

Microwave Path Data Sheet
COMSEARCH

19700 Janelia Farm Boulevard, Ashburn, VA, 20147
(703)636-5234 www.comsearch.com
Job Number: 140624COMSDS03

Date: 06/24/2014

Adaptive Modulation Prior Coordination Notice

One or more paths in this Prior Coordination Notice (PCN) use microwave radios with Adaptive Modulation. These paths can be identified by a numerical superscript notation immediately following the Radio Code on the path data sheet.

The superscript notation can be cross referenced to the corresponding table(s) below to identify the various modulation modes in which the microwave path will operate.

(1) Master Radio Code: X18656 - EXALT COMMUNICATIONS INC.

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Radio Code	Model	Model Description	Emission Designator	Modulation	Loading (Mbps)	Stability (%)	Coordinated Power (dBm)
TEPE30	EXTENDAIR G2	EXTENDAIR G2 RC18020	40M0D7D	256 QAM	1 CH DIG 262.0	0.0007	19.0
TEPE31	EXTENDAIR G2	EXTENDAIR G2 RC18020	40M0D7D	128 QAM	1 CH DIG 229.0	0.0007	19.0
TEPE32	EXTENDAIR G2	EXTENDAIR G2 RC18020	40M0D7D	64 QAM	1 CH DIG 196.0	0.0007	19.0
TEPE33	EXTENDAIR G2	EXTENDAIR G2 RC18020	40M0D7D	32 QAM	1 CH DIG 163.0	0.0007	19.0
TEPE34	EXTENDAIR G2	EXTENDAIR G2 RC18020	40M0D7D	16 QAM	1 CH DIG 130.0	0.0007	19.0
TEPE35	EXTENDAIR G2	EXTENDAIR G2 RC18020	40M0D7D	QPSK	1 CH DIG 65.0	0.0007	19.0

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PCN Date: 06/24/2014

Job Number: 140624COMSDS03

Prev Job Num: 070416COMSSL01

RCN Number: 14062497

Administrative Information

MT TORO CA
City/County /MONTEREY
Status / License Basis Engineering Proposal / PRIMARY OPERATION
Call Sign WNTG789
Licensee Code S62499
Licensee Name Monterey Bay Aquarium Research Inst
Radio Service / Station Class MG -- Microwave Industrial/Business Pool

S & E BLDG CA

Moss Landing/MONTEREY
Status / License Basis Engineering Proposal / PRIMARY OPERATION
Call Sign WNTP517
Licensee Code S62499
Licensee Name Monterey Bay Aquarium Research Inst
Radio Service / Station Class FXO -- Fixed

Site Information

Latitude (NAD 83)	36 °32' 16.2" N	36 °48' 6.8" N
Longitude (NAD 83)	121 °37' 35.3" W	121 °47' 18.3" W
Ground Elevation (m/ft-AMSL)	958.29 / 3144.0	2.13 / 7.0
Antenna Structure Registration #		
Path Azimuth (°)	333.757	153.660
Path Length (km / miles)	32.684 / 20.309	

Transmit Antenna

Manufacturer	MB1112	86180G
Model	MILLIFLECT MICROWAVE ANTENNA SPECIALISTS	GABRIEL ELECTRONICS
Gain(dBi) / Beamwidth(°) / Tilt(°)	TM1872DA	HED6-180B
Centerline (m / ft - AGL)	48.5 / 0.60 / -1.77	48.1 / 0.70 / 1.55
	3.96 / 13.0	14.63 / 48.0

