RADIATION HAZARD ASSESSMENT

Presented here are the analyses pertaining to the emission of non-ionizing radiation by the antenna systems requested by this application. These analyses demonstrate how the requested antennas will perform in accordance with the human exposure limits specified by the FCC Office of Engineering and Technology Bulletin No. 65. Note that the Commission has previously evaluated Kepler's radiation hazard assessment of the Intellian v65, Intellian v85NX, Intellian v240MT, and Cobham Sailor 900 antennas as part of its Fixed Blanket License grant. The analysis results for those antennas are repeated here for convenience, alongside that of the additional antennas Kepler seeks to include in its ESIM authorization.[1]

The radiation hazard assessment presented below demonstrates conditions that will be considered in the operation of Kepler's ESIMs. Any terminal failing to meet the limits for an Uncontrolled Environment will not be installed in/operated toward areas that are accessible to the general public and other untrained personnel. Any terminal failing to meet the Controlled Environment limits at the main reflector will be equipped with a radome to prevent access to the main reflector area. Any terminal failing to meet the Controlled Environment limits in the near, transition, or far field regions will be operated with power limitations.

Due to the wide variety of its customers, Kepler cannot predict the exact duty cycle of future earth station operations. As such, a very conservative duty factor of 1.0 has been assumed; in practice it is highly unlikely that terminals in communication with Kepler's satellites will be operated continuously based on Kepler's experience in communicating with fixed terminals.

The following parameters are used across all calculations.

Human Exposure Limits[2]

Parameter	Value	Units	Condition	Symbol
Limit Controlled Environment	50	W/m^2	<=	Plim
Limit Uncontrolled Environment	10	W/m^2	<=	Plim

Constants

Parameter	Value	Units	Symbol
Pi	3.1415927	real	π
Speed of Light	299,792,458	m/s	c

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[1] *See* Kepler Communications Inc., Radio Station Authorization, IBFS File No. SES-LIC-20190627-00861 (granted Aug. 17, 2020) ("Fixed Blanket License").

[2] *See* OET Bulletin 65: Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields, Edition 97-01 at 67 (1997).

Contents

Intellian v65

Basic Inputs

Input Parameter	Value	Units	Symbol
Antenna Diameter	0.65	m	D
Antenna Transmit Gain	37.7	dBi	G
Transmit Frequency	1.413E+10	Hz	f
Power Input to the Antenna	8	Watts	Pbuc
Fixed Loss from Transmitter to Feed	1	dB	Ploss

Calculated Parameter	Value	Units	Symbol	Formula
Total Feed Input Power	6.74	Watts	P	Pbuc - Ploss
Antenna Surface Area	0.33	m^2	A	$\pi D^2/4$
Wavelength	0.021	m	λ	c/f
Gain Factor	5888.44	real	g	$10^{(G/10)}$
Antenna Efficiency	0.64	real	η	$g\lambda^2/(4\pi A)$
Max EIRP	45.99	dBW	E	G+P

Antenna Field Distances

Calculated Parameter	Value	Units	Symbol	Formula
Near-Field Distance	4.98	m	Rnf	$D^2/(4\lambda)$
Distance to Far-Field	11.94	m	Rff	$0.6D^2/\lambda$
Distance of Transition Range	4.98	m	Rt	Rt=Rnf

Power Flux Density

Calculated Parameter	Value	Units	Symbol	Formula	Pass Limit? Controlled	Uncontrolled
Near Field Region	51.69	W/m^2	Snf	$16\eta P/(\pi D^2)$	No	No
Far Field Region	22.14	W/m^2	Sff	$gP/(4\pi Rff^2)$	Yes	No
Transition Region	51.69	W/m^2	St	Snf*Rnf/Rt	No	No
At Main Reflector	81.26	W/m^2	Ssurface	4P/A	No	No
b/w Reflector and Ground	20.31	W/m^2	Sg	P/A	Yes	No

Notes:

- Radomes will be used to prevent access to the feed flange and main reflector areas.
- Antennas are to be installed in/operated toward areas that are inaccessible to the general public and other untrained personnel.
- Radiation in the near field/transition regions will meet the exposure limits for controlled environments if antenna is operated below 7.78 Watts.

