

RCN Number: 04021705

Administrative Information

Status / License Basis

Call Sign

Licensee Code

Licensee Name

Radio Service / Station Class

BLDG L CA

PROPOSED / PRIMARY OPERATION

QUAINC

QUALCOMM INCORPORATED

MG -- Microwave Industrial/Business Pool

MOBILE CA

PROPOSED / PRIMARY OPERATION

QUAINC

QUALCOMM INCORPORATED

FXO -- Fixed

Site Information

Latitude (NAD 83)

Longitude (NAD 83)

Ground Elevation (m/ft-AMSL)

Antenna Structure Registration #

Path Azimuth (°)

Path Length (km / miles)

32 ° 53' 30.7" N

117 ° 11' 43.7" W

161.23 / 529.0

89.435

40.617 / 25.238

32 ° 53' 41.0" N

116 ° 45' 41.0" W

30.48 / 100.0

269.670

Transmit Antenna

Manufacturer

Model

Gain (dBi) / Beamwidth (°) / Tilt (°)

Centerline (m / ft - AGL)

03900K

SCALA ELECTRONICS

OGB3-900K

5.2 / 20.00 / -0.36

36.58 / 120.0

Receive Antenna

Manufacturer

Model

Gain (dBi) / Beamwidth (°)

Centerline (m / ft - AGL)

S00000

SCALA ELECTRONICS

MF-960B

16.2 / 14.00

6.10 / 20.0

Diversity Receive Antenna

Manufacturer

Model

Gain (dBi) / Beamwidth (°)

Centerline (m / ft - AGL)

Radio Information

Manufacturer

Model

Model Description

Emission Designator / Modulation

Loading

Stability (%)

Power (dBm)

Received Level (dBm)

EIRP (dBm)

Fixed Loss: Tx / Common (dB)

Free Space Loss (dB)

TEMB31

INTERWAVE COMMUNICATIONS

GSM BTS

270KGXW

16 QAM

DIGITAL DIG 0.000

0.00015

Nominal

Coordinated

Maximum

38.5

13.0

30.0 / 0.7

124.3

999999

RECEIVE

ONLY

DIGITAL DIG 0.000

0.00015

Nominal

Coordinated

Maximum

-96.1

0.0 / 1.0

Transmit Frequencies (MHz) 959.2000V(3)

19700 Janelia Farm Boulevard

Ashburn, VA 20147

(703) 726-5500

Fax (703) 726-5600



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February 17, 2004

*** CLIENT COPY ***

*** PLEASE MAIL ***

*** TO CUSTOMER ***, VA 00000

Re: QUALCOMM INCORPORATED
Job Number: 040217COMSKD01
BLDG E - MOBILE, BLDG L - MOBILE, CA
0.96 GHz DIGITAL MICROWAVE SYSTEM
Prior Coordination Notification/No Response Required
Reiterations for experimental paths

Dear Frequency Coordinator:

COMSEARCH has completed an interference analysis for the system described in the attached documentation. Our analysis indicates that the proposed system meets industry accepted interference criteria with your system.

In accordance with FCC Rule Part 101.103(d), we are providing you with the technical parameters of the proposed system for your review. For easy reference, we have underlined all changes to previously coordinated paths and included their previous PCN date.

These changes do not increase the interference potential into your system. Thus, pursuant to FCC Rule Part 101.103(d)(2)(ix), this notice is provided for information purposes only and requires no response.

If you have any questions, or require additional information, please contact me at (703) 726-5826.

Sincerely,

COMSEARCH

Kent E. Dorsey
Senior Freq. Planner

Enclosure(s)