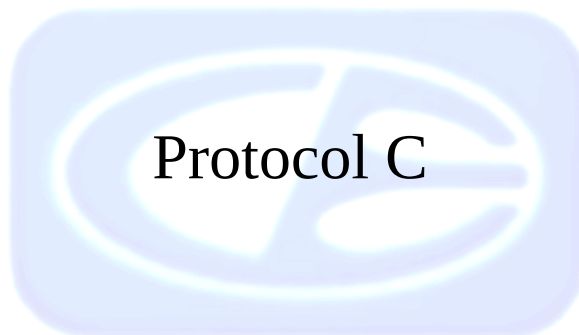




FCC 15.247

Linx Technologies
 Hummingbird MCA Module
 Model: HUM-900-RC-CAS
 Configuration: Protocol C - Module 4
 ANT-916-CW-HW Antenna

Date: 02/02/2015
 Lab: B
 Tested By: Kyle Fujimoto

Low Channel
Transmit Mode - X-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1805.5								N/A - Not in Restricted Band and done via Conducted
2708.25	40.45	V	74	-33.55	Peak	1.25	135	
2708.25	26.28	V	54	-27.72	Avg	1.25	135	
3611	41.86	V	74	-32.14	Peak	1.25	225	
3611	29.24	V	54	-24.76	Avg	1.25	225	
4513.75	42.42	V	74	-31.58	Peak	1.25	225	
4513.75	27.49	V	54	-26.51	Avg	1.25	225	
5416.5	47.55	V	74	-26.45	Peak	1.25	180	
5416.5	33.51	V	54	-20.49	Avg	1.25	180	
6319.25								N/A - Not in Restricted Band and done via Conducted
7222								No Emissions Detected
8124.75								No Emissions Detected
9027.5								No Emissions Detected

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-RC-CAS
Configuration: Protocol C - Module 4
ANT-916-CW-HW Antenna

Date: 02/02/2015
Lab: B
Tested By: Kyle Fujimoto

**Low Channel
Transmit Mode - Y-Axis**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1805.5								N/A - Not in Restricted Band and done via Conducted
2708.25	38.95	V	74	-35.05	Peak	1.25	155	
2708.25	24.82	V	54	-29.18	Avg	1.25	155	
3611	44.89	V	74	-29.11	Peak	1.35	165	
3611	28.59	V	54	-25.41	Avg	1.35	165	
4513.75	40.63	V	74	-33.37	Peak	1.25	175	
4513.75	28.03	V	54	-25.97	Avg	1.25	175	
5416.5	47.92	V	74	-26.08	Peak	1.35	185	
5416.5	32.55	V	54	-21.45	Avg	1.35	185	
6319.25								N/A - Not in Restricted Band and done via Conducted
7222								No Emissions Detected
8124.75								No Emissions Detected
9027.5								No Emissions Detected

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-RC-CAS
Configuration: Protocol C - Module 4
ANT-916-CW-HW Antenna

Date: 02/02/2015
Lab: B
Tested By: Kyle Fujimoto

Low Channel
Transmit Mode - Z-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1805.5								N/A - Not in Restricted Band and done via Conducted
2708.25	41.26	V	74	-32.74	Peak	1.25	135	
2708.25	27.33	V	54	-26.67	Avg	1.25	135	
3611	42.21	V	74	-31.79	Peak	1.35	145	
3611	27.31	V	54	-26.69	Avg	1.35	145	
4513.75	42.18	V	74	-31.82	Peak	1.25	155	
4513.75	27.42	V	54	-26.58	Avg	1.25	155	
5416.5	47.91	V	74	-26.09	Peak	1.35	165	
5416.5	33.79	V	54	-20.21	Avg	1.35	165	
6319.25								N/A - Not in Restricted Band and done via Conducted
7222								No Emissions Detected
8124.75								No Emissions Detected
9027.5								No Emissions Detected

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-RC-CAS
Configuration: Protocol C - Module 4
ANT-916-CW-HW Antenna

Date: 02/02/2015
Lab: B
Tested By: Kyle Fujimoto

Low Channel
Transmit Mode - X-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1805.5								N/A - Not in Restricted Band and done via Conducted
2708.25	38.72	H	74	-35.28	Peak	1.25	155	
2708.25	24.79	H	54	-29.21	Avg	1.25	155	
3611	44.29	H	74	-29.71	Peak	1.35	165	
3611	30.08	H	54	-23.92	Avg	1.35	165	
4513.75	41.96	H	74	-32.04	Peak	1.25	155	
4513.75	27.43	H	54	-26.57	Avg	1.25	155	
5416.5	47.39	H	74	-26.61	Peak	1.35	165	
5416.5	32.08	H	54	-21.92	Avg	1.35	165	
6319.25								N/A - Not in Restricted Band and done via Conducted
7222								No Emissions Detected
8124.75								No Emissions Detected
9027.5								No Emissions Detected

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-RC-CAS
Configuration: Protocol C - Module 4
ANT-916-CW-HW Antenna

Date: 02/02/2015
Lab: B
Tested By: Kyle Fujimoto

Low Channel
Transmit Mode - Y-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1805.5								N/A - Not in Restricted Band and done via Conducted
2708.25	38.85	H	74	-35.15	Peak	1.25	135	
2708.25	25.41	H	54	-28.59	Avg	1.25	135	
3611	43.58	H	74	-30.42	Peak	1.25	315	
3611	28.33	H	54	-25.67	Avg	1.25	315	
4513.75	43.76	H	74	-30.24	Peak	1.25	125	
4513.75	28.64	H	54	-25.36	Avg	1.25	125	
5416.5	41.71	H	74	-32.29	Peak	1.25	145	
5416.5	32.08	H	54	-21.92	Avg	1.25	145	
6319.25								N/A - Not in Restricted Band and done via Conducted
7222								No Emissions Detected
8124.75								No Emissions Detected
9027.5								No Emissions Detected

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-RC-CAS
Configuration: Protocol C - Module 4
ANT-916-CW-HW Antenna

Date: 02/02/2015
Lab: B
Tested By: Kyle Fujimoto

Low Channel
Transmit Mode - Z-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1805.5								N/A - Not in Restricted Band and done via Conducted
2708.25	42.19	H	74	-31.81	Peak	1.25	225	
2708.25	27.88	H	54	-26.12	Avg	1.25	225	
3611	46.21	H	74	-27.79	Peak	1.35	315	
3611	31.08	H	54	-22.92	Avg	1.35	315	
4513.75	39.86	H	74	-34.14	Peak	1.25	225	
4513.75	27.34	H	54	-26.66	Avg	1.25	225	
5416.5	49.51	H	74	-24.49	Peak	1.25	155	
5416.5	32.15	H	54	-21.85	Avg	1.25	155	
6319.25								N/A - Not in Restricted Band and done via Conducted
7222								No Emissions Detected
8124.75								No Emissions Detected
9027.5								No Emissions Detected

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-RC-CAS
Configuration: Protocol C - Module 4
ANT-916-CW-HW Antenna

Date: 02/02/2015
Lab: B
Tested By: Kyle Fujimoto

Middle Channel
Transmit Mode - X-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1817.5								N/A - Not in Restricted Band and done via Conducted
2726.25	41.99	V	74	-32.01	Peak	1.25	180	
2726.25	27.37	V	54	-26.63	Avg	1.25	180	
3635	42.82	V	74	-31.18	Peak	1.25	165	
3635	27.38	V	54	-26.62	Avg	1.25	165	
4543.75	43.27	V	74	-30.73	Peak	1.25	175	
4543.75	38.05	V	54	-15.95	Avg	1.25	175	
5452.49	49.89	V	74	-24.11	Peak	1.25	185	
5452.49	34.56	V	54	-19.44	Avg	1.25	185	
6361.24								N/A - Not in Restricted Band and done via Conducted
7269.99								No Emissions Detected
8178.74								No Emissions Detected
9087.49								No Emissions Detected

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-RC-CAS
Configuration: Protocol C - Module 4
ANT-916-CW-HW Antenna

Date: 02/02/2015
Lab: B
Tested By: Kyle Fujimoto

Middle Channel
Transmit Mode - Y-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1817.5								N/A - Not in Restricted Band and done via Conducted
2726.25	41.87	V	74	-32.13	Peak	1.25	225	
2726.25	25.15	V	54	-28.85	Avg	1.25	225	
3635	44.31	V	74	-29.69	Peak	1.25	235	
3635	26.95	V	54	-27.05	Avg	1.25	235	
4543.75	43.27	V	74	-30.73	Peak	1.35	225	
4543.75	27.86	V	54	-26.14	Avg	1.35	225	
5452.49	45.37	V	74	-28.63	Peak	1.25	235	
5452.49	31.71	V	54	-22.29	Avg	1.25	235	
6361.24								N/A - Not in Restricted Band and done via Conducted
7269.99								No Emissions Detected
8178.74								No Emissions Detected
9087.49								No Emissions Detected

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-RC-CAS
Configuration: Protocol C - Module 4
ANT-916-CW-HW Antenna

Date: 02/02/2015
Lab: B
Tested By: Kyle Fujimoto

**Middle Channel
Transmit Mode - Z-Axis**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1817.5								N/A - Not in Restricted Band and done via Conducted
2726.25	42.09	V	74	-31.91	Peak	1.25	155	
2726.25	27.16	V	54	-26.84	Avg	1.25	155	
3635	41.85	V	74	-32.15	Peak	1.25	165	
3635	27.91	V	54	-26.09	Avg	1.25	165	
4543.75	42.08	V	74	-31.92	Peak	1.35	175	
4543.75	27.62	V	54	-26.38	Avg	1.35	175	
5452.49	48.67	V	74	-25.33	Peak	1.25	185	
5452.49	32.81	V	54	-21.19	Avg	1.25	185	
6361.24								N/A - Not in Restricted Band and done via Conducted
7269.99								No Emissions Detected
8178.74								No Emissions Detected
9087.49								No Emissions Detected

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-RC-CAS
Configuration: Protocol C - Module 4
ANT-916-CW-HW Antenna