Intellian v85NX

Basic Inputs

Input Parameter	Value	Units	Symbol
Antenna Diameter	0.85	m	D
Antenna Transmit Gain	40.7	dBi	G
Transmit Frequency	1.425E+10	Hz	f
Power Input to the Antenna	8	Watts	Pbuc
Fixed Loss from Transmitter to Feed	1	dB	Ploss

Calculated Parameter	Value	Units	Symbol	Formula
Total Feed Input Power	6.74	Watts	P	Pbuc - Ploss
Antenna Surface Area	0.57	m^2	A	$\pi D^2/4$
Wavelength	0.021	m	λ	c/f
Gain Factor	11748.98	real	g	$10^{(G/10)}$
Antenna Efficiency	0.73	real	η	$g\lambda^2/(4\pi A)$
Max EIRP	48.99	dBW	E	G+P

Antenna Field Distances

Calculated Parameter	Value	Units	Symbol	Formula
Near-Field Distance	8.59	m	Rnf	$D^2/(4\lambda)$
Distance to Far-Field	20.61	m	Rff	$0.6D^2/\lambda$
Distance of Transition Range	8.59	m	Rt	Rt=Rnf

Power Flux Density

					Pass Limit?	
Calculated Parameter	Value	Units	Symbol	Formula	Controlled	Uncontrolled
Near Field Region	34.65	W/m^2	Snf	$16\eta P/(\pi D^2)$	Yes	No
Far Field Region	14.84	W/m^2	Sff	$gP/(4\pi Rff^2)$	Yes	No
Transition Region	34.65	W/m^2	St	Snf*Rnf/Rt	Yes	No
At Main Reflector	47.52	W/m^2	Ssurface	4P/A	Yes	No
b/w Reflector and Ground	11.88	W/m^2	Sg	P/A	Yes	No

Notes:

- Antennas are to be installed in/operated toward areas that are inaccessible to the general public and other untrained personnel.

Intellian v240MT – 40 Watts (Minimum Power)

Basic Inputs

Input Parameter	Value	Units	Symbol
Antenna Diameter	2.4	m	D
Antenna Transmit Gain	47.4	dBi	G
Transmit Frequency	1.425E+10	Hz	f
Power Input to the Antenna	40	Watts	Pbuc
Fixed Loss from Transmitter to Feed	1	dB	Ploss

Calculated Parameter	Value	Units	Symbol	Formula
Total Feed Input Power	38.74	Watts	P	Pbuc - Ploss
Antenna Surface Area	4.52	m^2	A	$\pi D^2/4$
Wavelength	0.021	m	λ	c/f
Gain Factor	54954.09	real	g	$10^{\wedge}(G/10)$
Antenna Efficiency	0.43	real	η	$g\lambda^2/(4\pi A)$
Max EIRP	63.28	dBW	E	G+P

Antenna Field Distances

Calculated Parameter	Value	Units	Symbol	Formula
Near-Field Distance	68.45	m	Rnf	$D^2/(4\lambda)$
Distance to Far-Field	164.27	m	Rff	$0.6D^2/\lambda$
Distance of Transition Range	68.45	m	Rt	Rt=Rnf

Power Flux Density

					Pass Limit?	
Calculated Parameter	Value	Units	Symbol	Formula	Controlled	Uncontrolled
Near Field Region	14.66	W/m^2	Snf	$16\eta P/(\pi D^2)$	Yes	No
Far Field Region	6.28	W/m^2	Sff	$gP/(4\pi Rff^2)$	Yes	Yes
Transition Region	14.66	W/m^2	St	Snf*Rnf/Rt	Yes	No
At Main Reflector	34.25	W/m^2	Ssurface	4P/A	Yes	No
b/w Reflector and Ground	8.56	W/m^2	Sg	P/A	Yes	Yes

Notes:

- Antennas are to be installed in/operated toward areas that are inaccessible to the general public and other untrained personnel.

Intellian v240MT – 125 Watts (Maximum Power)

Basic Inputs

Input Parameter	Value	Units	Symbol
Antenna Diameter	2.4	m	D
Antenna Transmit Gain	47.4	dBi	G
Transmit Frequency	1.425E+10	Hz	f
Power Input to the Antenna	125	Watts	Pbuc
Fixed Loss from Transmitter to Feed	1	dB	Ploss

Calculated Parameter	Value	Units	Symbol	Formula
Total Feed Input Power	123.74	Watts	P	Pbuc - Ploss
Antenna Surface Area	4.52	m^2	A	$\pi D^2/4$
Wavelength	0.021	m	λ	c/f
Gain Factor	54954.09	real	g	$10^{\wedge}(G/10)$
Antenna Efficiency	0.43	real	η	$g\lambda^2/(4\pi A)$
Max EIRP	68.32	dBW	E	G+P