Receive Antenna

Same As Transmit

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

Diversity Receive Antenna

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

Radio Information

Manufacturer	<u>X18656¹</u>	<u>X18656¹</u>
Model	<u>EXALT COMMUNICATIONS INC.</u>	<u>EXALT COMMUNICATIONS INC.</u>
Model Description	<u>EXTENDAIR G2</u>	<u>EXTENDAIR G2</u>
Emission Designator / Modulation	<u>EXTENDAIR G2 RC18020 256QAM-QPSK</u>	<u>EXTENDAIR G2 RC18020 256QAM-QPSK</u>
Loading	<u>40M0D7D</u> <u>256 QAM</u>	<u>40M0D7D</u> <u>256 QAM</u>
Stability (%)	<u>1 CH DIG 262000.000</u>	<u>1 CH DIG 262000.000</u>
	<u>0.0007</u>	<u>0.0007</u>
Power (dBm)	Nominal Coordinated Maximum	Nominal Coordinated Maximum
Received Level (dBm)	<u>19.0</u>	<u>19.0</u>
EIRP (dBm)	<u>-36.8</u>	<u>-36.8</u>
	<u>65.4</u>	<u>65.0</u>
Fixed Loss: Tx / Common (dB)	0.0 / 2.1	0.0 / 2.1
Free Space Loss (dB)		148.2

Transmit Frequencies (MHz) 19440.0000V(5)

17880.0000V(5)

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PCN Date: 06/24/2014
Job Number 140624COMSDS03

Prev Job Num: 980526JF01
RCN Number: 14062497

Administrative Information

MT TORO CA
City/County /MONTEREY
Status / License Basis Engineering Proposal / PRIMARY OPERATION
Call Sign WNTG789
Licensee Code S62499
Licensee Name Monterey Bay Aquarium Research Inst
Radio Service / Station Class MG -- Microwave Industrial/Business Pool

S & E BLDG CA

Moss Landing/MONTEREY
Engineering Proposal / PRIMARY OPERATION
WNTP517
S62499
Monterey Bay Aquarium Research Inst
FXO -- Fixed

Site Information

Latitude (NAD 83)	36 °32' 16.2" N	36 °48' 6.8" N
Longitude (NAD 83)	121 °37' 35.3" W	121 °47' 18.3" W
Ground Elevation (m/ft-AMSL)	958.30 / 3144.0	2.44 / 8.0
Antenna Structure Registration #		
Path Azimuth (°)	333.757	153.660
Path Length (km / miles)		32.684 / 20.309

Transmit Antenna

Manufacturer	MB1112	GB1040
Model	MILLIFLECT MICROWAVE ANTENNA SPECIALISTS	GABRIEL ELECTRONICS
Gain(dBi) / Beamwidth(°) / Tilt(°)	TM1872DA	HED4-180
Centerline (m / ft - AGL)	48.5 / 0.60 / -1.79	44.7 / 0.90 / 1.57
	15.54 / 51.0	12.50 / 41.0

Receive Antenna

Same As Transmit

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

Diversity Receive Antenna

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

Radio Information

Manufacturer	<u>TEMH78</u>			<u>TEMH78</u>		
Model	<u>Aviat Networks, Inc.</u>			<u>Aviat Networks, Inc.</u>		
Model Description	<u>HRS5218-00016T1QPSKS</u>			<u>HRS5218-00016T1QPSKS</u>		
Emission Designator / Modulation	<u>TRUEPOINT 5200 16DS1 QPSK</u>			<u>TRUEPOINT 5200 16DS1 QPSK</u>		
Loading	<u>20M0G7W QPSK</u>			<u>20M0G7W QPSK</u>		
Stability (%)	<u>384 CH DIG 27489.000</u>			<u>384 CH DIG 27489.000</u>		
	<u>0.0005</u>			<u>0.0005</u>		
	Nominal	Coordinated	Maximum	Nominal	Coordinated	Maximum
Power (dBm)		20.0			20.0	
Received Level (dBm)		-35.0			-35.0	
EIRP (dBm)		68.5			64.7	
Fixed Loss: Tx / Common (dB)	0.0 / 0.0			0.0 / 0.0		
Free Space Loss (dB)	148.2					

Transmit Frequencies (MHz) 19350.0000H(5)

17790.0000H(5)