Date: 02/02/2015
Lab: B
Tested By: Kyle Fujimoto

Middle Channel
Transmit Mode - X-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1817.5								N/A - Not in Restricted Band and done via Conducted
2726.25	41.91	H	74	-32.09	Peak	1.25	155	
2726.25	25.63	H	54	-28.37	Avg	1.25	155	
3635	45.52	H	74	-28.48	Peak	1.35	165	
3635	29.46	H	54	-24.54	Avg	1.35	165	
4543.75	42.51	H	74	-31.49	Peak	1.25	175	
4543.75	28.23	H	54	-25.77	Avg	1.25	175	
5452.49	48.43	H	74	-25.57	Peak	1.25	155	
5452.49	31.92	H	54	-22.08	Avg	1.25	155	
6361.24								N/A - Not in Restricted Band and done via Conducted
7269.99								No Emissions Detected
8178.74								No Emissions Detected
9087.49								No Emissions Detected

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-RC-CAS
Configuration: Protocol C - Module 4
ANT-916-CW-HW Antenna

Date: 02/02/2015
Lab: B
Tested By: Kyle Fujimoto

Middle Channel
Transmit Mode - Y-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1817.5								N/A - Not in Restricted Band and done via Conducted
2726.25	41.04	H	74	-32.96	Peak	1.25	155	
2726.25	26.35	H	54	-27.65	Avg	1.25	155	
3635	40.85	H	74	-33.15	Peak	1.35	145	
3635	27.12	H	54	-26.88	Avg	1.35	145	
4543.75	42.35	H	74	-31.65	Peak	1.25	155	
4543.75	27.71	H	54	-26.29	Avg	1.25	155	
5452.49	47.64	H	74	-26.36	Peak	1.35	235	
5452.49	33.72	H	54	-20.28	Avg	1.35	235	
6361.24								N/A - Not in Restricted Band and done via Conducted
7269.99								No Emissions Detected
8178.74								No Emissions Detected
9087.49								No Emissions Detected

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-RC-CAS
Configuration: Protocol C - Module 4
ANT-916-CW-HW Antenna

Date: 02/02/2015
Lab: B
Tested By: Kyle Fujimoto

Middle Channel
Transmit Mode - Z-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1817.5								N/A - Not in Restricted Band and done via Conducted
2726.25	41.11	H	74	-32.89	Peak	1.25	180	
2726.25	26.71	H	54	-27.29	Avg	1.25	180	
3635	46.31	H	74	-27.69	Peak	1.25	45	
3635	30.63	H	54	-23.37	Avg	1.25	45	
4543.75	43.52	H	74	-30.48	Peak	1.35	180	
4543.75	27.61	H	54	-26.39	Avg	1.35	180	
5452.49	48.54	H	74	-25.46	Peak	1.25	155	
5452.49	31.65	H	54	-22.35	Avg	1.25	155	
6361.24								N/A - Not in Restricted Band and done via Conducted
7269.99								No Emissions Detected
8178.74								No Emissions Detected
9087.49								No Emissions Detected

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-RC-CAS
Configuration: Protocol C - Module 4
ANT-916-CW-HW Antenna

Date: 02/02/2015
Lab: B
Tested By: Kyle Fujimoto

**High Channel
Transmit Mode - X-Axis**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1829.49								N/A - Not in Restricted Band and done via Conducted
2744.24	42.43	V	74	-31.57	Peak	1.25	225	
2744.24	27.77	V	54	-26.23	Avg	1.25	225	
3658.99	42.83	V	74	-31.17	Peak	1.25	255	
3658.99	27.85	V	54	-26.15	Avg	1.25	255	
4573.74	42.81	V	74	-31.19	Peak	1.25	265	
4573.74	27.71	V	54	-26.29	Avg	1.25	265	
5488.48	50.25	V	74	-23.75	Peak	1.25	275	
5488.48	35.04	V	54	-18.96	Avg	1.25	275	
6403.23								N/A - Not in Restricted Band and done via Conducted
7317.98								No Emissions Detected
8232.72								No Emissions Detected
9147.47								No Emissions Detected

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-RC-CAS
Configuration: Protocol C - Module 4
ANT-916-CW-HW Antenna

Date: 02/02/2015
Lab: B
Tested By: Kyle Fujimoto

**High Channel
Transmit Mode - Y-Axis**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1829.49								N/A - Not in Restricted Band and done via Conducted
2744.24	41.61	V	74	-32.39	Peak	1.25	155	
2744.24	26.28	V	54	-27.72	Avg	1.25	155	
3658.99	43.27	V	74	-30.73	Peak	1.25	145	
3658.99	26.84	V	54	-27.16	Avg	1.25	145	
4573.74	43.11	V	74	-30.89	Peak	1.25	135	
4573.74	27.85	V	54	-26.15	Avg	1.25	135	
5488.48	49.58	V	74	-24.42	Peak	1.25	155	
5488.48	34.48	V	54	-19.52	Avg	1.25	155	
6403.23								N/A - Not in Restricted Band and done via Conducted
7317.98								No Emissions Detected
8232.72								No Emissions Detected
9147.47								No Emissions Detected

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-RC-CAS
Configuration: Protocol C - Module 4
ANT-916-CW-HW Antenna

Date: 02/02/2015
Lab: B
Tested By: Kyle Fujimoto

**High Channel
Transmit Mode - Z-Axis**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1829.49								N/A - Not in Restricted Band and done via Conducted
2744.24	42.11	V	74	-31.89	Peak	1.25	225	
2744.24	27.41	V	54	-26.59	Avg	1.25	225	
3658.99	42.34	V	74	-31.66	Peak	1.25	235	
3658.99	26.89	V	54	-27.11	Avg	1.25	235	
4573.74	43.64	V	74	-30.36	Peak	1.35	125	
4573.74	27.71	V	54	-26.29	Avg	1.35	125	
5488.48	50.01	V	74	-23.99	Peak	1.25	153	
5488.48	31.96	V	54	-22.04	Avg	1.25	135	
6403.23								N/A - Not in Restricted Band and done via Conducted
7317.98								No Emissions Detected
8232.72								No Emissions Detected
9147.47								No Emissions Detected

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-RC-CAS
Configuration: Protocol C - Module 4
ANT-916-CW-HW Antenna

Date: 02/02/2015
Lab: B
Tested By: Kyle Fujimoto

**High Channel
Transmit Mode - X-Axis**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1829.49								N/A - Not in Restricted Band and done via Conducted
2744.24	41.24	H	74	-32.76	Peak	1.25	155	
2744.24	26.59	H	54	-27.41	Avg	1.25	155	
3658.99	43.21	H	74	-30.79	Peak	1.15	125	
3658.99	28.45	H	54	-25.55	Avg	1.15	125	
4573.74	43.84	H	74	-30.16	Peak	1.25	135	
4573.74	28.21	H	54	-25.79	Avg	1.25	135	
5488.48	45.44	H	74	-28.56	Peak	1.25	145	
5488.48	32.01	H	54	-21.99	Avg	1.25	145	
6403.23								N/A - Not in Restricted Band and done via Conducted
7317.98								No Emissions Detected
8232.72								No Emissions Detected
9147.47								No Emissions Detected

FCC 15.247

Linx Technologies
 Hummingbird MCA Module
 Model: HUM-900-RC-CAS
 Configuration: Protocol C - Module 4
 ANT-916-CW-HW Antenna

Date: 02/02/2015
 Lab: B
 Tested By: Kyle Fujimoto

**High Channel
Transmit Mode - Y-Axis**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1829.49								N/A - Not in Restricted Band and done via Conducted
2744.24	40.23	H	74	-33.77	Peak	1.25	155	
2744.24	25.37	H	54	-28.63	Avg	1.25	155	
3658.99	42.63	H	74	-31.37	Peak	1.25	135	
3658.99	28.09	H	54	-25.91	Avg	1.25	135	
4573.74	43.25	H	74	-30.75	Peak	1.35	145	
4573.74	29.36	H	54	-24.64	Avg	1.35	145	
5488.48	49.11	H	74	-24.89	Peak	1.25	180	
5488.48	34.97	H	54	-19.03	Avg	1.25	180	
6403.23								N/A - Not in Restricted Band and done via Conducted
7317.98								No Emissions Detected
8232.72								No Emissions Detected
9147.47								No Emissions Detected

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-RC-CAS
Configuration: Protocol C - Module 4
ANT-916-CW-HW Antenna

Date: 02/02/2015
Lab: B
Tested By: Kyle Fujimoto

**High Channel
Transmit Mode - Z-Axis**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1829.49								N/A - Not in Restricted Band and done via Conducted
2744.24	43.72	H	74	-30.28	Peak	1.25	155	
2744.24	29.22	H	54	-24.78	Avg	1.25	155	
3658.99	45.49	H	74	-28.51	Peak	1.25	315	
3658.99	29.47	H	54	-24.53	Avg	1.25	315	
4573.74	41.81	H	74	-32.19	Peak	1.25	135	
4573.74	28.75	H	54	-25.25	Avg	1.25	135	
5488.48	46.16	H	74	-27.84	Peak	1.25	155	
5488.48	32.94	H	54	-21.06	Avg	1.25	155	
6403.23								N/A - Not in Restricted Band and done via Conducted
7317.98								No Emissions Detected
8232.72								No Emissions Detected
9147.47								No Emissions Detected

FCC 15.247 and FCC Class B

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-RC-CAS
Configuration: Protocol C - Module 4
ANT-916-CW-HW Antenna