Antenna Field Distances

Calculated Parameter	Value	Units	Symbol	Formula
Near-Field Distance	68.45	m	Rnf	$D^2/(4\lambda)$
Distance to Far-Field	164.27	m	Rff	$0.6D^2/\lambda$
Distance of Transition Range	68.45	m	Rt	Rt=Rnf

Power Flux Density

Calculated Parameter	Value	Units	Symbol	Formula	Pass Limit? Controlled	Uncontrolled
Near Field Region	46.81	W/m^2	Snf	$16\eta P/(\pi D^2)$	Yes	No
Far Field Region	20.05	W/m^2	Sff	$gP/(4\pi Rff^2)$	Yes	No
Transition Region	46.81	W/m^2	St	Snf*Rnf/Rt	Yes	No
At Main Reflector	109.41	W/m^2	Ssurface	4P/A	No	No
b/w Reflector and Ground	27.35	W/m^2	Sg	P/A	Yes	No

Notes:

- Radomes will be used to prevent access to the feed flange and main reflector areas.
- Antennas are to be installed in/operated toward areas that are inaccessible to the general public and other untrained personnel.

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Cobham Sailor 900

Basic Inputs

Input Parameter	Value	Units	Symbol
Antenna Diameter	1.03	m	D
Antenna Transmit Gain	41.6	dBi	G
Transmit Frequency	1.425E+10	Hz	f
Power Input to the Antenna	8	Watts	Pbuc
Fixed Loss from Transmitter to Feed	1	dB	Ploss

Calculated Parameter	Value	Units	Symbol	Formula
Total Feed Input Power	6.74	Watts	P	Pbuc - Ploss
Antenna Surface Area	0.83	m^2	A	$\pi D^2/4$
Wavelength	0.021	m	λ	c/f
Gain Factor	14454.40	real	g	$10^{\wedge}(G/10)$
Antenna Efficiency	0.61	real	η	$g\lambda^2/(4\pi A)$
Max EIRP	49.89	dBW	E	G+P

Antenna Field Distances

Calculated Parameter	Value	Units	Symbol	Formula
Near-Field Distance	12.61	m	Rnf	$D^2/(4\lambda)$
Distance to Far-Field	30.26	m	Rff	$0.6D^2/\lambda$
Distance of Transition Range	12.61	m	Rt	Rt=Rnf

Power Flux Density

Calculated Parameter	Value	Units	Symbol	Formula	Pass Limit? Controlled	Uncontrolled
Near Field Region	19.77	W/m^2	Snf	$16\eta P/(\pi D^2)$	Yes	No
Far Field Region	8.47	W/m^2	Sff	$gP/(4\pi Rff^2)$	Yes	Yes
Transition Region	19.77	W/m^2	St	Snf*Rnf/Rt	Yes	No
At Main Reflector	32.36	W/m^2	Ssurface	4P/A	Yes	No
b/w Reflector and Ground	8.09	W/m^2	Sg	P/A	Yes	Yes

Notes:

- Antennas are to be installed in/operated toward areas that are inaccessible to the general public and other untrained personnel.

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Kepler Communications Inc.

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Cobham Sailor 600

Basic Inputs

Input Parameter	Value	Units	Symbol
Antenna Diameter	0.65	m	D
Antenna Transmit Gain	37.7	dBi	G
Transmit Frequency	1.400E+10	Hz	f
Power Input to the Antenna	6	Watts	Pbuc
Fixed Loss from Transmitter to Feed	1	dB	Ploss

Calculated Parameter	Value	Units	Symbol	Formula
Total Feed Input Power	4.74	Watts	P	Pbuc - Ploss
Antenna Surface Area	0.33	m^2	A	$\pi D^2/4$
Wavelength	0.02	m	λ	c/f
Gain Factor	5888.44	real	g	$10^{(G/10)}$
Antenna Efficiency	0.65	real	η	$g\lambda^2/(4\pi A)$
Max EIRP	44.46	dBW	E	G+P

Antenna Field Distances

Calculated Parameter	Value	Units	Symbol	Formula
Near-Field Distance	4.93	m	Rnf	$D^2/(4\lambda)$
Distance to Far-Field	11.84	m	Rff	$0.6D^2/\lambda$
Distance of Transition Range	4.93	m	Rt	Rt=Rnf

Power Flux Density

Calculated Parameter	Value	Units	Symbol	Formula	Pass Limit? Controlled	Uncontrolled
Near Field Region	37.01	W/m^2	Snf	$16\eta P/(\pi D^2)$	Yes	No
Far Field Region	15.85	W/m^2	Sff	$gP/(4\pi Rff^2)$	Yes	No
Transition Region	37.01	W/m^2	St	Snf*Rnf/Rt	Yes	No
At Main Reflector	57.15	W/m^2	Ssurface	4P/A	No	No
b/w Reflector and Ground	14.29	W/m^2	Sg	P/A	Yes	No

Notes:

- Radomes will be used to prevent access to the feed flange and main reflector areas.
- Antennas are to be installed in/operated toward areas that are inaccessible to the general public and other untrained personnel.

Kepler Communications Inc.

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Cobham Sailor XTR

Basic Inputs

Input Parameter	Value	Units	Symbol
Antenna Diameter	1.03	m	D
Antenna Transmit Gain	41.6	dBi	G
Transmit Frequency	1.425E+10	Hz	f
Power Input to the Antenna	16	Watts	Pbuc
Fixed Loss from Transmitter to Feed	1	dB	Ploss

Calculated Parameter	Value	Units	Symbol	Formula
Total Feed Input Power	14.74	Watts	P	Pbuc - Ploss
Antenna Surface Area	0.83	m^2	A	$\pi D^2/4$
Wavelength	0.021	m	λ	c/f
Gain Factor	14454.40	real	g	$10^{(G/10)}$
Antenna Efficiency	0.61	real	η	$g\lambda^2/(4\pi A)$
Max EIRP	53.29	dBW	E	G+P

Antenna Field Distances

Calculated Parameter	Value	Units	Symbol	Formula
Near-Field Distance	12.61	m	Rnf	$D^2/(4\lambda)$
Distance to Far-Field	30.26	m	Rff	$0.6D^2/\lambda$
Distance of Transition Range	12.61	m	Rt	Rt=Rnf

Power Flux Density

Calculated Parameter	Value	Units	Symbol	Formula	Controlled	Uncontrolled
Near Field Region	43.24	W/m^2	Snf	$16\eta P/(\pi D^2)$	Yes	No
Far Field Region	18.52	W/m^2	Sff	$gP/(4\pi Rff^2)$	Yes	No
Transition Region	43.24	W/m^2	St	Snf*Rnf/Rt	Yes	No
At Main Reflector	70.77	W/m^2	Ssurface	4P/A	No	No
b/w Reflector and Ground	17.69	W/m^2	Sg	P/A	Yes	No

Pass Limit?

Notes:

- Radomes will be used to prevent access to the feed flange and main reflector areas.
- Antennas are to be installed in/operated toward areas that are inaccessible to the general public and other untrained personnel.

Cobham Sea Tel 3011

Basic Inputs

Input Parameter	Value	Units	Symbol
Antenna Diameter	0.75	m	D
Antenna Transmit Gain	39.1	dBi	G
Transmit Frequency	1.425E+10	Hz	f
Power Input to the Antenna	8	Watts	Pbuc
Fixed Loss from Transmitter to Feed	1	dB	Ploss

Calculated Parameter	Value	Units	Symbol	Formula
Total Feed Input Power	6.74	Watts	P	Pbuc - Ploss
Antenna Surface Area	0.44	m^2	A	$\pi D^2/4$
Wavelength	0.02	m	λ	c/f
Gain Factor	8128.31	real	g	$10^{(G/10)}$
Antenna Efficiency	0.65	real	η	$g\lambda^2/(4\pi A)$
Max EIRP	47.39	dBW	E	G+P

Antenna Field Distances

Calculated Parameter	Value	Units	Symbol	Formula
Near-Field Distance	6.68	m	Rnf	$D^2/(4\lambda)$
Distance to Far-Field	16.04	m	Rff	$0.6D^2/\lambda$
Distance of Transition Range	6.68	m	Rt	Rt=Rnf

Power Flux Density

Calculated Parameter	Value	Units	Symbol	Formula	Pass Limit? Controlled	Uncontrolled
Near Field Region	39.55	W/m^2	Snf	$16\eta P/(\pi D^2)$	Yes	No
Far Field Region	16.94	W/m^2	Sff	$gP/(4\pi Rff^2)$	Yes	No
Transition Region	39.55	W/m^2	St	Snf*Rnf/Rt	Yes	No
At Main Reflector	61.03	W/m^2	Ssurface	4P/A	No	No
b/w Reflector and Ground	15.26	W/m^2	Sg	P/A	Yes	No

Notes:

- Radomes will be used to prevent access to the feed flange and main reflector areas.
- Antennas are to be installed in/operated toward areas that are inaccessible to the general public and other untrained personnel.