Dates: 02/02/2015 and 02/05/2015
Labs: B and D
Tested By: Kenneth Lee

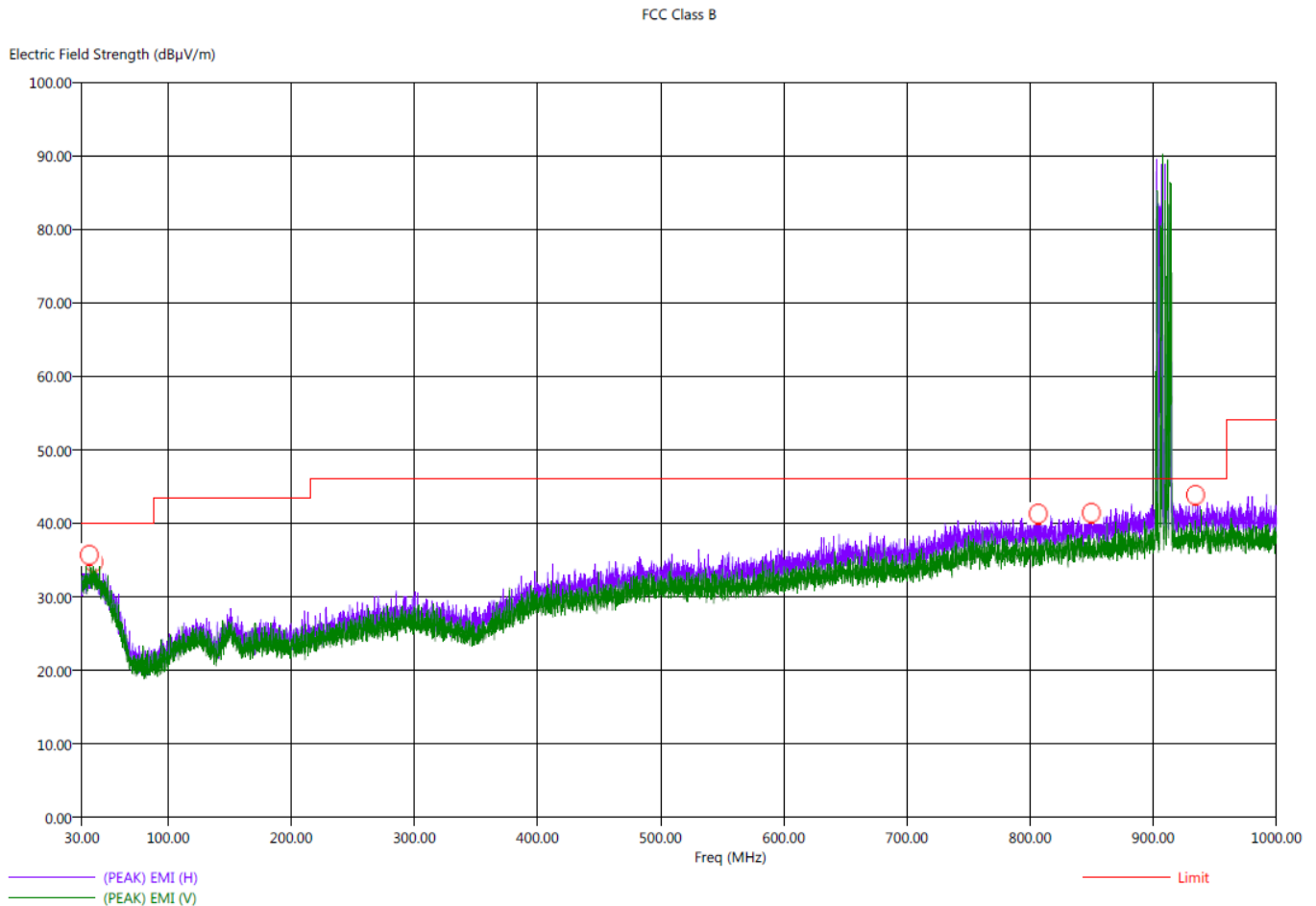
Non Harmonic Emissions from the Tx and Digital Portion - 10 kHz to 30 MHz

Non Harmonic Emissions from the Tx and Digital Portion - 1 GHz to 9.3 GHz

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
								No Emissions Found for the
								Digital Portion
								from 10 kHz to 30 MHz
								for both Vertical and Horizontal
								Polarizations
								No Non Harmonic Emissions Found
								for the Tx Mode
								from 10 kHz to 30 MHz
								for both Vertical and Horizontal
								Polarizations
								Investigated in the X-Axis, Y-Axis,
								and Z-Axis
								No Emissions Found for the
								Digital Portion
								from 1 GHz to 9.3 GHz
								for both Vertical and Horizontal
								Polarizations
								No Non Harmonic Emissions Found
								for the Tx Mode
								from 1 GHz to 9.3 GHz
								for both Vertical and Horizontal
								Polarizations
								Investigated in the X-Axis, Y-Axis,
								and Z-Axis

Title: Pre-Scan - FCC Class B
File: Agilent - Radiated Pre-Scan 30-1000Mhz - FCC Class B_Module_4_Protocol_C_ANT-916-CW-HW_X-Axis_02-05-2015.set
Operator: Kenneth Lee
EUT Type: Hummingbird MCA
EUT Condition: Continuously Transmitting - Frequency Hopping - Protocol C - Module 4 - X-Axis - Worst Case
Comments: Customer: Linx Technologies
M/N: HUM-900-RC-CAS
Note: Antenna - ANT-916-CW-HW

2/5/2015 4:41:03 PM
Sequence: Preliminary Scan

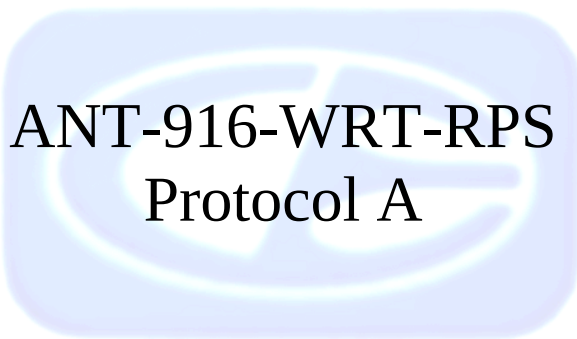


Title: Radiated Final - 30-1000 MHz - FCC Class B
File: Agilent - Radiated Final Scan 30-1000Mhz - FCC Class B_Module_4_Protocol_C_ANT-916-CW-HW_X-Axis_02-05-2015.set
Operator: Kenneth Lee
EUT Type: Hummingbird MCA
EUT Condition: Continuously Transmitting - Frequency Hopping - Protocol C - Module 4 - X-Axis - Worst Case
Comments: Customer: Linx Technologies
M/N: HUM-900-RC-CAS
Note: Antenna - ANT-916-CW-HW

2/5/2015 4:52:37 PM
Sequence: Final Measurements

Final Scan - FCC Class B

Freq (MHz)	Pol	(PEAK) EMI (dBµV/m)	(QP) EMI (dBµV/m)	(PEAK) Margin (dB)	(QP) Margin (dB)	Limit (dBµV/m)	Transducer (dB)	Cable (dB)	Twr Ht (cm)	Ttbl Agl (deg)
36.10	V	35.80	31.12	-4.20	-8.88	40.00	23.84	0.40	159.43	145.50
39.70	H	36.10	31.33	-3.90	-8.67	40.00	24.10	0.43	174.89	93.75
40.80	H	35.86	31.36	-4.14	-8.64	40.00	24.11	0.43	191.49	252.00
806.60	H	41.89	36.85	-4.11	-9.15	46.00	25.96	2.39	368.50	217.00
849.90	H	42.51	37.35	-3.49	-8.65	46.00	26.40	2.52	288.14	293.75
934.30	H	43.35	38.92	-2.65	-7.08	46.00	27.48	2.69	400.38	343.25



ANT-916-WRT-RPS Protocol A

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-PRO-CAS
Configuration: Protocol A - Module 4
ANT-916-WRT-RPS Antenna

Date: 02/03/2015
Lab: B
Tested By: Kenneth Lee

Low Channel
Transmit Mode - X-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1805.94								N/A - Not in Restricted Band and done via Conducted
2708.91	41.86	V	74	-32.14	Peak	2	160	
2708.91	34.19	V	54	-19.81	Avg	2	160	
3611.88	48.31	V	74	-25.69	Peak	1.5	320	
3611.88	43.96	V	54	-10.04	Avg	1.5	320	
4514.86	43.14	V	74	-30.86	Peak	1.5	45	
4514.86	31.88	V	54	-22.12	Avg	1.5	45	
5417.83	52.04	V	74	-21.96	Peak	1.75	190	
5417.83	46.98	V	54	-7.02	Avg	1.75	190	
6320.8								N/A - Not in Restricted Band and done via Conducted
7223.77								No Emissions Detected
8126.74								No Emissions Detected
9029.71								No Emissions Detected

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-PRO-CAS
Configuration: Protocol A - Module 4
ANT-916-WRT-RPS Antenna

Date: 02/03/2015
Lab: B
Tested By: Kenneth Lee

Low Channel
Transmit Mode - Y-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1805.94								N/A - Not in Restricted Band and done via Conducted
2708.91	42.79	V	74	-31.21	Peak	1	190	
2708.91	35.26	V	54	-18.74	Avg	1	190	
3611.88	46.27	V	74	-27.73	Peak	1	230	
3611.88	39.87	V	54	-14.13	Avg	1	230	
4514.86	43.93	V	74	-30.07	Peak	1	355	
4514.86	32.14	V	54	-21.86	Avg	1	355	
5417.83	49.86	V	74	-24.14	Peak	2	340	
5417.83	42.43	V	54	-11.57	Avg	2	340	
6320.8								N/A - Not in Restricted Band and done via Conducted
7223.77								No Emissions Detected
8126.74								No Emissions Detected
9029.71								No Emissions Detected

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-PRO-CAS
Configuration: Protocol A - Module 4
ANT-916-WRT-RPS Antenna

Date: 02/03/2015
Lab: B
Tested By: Kenneth Lee

Low Channel
Transmit Mode - Z-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1805.94								N/A - Not in Restricted Band and done via Conducted
2708.91	41.93	V	74	-32.07	Peak	1.5	120	
2708.91	33.27	V	54	-20.73	Avg	1.5	120	
3611.88	50.37	V	74	-23.63	Peak	1.35	160	
3611.88	46.87	V	54	-7.13	Avg	1.35	160	
4514.86	43.93	V	74	-30.07	Peak	1.15	80	
4514.86	34.25	V	54	-19.75	Avg	1.15	80	
5417.83	55.31	V	74	-18.69	Peak	1.1	90	
5417.83	51.69	V	54	-2.31	Avg	1.1	90	
6320.8								N/A - Not in Restricted Band and done via Conducted
7223.77								No Emissions Detected
7223.77								
8126.74								No Emissions Detected
8126.74								
9029.71								No Emissions Detected
9029.71								

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-PRO-CAS
Configuration: Protocol A - Module 4
ANT-916-WRT-RPS Antenna