Cobham Sea Tel 9711 – 40 Watts (Minimum Power)

Basic Inputs

Input Parameter	Value	Units	Symbol
Antenna Diameter	2.4	m	D
Antenna Transmit Gain	48.5	dBi	G
Transmit Frequency	1.425E+10	Hz	f
Power Input to the Antenna	40	Watts	Pbuc
Fixed Loss from Transmitter to Feed	1	dB	Ploss

Calculated Parameter	Value	Units	Symbol	Formula
Total Feed Input Power	38.74	Watts	P	Pbuc - Ploss
Antenna Surface Area	4.52	m^2	A	$\pi D^2/4$
Wavelength	0.02	m	λ	c/f
Gain Factor	70794.58	real	g	$10^{(G/10)}$
Antenna Efficiency	0.55	real	η	$g\lambda^2/(4\pi A)$
Max EIRP	64.38	dBW	E	G+P

Antenna Field Distances

Calculated Parameter	Value	Units	Symbol	Formula
Near-Field Distance	68.45	m	Rnf	$D^2/(4\lambda)$
Distance to Far-Field	164.27	m	Rff	$0.6D^2/\lambda$
Distance of Transition Range	68.45	m	Rt	Rt=Rnf

Power Flux Density

Calculated Parameter	Value	Units	Symbol	Formula	Pass Limit? Controlled	Uncontrolled
Near Field Region	18.88	W/m^2	Snf	$16\eta P/(\pi D^2)$	Yes	No
Far Field Region	8.09	W/m^2	Sff	$gP/(4\pi Rff^2)$	Yes	Yes
Transition Region	18.88	W/m^2	St	Snf*Rnf/Rt	Yes	No
At Main Reflector	34.25	W/m^2	Ssurface	4P/A	Yes	No
b/w Reflector and Ground	8.56	W/m^2	Sg	P/A	Yes	Yes

Notes:

- Antennas are to be installed in/operated toward areas that are inaccessible to the general public and other untrained personnel.

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Cobham Sea Tel 9711 – 125 Watts (Maximum Power)

Basic Inputs

Input Parameter	Value	Units	Symbol
Antenna Diameter	2.4	m	D
Antenna Transmit Gain	48.5	dBi	G
Transmit Frequency	1.425E+10	Hz	f
Power Input to the Antenna	125	Watts	Pbuc
Fixed Loss from Transmitter to Feed	1	dB	Ploss

Calculated Parameter	Value	Units	Symbol	Formula
Total Feed Input Power	123.74	Watts	P	Pbuc - Ploss
Antenna Surface Area	4.52	m^2	A	$\pi D^2/4$
Wavelength	0.02	m	λ	c/f
Gain Factor	70794.58	real	g	$10^{(G/10)}$
Antenna Efficiency	0.55	real	η	$g\lambda^2/(4\pi A)$
Max EIRP	69.43	dBW	E	G+P

Antenna Field Distances

Calculated Parameter	Value	Units	Symbol	Formula
Near-Field Distance	68.45	m	Rnf	$D^2/(4\lambda)$
Distance to Far-Field	164.27	m	Rff	$0.6D^2/\lambda$
Distance of Transition Range	68.45	m	Rt	Rt=Rnf

Power Flux Density

Calculated Parameter	Value	Units	Symbol	Formula	Pass Limit? Controlled	Uncontrolled
Near Field Region	60.30	W/m^2	Snf	$16\eta P/(\pi D^2)$	No	No
Far Field Region	25.83	W/m^2	Sff	$gP/(4\pi Rff^2)$	Yes	No
Transition Region	60.30	W/m^2	St	Snf*Rnf/Rt	No	No
At Main Reflector	109.41	W/m^2	Ssurface	4P/A	No	No
b/w Reflector and Ground	27.35	W/m^2	Sg	P/A	Yes	No

Notes:

- Radomes will be used to prevent access to the feed flange and main reflector areas.
- Antennas are to be installed in/operated toward areas that are inaccessible to the general public and other untrained personnel.
- Radiation in the near field/transition regions will meet the exposure limits for controlled environments if antenna is operated below 103.86 Watts.