Date: 02/03/2015
Lab: B
Tested By: Kenneth Lee

Low Channel
Transmit Mode - X-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1805.94								N/A - Not in Restricted Band and done via Conducted
2708.91	41.74	H	74	-32.26	Peak	1	220	
2708.91	34.98	H	54	-19.02	Avg	1	220	
3611.88	49.26	H	74	-24.74	Peak	1.1	200	
3611.88	45.57	H	54	-8.43	Avg	1.1	200	
4514.86	44.17	H	74	-29.83	Peak	1.25	310	
4514.86	34.39	H	54	-19.61	Avg	1.25	310	
5417.83	50.8	H	74	-23.2	Peak	1.5	210	
5417.83	44.39	H	54	-9.61	Avg	1.5	210	
6320.8								N/A - Not in Restricted Band and done via Conducted
7223.77								No Emissions Detected
8126.74								No Emissions Detected
9029.71								No Emissions Detected

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-PRO-CAS
Configuration: Protocol A - Module 4
ANT-916-WRT-RPS Antenna

Date: 02/03/2015
Lab: B
Tested By: Kenneth Lee

Low Channel
Transmit Mode - Y-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1805.94								N/A - Not in Restricted Band and done via Conducted
2708.91	40.76	H	74	-33.24	Peak	2.5	45	
2708.91	29.35	H	54	-24.65	Avg	2.5	45	
3611.88	46.14	H	74	-27.86	Peak	2.75	180	
3611.88	39.89	H	54	-14.11	Avg	2.75	180	
4514.86	42.93	H	74	-31.07	Peak	1.75	340	
4514.86	32.69	H	54	-21.31	Avg	1.75	340	
5417.83	53.46	H	74	-20.54	Peak	1.75	320	
5417.83	49.22	H	54	-4.78	Avg	1.75	320	
6320.8								N/A - Not in Restricted Band and done via Conducted
7223.77								No Emissions Detected
8126.74								No Emissions Detected
9029.71								No Emissions Detected

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-PRO-CAS
Configuration: Protocol A - Module 4
ANT-916-WRT-RPS Antenna

Date: 02/03/2015
Lab: B
Tested By: Kenneth Lee

Low Channel
Transmit Mode - Z-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1805.94								N/A - Not in Restricted Band and done via Conducted
2708.91	41.62	H	74	-32.38	Peak	1	170	
2708.91	34.09	H	54	-19.91	Avg	1	170	
3611.88	49.64	H	74	-24.36	Peak	1.75	45	
3611.88	46.34	H	54	-7.66	Avg	1.75	45	
4514.86	44.4	H	74	-29.6	Peak	1.15	15	
4514.86	33.46	H	54	-20.54	Avg	1.15	15	
5417.83	52.18	H	74	-21.82	Peak	1	180	
5417.83	46.84	H	54	-7.16	Avg	1	180	
6320.8								N/A - Not in Restricted Band and done via Conducted
7223.77								No Emissions Detected
8126.74								No Emissions Detected
9029.71								No Emissions Detected

FCC 15.247

Linx Technologies
 Hummingbird MCA Module
 Model: HUM-900-PRO-CAS
 Configuration: Protocol A - Module 4
 ANT-916-WRT-RPS Antenna

Date: 02/03/2015
 Lab: B
 Tested By: Kenneth Lee

Middle Channel
Transmit Mode - X-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1830								N/A - Not in Restricted Band and done via Conducted
2745	40.69	V	74	-33.31	Peak	1	100	
2745	29.2	V	54	-24.8	Avg	1	100	
3660	48.11	V	74	-25.89	Peak	2.25	180	
3660	43.22	V	54	-10.78	Avg	2.25	180	
4575	44.02	V	74	-29.98	Peak	1.15	335	
4575	32.73	V	54	-21.27	Avg	1.15	335	
5490	52.05	V	74	-21.95	Peak	1.5	190	
5490	46.59	V	54	-7.41	Avg	1.5	190	
6405								N/A - Not in Restricted Band and done via Conducted
7320								No Emissions Detected
8235								No Emissions Detected
9150								No Emissions Detected

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-PRO-CAS
Configuration: Protocol A - Module 4
ANT-916-WRT-RPS Antenna

Date: 02/03/2015
Lab: B
Tested By: Kenneth Lee

Middle Channel
Transmit Mode - Y-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1830								N/A - Not in Restricted Band and done via Conducted
2745	41.79	V	74	-32.21	Peak	1.75	200	
2745	34.65	V	54	-19.35	Avg	1.75	200	
3660	45.26	V	74	-28.74	Peak	1.65	190	
3660	39.25	V	54	-14.75	Avg	1.65	190	
4575	43.52	V	74	-30.48	Peak	1.5	45	
4575	31.74	V	54	-22.26	Avg	1.5	45	
5490	51.51	V	74	-22.49	Peak	1.7	325	
5490	45.33	V	54	-8.67	Avg	1.7	325	
6405								N/A - Not in Restricted Band and done via Conducted
7320								No Emissions Detected
8235								No Emissions Detected
9150								No Emissions Detected

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-PRO-CAS
Configuration: Protocol A - Module 4
ANT-916-WRT-RPS Antenna

Date: 02/03/2015
Lab: B
Tested By: Kenneth Lee

Middle Channel
Transmit Mode - Z-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1830								N/A - Not in Restricted Band and done via Conducted
2745	41.92	V	74	-32.08	Peak	2	65	
2745	30.05	V	54	-23.95	Avg	2	65	
3660	48.48	V	74	-25.52	Peak	1.85	160	
3660	44.87	V	54	-9.13	Avg	1.85	160	
4575	45.72	V	74	-28.28	Peak	1.25	115	
4575	35.9	V	54	-18.1	Avg	1.25	115	
5490	53.8	V	74	-20.2	Peak	1.25	90	
5490	49.82	V	54	-4.18	Avg	1.25	90	
6405								N/A - Not in Restricted Band and done via Conducted
7320								No Emissions Detected
8235								No Emissions Detected
9150								No Emissions Detected

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-PRO-CAS
Configuration: Protocol A - Module 4
ANT-916-WRT-RPS Antenna

Date: 02/03/2015
Lab: B
Tested By: Kenneth Lee

Middle Channel
Transmit Mode - X-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1830								N/A - Not in Restricted Band and done via Conducted
2745	41.57	H	74	-32.43	Peak	1.15	90	
2745	31.01	H	54	-22.99	Avg	1.15	90	
3660	47.97	H	74	-26.03	Peak	1	350	
3660	44.31	H	54	-9.69	Avg	1	350	
4575	44.26	H	74	-29.74	Peak	2.25	325	
4575	33.91	H	54	-20.09	Avg	2.25	325	
5490	50.66	H	74	-23.34	Peak	1.75	45	
5490	43.53	H	54	-10.47	Avg	1.75	45	
6405								N/A - Not in Restricted Band and done via Conducted
7320								No Emissions Detected
8235								No Emissions Detected
9150								No Emissions Detected

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-PRO-CAS
Configuration: Protocol A - Module 4
ANT-916-WRT-RPS Antenna

Date: 02/03/2015
Lab: B
Tested By: Kenneth Lee

Middle Channel
Transmit Mode - Y-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1830								N/A - Not in Restricted Band and done via Conducted
2745	39.8	H	74	-34.2	Peak	3	85	
2745	28.8	H	54	-25.2	Avg	3	85	
3660	46.12	H	74	-27.88	Peak	1.25	325	
3660	40.79	H	54	-13.21	Avg	1.25	325	
4575	43.81	H	74	-30.19	Peak	1.65	10	
4575	33.74	H	54	-20.26	Avg	1.65	10	
5490	54.03	H	74	-19.97	Peak	1.5	320	
5490	49.89	H	54	-4.11	Avg	1.5	320	
6405								N/A - Not in Restricted Band and done via Conducted
7320								No Emissions Detected
8235								No Emissions Detected
9150								No Emissions Detected

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-PRO-CAS
Configuration: Protocol A - Module 4
ANT-916-WRT-RPS Antenna

Date: 02/03/2015
Lab: B
Tested By: Kenneth Lee

Middle Channel
Transmit Mode - Z-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1830								N/A - Not in Restricted Band and done via Conducted
2745	40.94	H	74	-33.06	Peak	1.1	160	
2745	31.51	H	54	-22.49	Avg	1.1	160	
3660	47.83	H	74	-26.17	Peak	1	180	
3660	43.6	H	54	-10.4	Avg	1	180	
4575	44.06	H	74	-29.94	Peak	1.1	230	
4575	34.3	H	54	-19.7	Avg	1.1	230	
5490	52.17	H	74	-21.83	Peak	1	180	
5490	46.8	H	54	-7.2	Avg	1	180	
6405								N/A - Not in Restricted Band and done via Conducted
7320								No Emissions Detected
8235								No Emissions Detected
9150								No Emissions Detected

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-PRO-CAS
Configuration: Protocol A - Module 4
ANT-916-WRT-RPS Antenna

Date: 02/03/2015
Lab: B
Tested By: Kenneth Lee

**High Channel
Transmit Mode - X-Axis**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1853.3								N/A - Not in Restricted Band and done via Conducted
2779.9	41.14	V	74	-32.86	Peak	1.65	160	
2779.9	31.49	V	54	-22.51	Avg	1.65	160	
3706.6	47.49	V	74	-26.51	Peak	1.75	210	
3706.6	41.75	V	54	-12.25	Avg	1.75	210	
4633.25	44.67	V	74	-29.33	Peak	1.75	150	
4633.25	33.32	V	54	-20.68	Avg	1.75	150	
5559.9	50.32	V	74	-23.68	Peak	2	320	
5559.9	42.92	V	54	-11.08	Avg	2	320	
6486.55								N/A - Not in Restricted Band and done via Conducted
7413.2								No Emissions Detected
8339.85								No Emissions Detected
9266.5								No Emissions Detected

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-PRO-CAS
Configuration: Protocol A - Module 4
ANT-916-WRT-RPS Antenna

Date: 02/03/2015
Lab: B
Tested By: Kenneth Lee

**High Channel
Transmit Mode - Y-Axis**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1853.3								N/A - Not in Restricted Band and done via Conducted
2779.9	41.86	V	74	-32.14	Peak	1	25	
2779.9	29.77	V	54	-24.23	Avg	1	25	
3706.6	48.4	V	74	-25.6	Peak	3	325	
3706.6	43.47	V	54	-10.53	Avg	3	325	
4633.25	43.63	V	74	-30.37	Peak	1.25	300	
4633.25	30.37	V	54	-23.63	Avg	1.25	300	
5559.9	50.42	V	74	-23.58	Peak	1.5	310	
5559.9	43.27	V	54	-10.73	Avg	1.5	310	
6486.55								N/A - Not in Restricted Band and done via Conducted
7413.2								No Emissions Detected
8339.85								No Emissions Detected
9266.5								No Emissions Detected

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-PRO-CAS
Configuration: Protocol A - Module 4
ANT-916-WRT-RPS Antenna

Date: 02/03/2015
Lab: B
Tested By: Kenneth Lee

**High Channel
Transmit Mode - Z-Axis**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1853.3								N/A - Not in Restricted Band and done via Conducted
2779.9	41.11	V	74	-32.89	Peak	1.35	100	
2779.9	30.32	V	54	-23.68	Avg	1.35	100	
3706.6	48.89	V	74	-25.11	Peak	2.1	320	
3706.6	44.84	V	54	-9.16	Avg	2.1	320	
4633.25	46.34	V	74	-27.66	Peak	1.85	90	
4633.25	39.75	V	54	-14.25	Avg	1.85	90	
5559.9	52.36	V	74	-21.64	Peak	2	100	
5559.9	47.38	V	54	-6.62	Avg	2	100	
6486.55								N/A - Not in Restricted Band and done via Conducted
7413.2								No Emissions Detected
8339.85								No Emissions Detected
9266.5								No Emissions Detected

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-PRO-CAS
Configuration: Protocol A - Module 4
ANT-916-WRT-RPS Antenna

Date: 02/03/2015
Lab: B
Tested By: Kenneth Lee

**High Channel
Transmit Mode - X-Axis**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1853.3								N/A - Not in Restricted Band and done via Conducted
2779.9	41.05	H	74	-32.95	Peak	1.5	200	
2779.9	30.96	H	54	-23.04	Avg	1.5	200	
3706.6	49.55	H	74	-24.45	Peak	1.85	320	
3706.6	45.36	H	54	-8.64	Avg	1.85	320	
4633.25	44.99	H	74	-29.01	Peak	3	30	
4633.25	34.51	H	54	-19.49	Avg	3	30	
5559.9	50.55	H	74	-23.45	Peak	1.75	350	
5559.9	41.22	H	54	-12.78	Avg	1.75	350	
6486.55								N/A - Not in Restricted Band and done via Conducted
7413.2								No Emissions Detected
8339.85								No Emissions Detected
9266.5								No Emissions Detected

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-PRO-CAS
Configuration: Protocol A - Module 4
ANT-916-WRT-RPS Antenna

Date: 02/03/2015
Lab: B
Tested By: Kenneth Lee

**High Channel
Transmit Mode - Y-Axis**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1853.3								N/A - Not in Restricted Band and done via Conducted
2779.9	40.73	H	74	-33.27	Peak	1.75	355	
2779.9	26.31	H	54	-27.69	Avg	1.75	355	
3706.6	49	H	74	-25	Peak	1.75	85	
3706.6	44.84	H	54	-9.16	Avg	1.75	85	
4633.25	44.83	H	74	-29.17	Peak	1	0	
4633.25	36.13	H	54	-17.87	Avg	1	0	
5559.9	53.21	H	74	-20.79	Peak	1.5	350	
5559.9	48.88	H	54	-5.12	Avg	1.5	350	
6486.55								N/A - Not in Restricted Band and done via Conducted
7413.2								No Emissions Detected
8339.85								No Emissions Detected
9266.5								No Emissions Detected

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-PRO-CAS
Configuration: Protocol A - Module 4
ANT-916-WRT-RPS Antenna

Date: 02/03/2015
Lab: B
Tested By: Kenneth Lee

**High Channel
Transmit Mode - Z-Axis**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1853.3								N/A - Not in Restricted Band and done via Conducted
2779.9	40.75	H	74	-33.25	Peak	1.5	45	
2779.9	29.48	H	54	-24.52	Avg	1.5	45	
3706.6	48.83	H	74	-25.17	Peak	1.25	335	
3706.6	45.15	H	54	-8.85	Avg	1.25	335	
4633.25	44.28	H	74	-29.72	Peak	1.65	200	
4633.25	34.02	H	54	-19.98	Avg	1.65	200	
5559.9	52.08	H	74	-21.92	Peak	1	180	
5559.9	47.06	H	54	-6.94	Avg	1	180	
6486.55								N/A - Not in Restricted Band and done via Conducted
7413.2								No Emissions Detected
8339.85								No Emissions Detected
9266.5								No Emissions Detected

FCC 15.247 and FCC Class B

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-PRO-CAS
Configuration: Protocol A - Module 4
ANT-916-WRT-RPS Antenna

Dates: 02/03/2015 and 02/05/2015
Labs: B and D
Tested By: Kenneth Lee

Non Harmonic Emissions from the Tx and Digital Portion - 10 kHz to 30 MHz

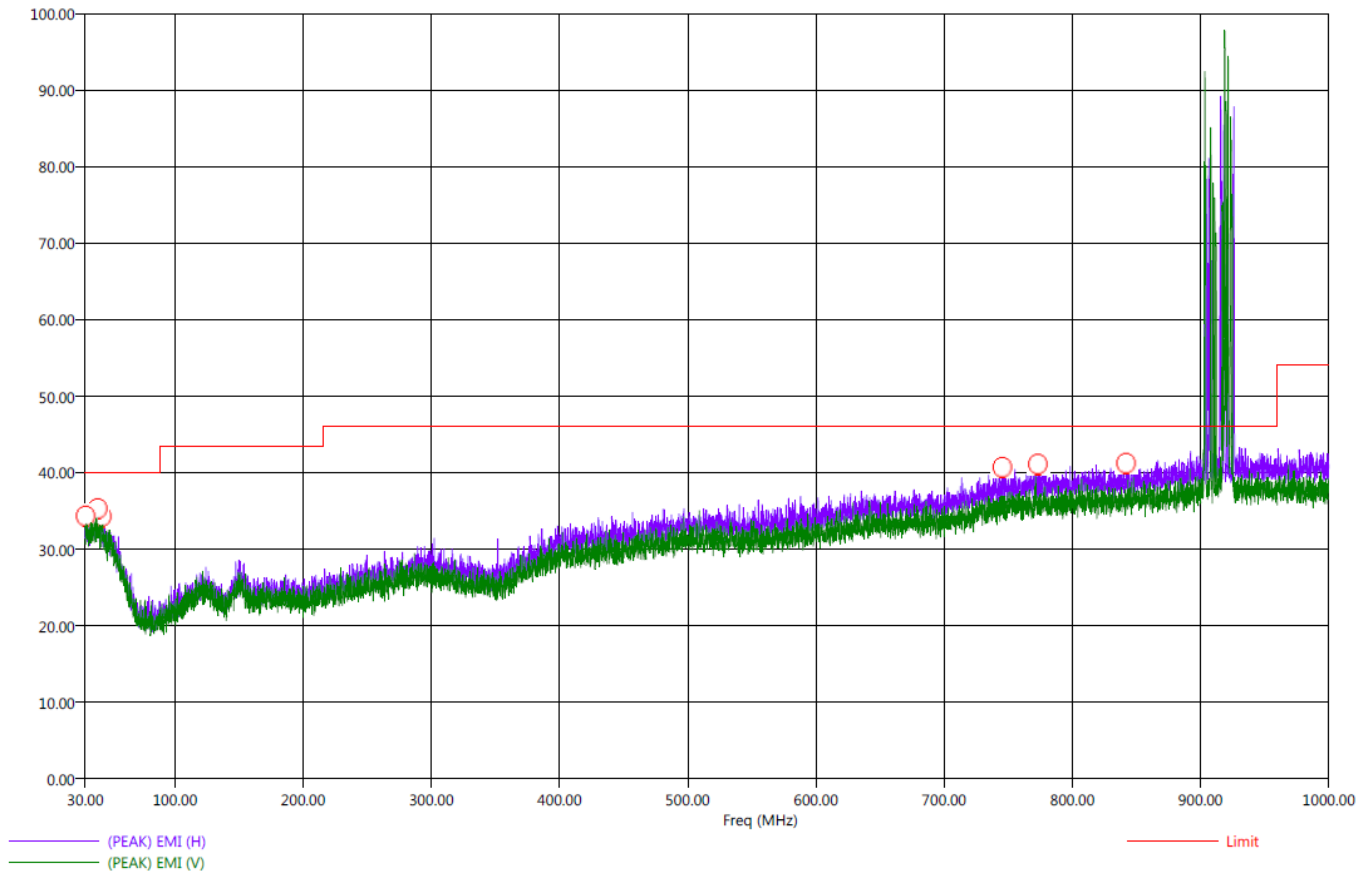
Non Harmonic Emissions from the Tx and Digital Portion - 1 GHz to 9.3 GHz

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
								No Emissions Found for the
								Digital Portion
								from 10 kHz to 30 MHz
								for both Vertical and Horizontal
								Polarizations
								No Non Harmonic Emissions Found
								for the Tx Mode
								from 10 kHz to 30 MHz
								for both Vertical and Horizontal
								Polarizations
								Investigated in the X-Axis, Y-Axis,
								and Z-Axis
								No Emissions Found for the
								Digital Portion
								from 1 GHz to 9.3 GHz
								for both Vertical and Horizontal
								Polarizations
								No Non Harmonic Emissions Found
								for the Tx Mode
								from 1 GHz to 9.3 GHz
								for both Vertical and Horizontal
								Polarizations
								Investigated in the X-Axis, Y-Axis,
								and Z-Axis

Title: Pre-Scan - FCC Class B
File: Agilent - Radiated Pre-Scan 30-1000Mhz - FCC Class B_Module_4_Protocol_A_ANT-916-WRT-RPS_Z-Axis_02-05-2015.set
Operator: Kenneth Lee
EUT Type: Hummingbird MCA
EUT Condition: Continuously Transmitting - Frequency Hopping - Protocol A - Module 4 - Z-Axis - Worst Case
Comments: Customer: Linx Technologies
M/N: HUM-900-PRO-CAS
Note: Antenna - ANT-916-WRT-RPS

2/5/2015 11:16:26 AM
Sequence: Preliminary Scan

FCC Class B

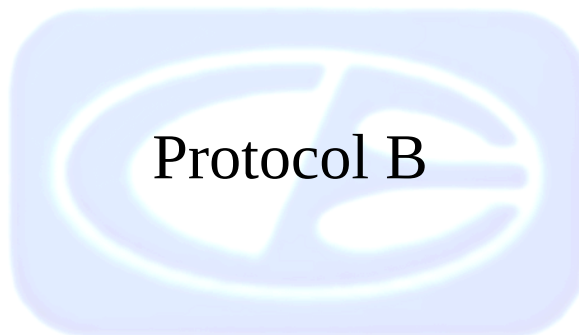
Electric Field Strength (dB μ V/m)