Kymeta u7

Basic Inputs

Input Parameter	Value	Units	Symbol
Antenna Diameter	0.823	m	D
Antenna Transmit Gain	33.5	dBi	G
Transmit Frequency	1.425E+10	Hz	f
Power Input to the Antenna	16	Watts	Pbuc
Fixed Loss from Transmitter to Feed	1	dB	Ploss

Calculated Parameter	Value	Units	Symbol	Formula
Total Feed Input Power	14.74	Watts	P	Pbuc - Ploss
Antenna Surface Area	0.56	m^2	A	
Wavelength	0.021	m	λ	c/f
Gain Factor	2238.72	real	g	$10^{\wedge}(G/10)$
Antenna Efficiency	0.14	real	η	$g\lambda^2/(4\pi A)$
Max EIRP	45.19	dBW	E	G+P

Antenna Field Distances

Calculated Parameter	Value	Units	Symbol	Formula
Near-Field Distance	8.05	m	Rnf	$D^2/(4\lambda)$
Distance to Far-Field	19.32	m	Rff	$0.6D^2/\lambda$
Distance of Transition Range	8.05	m	Rt	Rt=Rnf

Power Flux Density

Calculated Parameter	Value	Units	Symbol	Formula	Pass Limit? Controlled	Uncontrolled
Near Field Region	15.58	W/m^2	Snf	$16\eta P/(\pi D^2)$	Yes	No
Far Field Region	7.04	W/m^2	Sff	$gP/(4\pi Rff^2)$	Yes	Yes
Transition Region	15.58	W/m^2	St	Snf*Rnf/Rt	Yes	No
At Main Reflector	105.08	W/m^2	Ssurface	4P/A	No	No
b/w Reflector and Ground	26.27	W/m^2	Sg	P/A	Yes	No

Notes:

- Radomes will be used to prevent access to the feed flange and main reflector areas. Note: the Kymeta u7 integrates a flat radome assembly in its antenna stack.
- Antennas are to be installed in/operated toward areas that are inaccessible to the general public and other untrained personnel.

Kymeta u8

Basic Inputs

Input Parameter	Value	Units	Symbol
Antenna Diameter	0.895	m	D
Antenna Transmit Gain	34.6	dBi	G
Transmit Frequency	1.420E+10	Hz	f
Power Input to the Antenna	20	Watts	Pbuc
Fixed Loss from Transmitter to Feed	1	dB	Ploss

Calculated Parameter	Value	Units	Symbol	Formula
Total Feed Input Power	18.74	Watts	P	Pbuc - Ploss
Antenna Surface Area	0.75	m^2	A	
Wavelength	0.021	m	λ	c/f
Gain Factor	2884.03	real	g	$10^{(G/10)}$
Antenna Efficiency	0.14	real	η	$g\lambda^2/(4\pi A)$
Max EIRP	47.33	dBW	E	G+P

Antenna Field Distances

Calculated Parameter	Value	Units	Symbol	Formula
Near-Field Distance	9.49	m	Rnf	$D^2/(4\lambda)$
Distance to Far-Field	22.76	m	Rff	$0.6D^2/\lambda$
Distance of Transition Range	9.49	m	Rt	Rt=Rnf

Power Flux Density

Calculated Parameter	Value	Units	Symbol	Formula	Pass Limit? Controlled	Uncontrolled
Near Field Region	16.21	W/m^2	Snf	$16\eta P/(\pi D^2)$	Yes	No
Far Field Region	8.30	W/m^2	Sff	$gP/(4\pi Rff^2)$	Yes	Yes
Transition Region	16.21	W/m^2	St	Snf*Rnf/Rt	Yes	No
At Main Reflector	99.69	W/m^2	Ssurface	4P/A	No	No
b/w Reflector and Ground	24.92	W/m^2	Sg	P/A	Yes	No

Notes:

- Radomes will be used to prevent access to the feed flange and main reflector areas. Note: the Kymeta u8 integrates a flat radome assembly in its antenna stack.
- Antennas are to be installed in/operated toward areas that are inaccessible to the general public and other untrained personnel.