Title: Radiated Final - 30-1000 MHz - FCC Class B
File: Agilent - Radiated Final Scan 30-1000Mhz - FCC Class B_Module_4_Protocol_A_ANT-916-WRT-RPS_Z-Axis_02-05-2015.set
Operator: Kenneth Lee
EUT Type: Hummingbird MCA
EUT Condition: Continuously Transmitting - Frequency Hopping - Protocol A - Module 4 - Z-Axis - Worst Case
Comments: Customer: Linx Technologies
M/N: HUM-900-PRO-CAS
Note: Antenna - ANT-916-WRT-RPS

2/5/2015 11:28:33 AM
Sequence: Final Measurements

Final Scan - FCC Class B

Freq (MHz)	Pol	(PEAK) EMI (dB μ V/m)	(QP) EMI (dB μ V/m)	(PEAK) Margin (dB)	(QP) Margin (dB)	Limit (dB μ V/m)	Transducer (dB)	Cable (dB)	Twr Ht (cm)	Ttbl Agl (deg)
30.30	H	34.69	30.56	-5.31	-9.44	40.00	23.44	0.36	352.56	312.25
39.80	H	35.35	31.32	-4.65	-8.68	40.00	24.19	0.43	175.79	77.25
42.90	H	35.04	30.57	-4.96	-9.43	40.00	23.40	0.45	143.73	173.00
745.40	H	40.24	36.11	-5.76	-9.89	46.00	25.70	2.35	384.38	117.00
773.20	H	40.70	36.58	-5.30	-9.42	46.00	25.90	2.36	208.14	213.50
841.90	H	42.07	37.15	-3.93	-8.85	46.00	26.32	2.50	239.85	252.25



FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-PRO-CAS
Configuration: Protocol B - Module 4
ANT-916-WRT-RPS Antenna

Date: 02/03/2015
Lab: B
Tested By: Kenneth Lee

Low Channel
Transmit Mode - X-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1805.94								N/A - Not in Restricted Band and done via Conducted
2708.91	41.57	V	74	-32.43	Peak	2	160	
2708.91	33.85	V	54	-20.15	Avg	2	160	
3611.88	49.27	V	74	-24.73	Peak	1.35	180	
3611.88	44.27	V	54	-9.73	Avg	1.35	180	
4514.86	43.26	V	74	-30.74	Peak	1.25	35	
4514.86	30.83	V	54	-23.17	Avg	1.25	35	
5417.83	50.87	V	74	-23.13	Peak	1.25	310	
5417.83	41.88	V	54	-12.12	Avg	1.25	310	
6320.8								N/A - Not in Restricted Band and done via Conducted
7223.77								No Emissions Detected
8126.74								No Emissions Detected
9029.71								No Emissions Detected

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-PRO-CAS
Configuration: Protocol B - Module 4
ANT-916-WRT-RPS Antenna

Date: 02/03/2015
Lab: B
Tested By: Kenneth Lee

Low Channel
Transmit Mode - Y-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1805.94								N/A - Not in Restricted Band and done via Conducted
2708.91	42.76	V	74	-31.24	Peak	1	190	
2708.91	35.26	V	54	-18.74	Avg	1	190	
3611.88	46.74	V	74	-27.26	Peak	1.1	215	
3611.88	40.7	V	54	-13.3	Avg	1.1	215	
4514.86	42.47	V	74	-31.53	Peak	1	45	
4514.86	30.11	V	54	-23.89	Avg	1	45	
5417.83	49.92	V	74	-24.08	Peak	2	45	
5417.83	40.41	V	54	-13.59	Avg	2	45	
6320.8								N/A - Not in Restricted Band and done via Conducted
7223.77								No Emissions Detected
8126.74								No Emissions Detected
9029.71								No Emissions Detected

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-PRO-CAS
Configuration: Protocol B - Module 4
ANT-916-WRT-RPS Antenna

Date: 02/03/2015
Lab: B
Tested By: Kenneth Lee

Low Channel
Transmit Mode - Z-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1805.94								N/A - Not in Restricted Band and done via Conducted
2708.91	41.94	V	74	-32.06	Peak	1.5	240	
2708.91	34.68	V	54	-19.32	Avg	1.5	240	
3611.88	50.06	V	74	-23.94	Peak	1.75	190	
3611.88	45.19	V	54	-8.81	Avg	1.75	190	
4514.86	43.87	V	74	-30.13	Peak	1	110	
4514.86	30.74	V	54	-23.26	Avg	1	110	
5417.83	54.75	V	74	-19.25	Peak	1.2	90	
5417.83	48.41	V	54	-5.59	Avg	1.2	90	
6320.8								N/A - Not in Restricted Band and done via Conducted
7223.77								No Emissions Detected
7223.77								
8126.74								No Emissions Detected
8126.74								
9029.71								No Emissions Detected
9029.71								

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-PRO-CAS
Configuration: Protocol B - Module 4
ANT-916-WRT-RPS Antenna

Date: 02/03/2015
Lab: B
Tested By: Kenneth Lee

Low Channel
Transmit Mode - X-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1805.94								N/A - Not in Restricted Band and done via Conducted
2708.91	43.28	H	74	-30.72	Peak	1.35	150	
2708.91	36.2	H	54	-17.8	Avg	1.35	150	
3611.88	50.12	H	74	-23.88	Peak	1.5	220	
3611.88	44.85	H	54	-9.15	Avg	1.5	220	
4514.86	43.07	H	74	-30.93	Peak	1	290	
4514.86	31.02	H	54	-22.98	Avg	1	290	
5417.83	51	H	74	-23	Peak	1	45	
5417.83	41.7	H	54	-12.3	Avg	1	45	
6320.8								N/A - Not in Restricted Band and done via Conducted
7223.77								No Emissions Detected
8126.74								No Emissions Detected
9029.71								No Emissions Detected

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-PRO-CAS
Configuration: Protocol B - Module 4
ANT-916-WRT-RPS Antenna

Date: 02/03/2015
Lab: B
Tested By: Kenneth Lee

Low Channel
Transmit Mode - Y-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1805.94								N/A - Not in Restricted Band and done via Conducted
2708.91	40.92	H	74	-33.08	Peak	1	225	
2708.91	31.38	H	54	-22.62	Avg	1	225	
3611.88	47.8	H	74	-26.2	Peak	1	325	
3611.88	42.12	H	54	-11.88	Avg	1	325	
4514.86	43.11	H	74	-30.89	Peak	2	340	
4514.86	30.14	H	54	-23.86	Avg	2	340	
5417.83	53.48	H	74	-20.52	Peak	2	0	
5417.83	46.94	H	54	-7.06	Avg	2	0	
6320.8								N/A - Not in Restricted Band and done via Conducted
7223.77								No Emissions Detected
8126.74								No Emissions Detected
9029.71								No Emissions Detected

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-PRO-CAS
Configuration: Protocol B - Module 4
ANT-916-WRT-RPS Antenna

Date: 02/03/2015
Lab: B
Tested By: Kenneth Lee

Low Channel
Transmit Mode - Z-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1805.94								N/A - Not in Restricted Band and done via Conducted
2708.91	42.25	H	74	-31.75	Peak	1.35	170	
2708.91	34.96	H	54	-19.04	Avg	1.35	170	
3611.88	50.44	H	74	-23.56	Peak	1.75	190	
3611.88	46.18	H	54	-7.82	Avg	1.75	190	
4514.86	42.87	H	74	-31.13	Peak	2	195	
4514.86	32.16	H	54	-21.84	Avg	2	195	
5417.83	52.05	H	74	-21.95	Peak	1.25	180	
5417.83	43.55	H	54	-10.45	Avg	1.25	180	
6320.8								N/A - Not in Restricted Band and done via Conducted
7223.77								No Emissions Detected
8126.74								No Emissions Detected
9029.71								No Emissions Detected

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-PRO-CAS
Configuration: Protocol B - Module 4
ANT-916-WRT-RPS Antenna

Date: 02/03/2015
Lab: B
Tested By: Kenneth Lee

Middle Channel
Transmit Mode - X-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1830								N/A - Not in Restricted Band and done via Conducted
2745	39.83	V	74	-34.17	Peak	1.25	310	
2745	29.05	V	54	-24.95	Avg	1.25	310	
3660	47.06	V	74	-26.94	Peak	1.15	0	
3660	40.72	V	54	-13.28	Avg	1.15	0	
4575	44.6	V	74	-29.4	Peak	1.25	330	
4575	32.41	V	54	-21.59	Avg	1.25	330	
5490	52.96	V	74	-21.04	Peak	1.5	180	
5490	45.31	V	54	-8.69	Avg	1.5	180	
6405								N/A - Not in Restricted Band and done via Conducted
7320								No Emissions Detected
8235								No Emissions Detected
9150								No Emissions Detected

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-PRO-CAS
Configuration: Protocol B - Module 4
ANT-916-WRT-RPS Antenna

Date: 02/03/2015
Lab: B
Tested By: Kenneth Lee

**Middle Channel
Transmit Mode - Y-Axis**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1830								N/A - Not in Restricted Band and done via Conducted
2745	41.42	V	74	-32.58	Peak	2	160	
2745	31.94	V	54	-22.06	Avg	2	160	
3660	46.26	V	74	-27.74	Peak	1.85	300	
3660	39.35	V	54	-14.65	Avg	1.85	300	
4575	43.66	V	74	-30.34	Peak	1.35	180	
4575	31.03	V	54	-22.97	Avg	1.35	180	
5490	50.22	V	74	-23.78	Peak	1.15	55	
5490	40.59	V	54	-13.41	Avg	1.15	55	
6405								N/A - Not in Restricted Band and done via Conducted
7320								No Emissions Detected
8235								No Emissions Detected
9150								No Emissions Detected

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-PRO-CAS
Configuration: Protocol B - Module 4
ANT-916-WRT-RPS Antenna

Date: 02/03/2015
Lab: B
Tested By: Kenneth Lee

Middle Channel
Transmit Mode - Z-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1830								N/A - Not in Restricted Band and done via Conducted
2745	41.28	V	74	-32.72	Peak	1.25	310	
2745	32.71	V	54	-21.29	Avg	1.25	310	
3660	49.31	V	74	-24.69	Peak	1.3	170	
3660	44.46	V	54	-9.54	Avg	1.3	170	
4575	43.6	V	74	-30.4	Peak	1.4	30	
4575	33.04	V	54	-20.96	Avg	1.4	30	
5490	52.69	V	74	-21.31	Peak	1.1	150	
5490	44.99	V	54	-9.01	Avg	1.1	150	
6405								N/A - Not in Restricted Band and done via Conducted
7320								No Emissions Detected
8235								No Emissions Detected
9150								No Emissions Detected

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-PRO-CAS
Configuration: Protocol B - Module 4
ANT-916-WRT-RPS Antenna

Date: 02/03/2015
Lab: B
Tested By: Kenneth Lee

Middle Channel
Transmit Mode - X-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1830								N/A - Not in Restricted Band and done via Conducted
2745	40.84	H	74	-33.16	Peak	1.4	150	
2745	29.54	H	54	-24.46	Avg	1.4	150	
3660	46.67	H	74	-27.33	Peak	1.1	155	
3660	40.01	H	54	-13.99	Avg	1.1	155	
4575	45.19	H	74	-28.81	Peak	1.3	320	
4575	34.38	H	54	-19.62	Avg	1.3	320	
5490	51.52	H	74	-22.48	Peak	1.25	200	
5490	43	H	54	-11	Avg	1.25	200	
6405								N/A - Not in Restricted Band and done via Conducted
7320								No Emissions Detected
8235								No Emissions Detected
9150								No Emissions Detected

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-PRO-CAS
Configuration: Protocol B - Module 4
ANT-916-WRT-RPS Antenna

Date: 02/03/2015
Lab: B
Tested By: Kenneth Lee

Middle Channel
Transmit Mode - Y-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1830								N/A - Not in Restricted Band and done via Conducted
2745	40.44	H	74	-33.56	Peak	2.1	155	
2745	28.49	H	54	-25.51	Avg	2.1	155	
3660	45.36	H	74	-28.64	Peak	1.45	240	
3660	37.59	H	54	-16.41	Avg	1.45	240	
4575	44.43	H	74	-29.57	Peak	1.25	0	
4575	33.19	H	54	-20.81	Avg	1.25	0	
5490	53.35	H	74	-20.65	Peak	2	15	
5490	46.2	H	54	-7.8	Avg	2	15	
6405								N/A - Not in Restricted Band and done via Conducted
7320								No Emissions Detected
8235								No Emissions Detected
9150								No Emissions Detected

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-PRO-CAS
Configuration: Protocol B - Module 4
ANT-916-WRT-RPS Antenna

Date: 02/03/2015
Lab: B
Tested By: Kenneth Lee

Middle Channel
Transmit Mode - Z-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1830								N/A - Not in Restricted Band and done via Conducted
2745	41.7	H	74	-32.3	Peak	2.25	280	
2745	32.66	H	54	-21.34	Avg	2.25	280	
3660	46.92	H	74	-27.08	Peak	2	45	
3660	40.57	H	54	-13.43	Avg	2	45	
4575	44.99	H	74	-29.01	Peak	1.75	190	
4575	33.94	H	54	-20.06	Avg	1.75	190	
5490	52.25	H	74	-21.75	Peak	1	180	
5490	43.49	H	54	-10.51	Avg	1	180	
6405								N/A - Not in Restricted Band and done via Conducted
7320								No Emissions Detected
8235								No Emissions Detected
9150								No Emissions Detected

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-PRO-CAS
Configuration: Protocol B - Module 4
ANT-916-WRT-RPS Antenna

Date: 02/03/2015
Lab: B
Tested By: Kenneth Lee

**High Channel
Transmit Mode - X-Axis**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1852.55								N/A - Not in Restricted Band and done via Conducted
2778.83	40.55	V	74	-33.45	Peak	1.75	165	
2778.83	30.88	V	54	-23.12	Avg	1.75	165	
3705.1	49.2	V	74	-24.8	Peak	2.25	345	
3705.1	44.16	V	54	-9.84	Avg	2.25	345	
4631.4	44.08	V	74	-29.92	Peak	1.8	30	
4631.4	33.11	V	54	-20.89	Avg	1.8	30	
5557.66	51.92	V	74	-22.08	Peak	1.25	180	
5557.66	43.09	V	54	-10.91	Avg	1.25	180	
6483.9								N/A - Not in Restricted Band and done via Conducted
6483.9								
7410.2								No Emissions Detected
7410.2								
8336.5								No Emissions Detected
8336.5								
9262.8								No Emissions Detected
9262.8								

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-PRO-CAS
Configuration: Protocol B - Module 4
ANT-916-WRT-RPS Antenna

Date: 02/03/2015
Lab: B
Tested By: Kenneth Lee

**High Channel
Transmit Mode - Y-Axis**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1852.55								N/A - Not in Restricted Band and done via Conducted
2778.83	41.18	V	74	-32.82	Peak	1.5	220	
2778.83	29.95	V	54	-24.05	Avg	1.5	220	
3705.1	47.84	V	74	-26.16	Peak	1.25	235	
3705.1	41.77	V	54	-12.23	Avg	1.25	235	
4631.4	44.23	V	74	-29.77	Peak	1.1	45	
4631.4	31.27	V	54	-22.73	Avg	1.1	45	
5557.66	52.42	V	74	-21.58	Peak	1.75	335	
5557.66	44.63	V	54	-9.37	Avg	1.75	335	
6483.9								N/A - Not in Restricted Band and done via Conducted
6483.9								
7410.2								No Emissions Detected
7410.2								
8336.5								No Emissions Detected
8336.5								
9262.8								No Emissions Detected
9262.8								

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-PRO-CAS
Configuration: Protocol B - Module 4
ANT-916-WRT-RPS Antenna

Date: 02/03/2015
Lab: B
Tested By: Kenneth Lee

**High Channel
Transmit Mode - Z-Axis**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1852.55								N/A - Not in Restricted Band and done via Conducted
2778.83	41.28	V	74	-32.72	Peak	1	240	
2778.83	30.99	V	54	-23.01	Avg	1	240	
3705.1	47.16	V	74	-26.84	Peak	1.5	250	
3705.1	41.08	V	54	-12.92	Avg	1.5	250	
4631.4	44.74	V	74	-29.26	Peak	1.1	45	
4631.4	32.9	V	54	-21.1	Avg	1.1	45	
5557.66	53.64	V	74	-20.36	Peak	1.25	45	
5557.66	44.44	V	54	-9.56	Avg	1.25	45	
6483.9								N/A - Not in Restricted Band and done via Conducted
6483.9								
7410.2								No Emissions Detected
7410.2								
8336.5								No Emissions Detected
8336.5								
9262.8								No Emissions Detected
9262.8								

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-PRO-CAS
Configuration: Protocol B - Module 4
ANT-916-WRT-RPS Antenna

Date: 02/03/2015
Lab: B
Tested By: Kenneth Lee

**High Channel
Transmit Mode - X-Axis**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1852.55								N/A - Not in Restricted Band and done via Conducted
2778.83	41.45	H	74	-32.55	Peak	1.25	20	
2778.83	30.46	H	54	-23.54	Avg	1.25	20	
3705.1	49.91	H	74	-24.09	Peak	1.75	340	
3705.1	44.9	H	54	-9.1	Avg	1.75	340	
4631.4	44.38	H	74	-29.62	Peak	1	45	
4631.4	32.93	H	54	-21.07	Avg	1	45	
5557.66	50.34	H	74	-23.66	Peak	1.35	190	
5557.66	40.02	H	54	-13.98	Avg	1.35	190	
6483.9								N/A - Not in Restricted Band and done via Conducted
6483.9								
7410.2								No Emissions Detected
7410.2								
8336.5								No Emissions Detected
8336.5								
9262.8								No Emissions Detected
9262.8								

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-PRO-CAS
Configuration: Protocol B - Module 4
ANT-916-WRT-RPS Antenna

Date: 02/03/2015
Lab: B
Tested By: Kenneth Lee

**High Channel
Transmit Mode - Y-Axis**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1852.55								N/A - Not in Restricted Band and done via Conducted
2778.83	40.32	H	74	-33.68	Peak	1.25	330	
2778.83	27.61	H	54	-26.39	Avg	1.25	330	
3705.1	47.89	H	74	-26.11	Peak	1.25	120	
3705.1	42	H	54	-12	Avg	1.25	120	
4631.4	44.69	H	74	-29.31	Peak	1.35	15	
4631.4	33.63	H	54	-20.37	Avg	1.35	15	
5557.66	51.59	H	74	-22.41	Peak	1.5	30	
5557.66	43.09	H	54	-10.91	Avg	1.5	30	
6483.9								N/A - Not in Restricted Band and done via Conducted
6483.9								
7410.2								No Emissions Detected
7410.2								
8336.5								No Emissions Detected
8336.5								
9262.8								No Emissions Detected
9262.8								

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-PRO-CAS
Configuration: Protocol B - Module 4
ANT-916-WRT-RPS Antenna

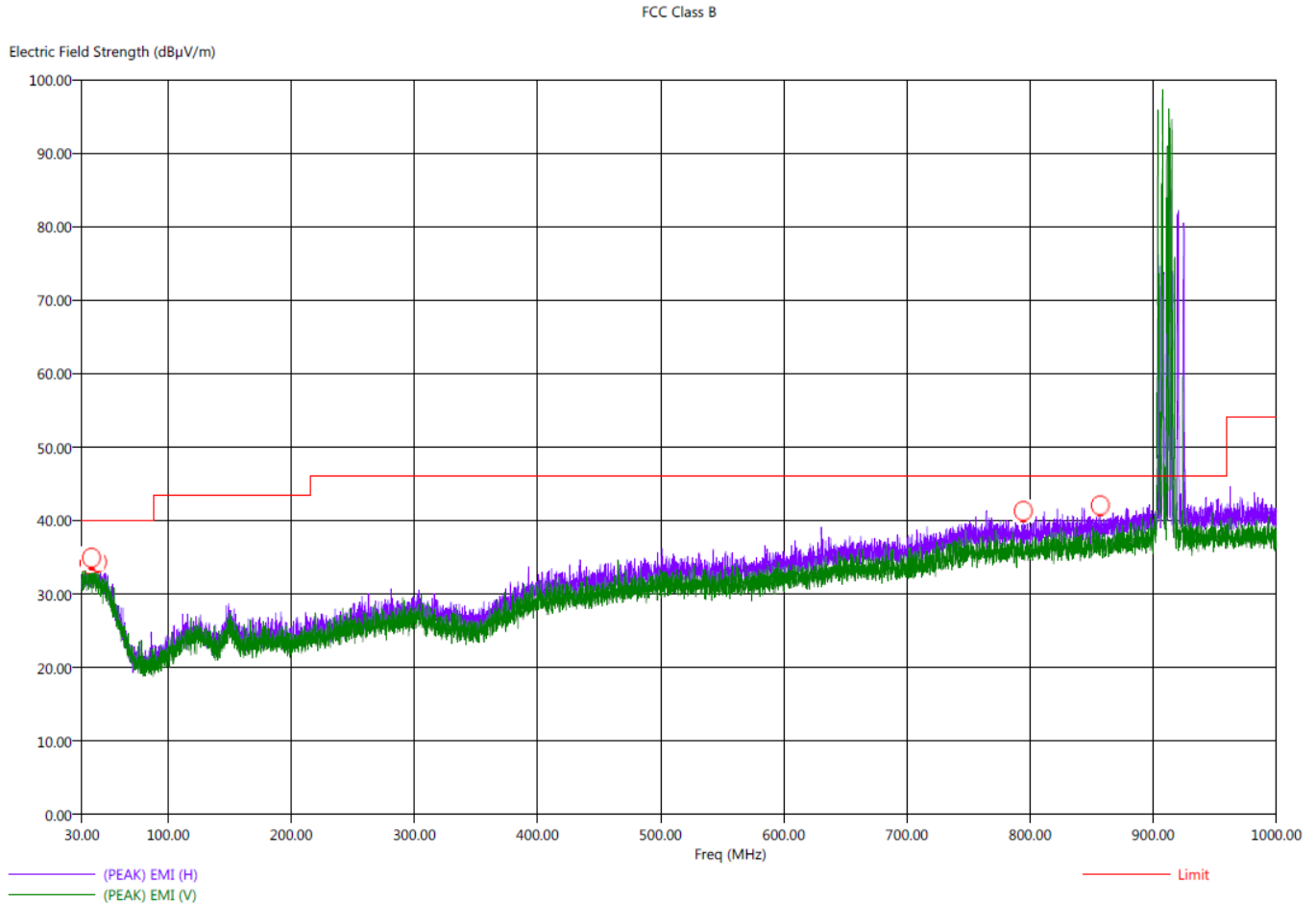
Date: 02/03/2015
Lab: B
Tested By: Kenneth Lee

**High Channel
Transmit Mode - Z-Axis**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1852.55								N/A - Not in Restricted Band and done via Conducted
2778.83	41.83	H	74	-32.17	Peak	1.25	170	
2778.83	30.68	H	54	-23.32	Avg	1.25	170	
3705.1	50.1	H	74	-23.9	Peak	1.15	180	
3705.1	45.09	H	54	-8.91	Avg	1.15	180	
4631.4	44.34	H	74	-29.66	Peak	1	45	
4631.4	31.89	H	54	-22.11	Avg	1	45	
5557.66	52.31	H	74	-21.69	Peak	1.25	180	
5557.66	43.91	H	54	-10.09	Avg	1.25	180	
6483.9								N/A - Not in Restricted Band and done via Conducted
6483.9								
7410.2								No Emissions Detected
7410.2								
8336.5								No Emissions Detected
8336.5								
9262.8								No Emissions Detected
9262.8								

Title: Pre-Scan - FCC Class B
File: Agilent - Radiated Pre-Scan 30-1000Mhz - FCC Class B_Module_4_Protocol_B_ANT-916-WRT-RPS_X-Axis_02-05-2015.set
Operator: Kenneth Lee
EUT Type: Hummingbird MCA
EUT Condition: Continuously Transmitting - Frequency Hopping - Protocol B - Module 4 - X-Axis - Worst Case
Comments: Customer: Linx Technologies
M/N: HUM-900-PRO-CAS
Note: Antenna - ANT-916-WRT-RPS

2/5/2015 12:07:14 PM
Sequence: Preliminary Scan

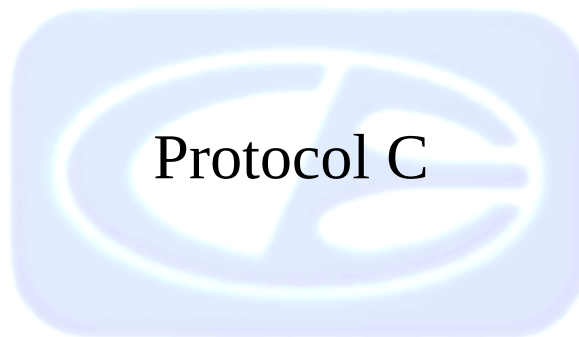


Title: Radiated Final - 30-1000 MHz - FCC Class B
File: Agilent - Radiated Final Scan 30-1000Mhz - FCC Class B_Module_4_Protocol_B_ANT-916-WRT-RPS_X-Axis_02-05-2015.set
Operator: Kenneth Lee
EUT Type: Hummingbird MCA
EUT Condition: Continuously Transmitting - Frequency Hopping - Protocol B - Module 4 - X-Axis - Worst Case
Comments: Customer: Linx Technologies
M/N: HUM-900-PRO-CAS
Note: Antenna - ANT-916-WRT-RPS

2/5/2015 12:19:02 PM
Sequence: Final Measurements

Final Scan - FCC Class B

Freq (MHz)	Pol	(PEAK) EMI (dB μ V/m)	(QP) EMI (dB μ V/m)	(PEAK) Margin (dB)	(QP) Margin (dB)	Limit (dB μ V/m)	Transducer (dB)	Cable (dB)	Twr Ht (cm)	Ttbl Agl (deg)
35.80	H	35.11	31.00	-4.89	-9.00	40.00	23.83	0.40	207.85	227.25
37.90	V	35.65	31.20	-4.35	-8.80	40.00	24.00	0.42	207.79	8.00
38.60	V	35.24	31.15	-4.76	-8.85	40.00	24.01	0.42	191.43	72.00
42.80	V	34.80	30.51	-5.20	-9.49	40.00	23.35	0.45	271.25	332.75
794.50	H	40.94	36.64	-5.06	-9.36	46.00	25.90	2.37	239.79	6.75
857.00	H	41.17	37.44	-4.83	-8.56	46.00	26.49	2.54	175.61	222.25



FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-RC-CAS
Configuration: Protocol C - Module 4
ANT-916-WRT-RPS

Date: 02/03/2015
Lab: B
Tested By: Kenneth Lee

Low Channel
Transmit Mode - X-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1805.5								N/A - Not in Restricted Band and done via Conducted
2708.25	40.32	V	74	-33.68	Peak	1.15	340	
2708.25	25.94	V	54	-28.06	Avg	1.15	340	
3611	45.23	V	74	-28.77	Peak	1.75	340	
3611	30.88	V	54	-23.12	Avg	1.75	340	
4513.75	43.16	V	74	-30.84	Peak	1.25	0	
4513.75	28.78	V	54	-25.22	Avg	1.25	0	
5416.5	48.68	V	74	-25.32	Peak	2	90	
5416.5	34.46	V	54	-19.54	Avg	2	90	
6319.25								N/A - Not in Restricted Band and done via Conducted
7222								No Emissions Detected
8124.75								No Emissions Detected
9027.5								No Emissions Detected

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-RC-CAS
Configuration: Protocol C - Module 4
ANT-916-WRT-RPS

Date: 02/03/2015
Lab: B
Tested By: Kenneth Lee

Low Channel
Transmit Mode - Y-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1805.5								N/A - Not in Restricted Band and done via Conducted
2708.25	42.13	V	74	-31.87	Peak	1	200	
2708.25	27.84	V	54	-26.16	Avg	1	200	
3611	43.69	V	74	-30.31	Peak	1	160	
3611	29.4	V	54	-24.6	Avg	1	160	
4513.75	41.6	V	74	-32.4	Peak	1.1	230	
4513.75	28.38	V	54	-25.62	Avg	1.1	230	
5416.5	46.76	V	74	-27.24	Peak	1.5	0	
5416.5	32.75	V	54	-21.25	Avg	1.5	0	
6319.25								N/A - Not in Restricted Band and done via Conducted
7222								No Emissions Detected
8124.75								No Emissions Detected
9027.5								No Emissions Detected

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-RC-CAS
Configuration: Protocol C - Module 4
ANT-916-WRT-RPS

Date: 02/03/2015
Lab: B
Tested By: Kenneth Lee

Low Channel
Transmit Mode - Z-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1805.5								N/A - Not in Restricted Band and done via Conducted
2708.25	41.68	V	74	-32.32	Peak	1	110	
2708.25	27.78	V	54	-26.22	Avg	1	110	
3611	45.26	V	74	-28.74	Peak	1.25	90	
3611	30.92	V	54	-23.08	Avg	1.25	90	
4513.75	43.59	V	74	-30.41	Peak	1.1	90	
4513.75	29.49	V	54	-24.51	Avg	1.1	90	
5416.5	50.57	V	74	-23.43	Peak	1.2	60	
5416.5	35.62	V	54	-18.38	Avg	1.2	60	
6319.25								N/A - Not in Restricted Band and done via Conducted
7222								No Emissions Detected
8124.75								No Emissions Detected
9027.5								No Emissions Detected

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-RC-CAS
Configuration: Protocol C - Module 4
ANT-916-WRT-RPS

Date: 02/03/2015
Lab: B
Tested By: Kenneth Lee

Low Channel
Transmit Mode - X-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1805.5								N/A - Not in Restricted Band and done via Conducted
2708.25	42.77	H	74	-31.23	Peak	1.5	170	
2708.25	28.39	H	54	-25.61	Avg	1.5	170	
3611	46.22	H	74	-27.78	Peak	1.5	180	
3611	31.12	H	54	-22.88	Avg	1.5	180	
4513.75	42.94	H	74	-31.06	Peak	1	230	
4513.75	28.64	H	54	-25.36	Avg	1	230	
5416.5	49.15	H	74	-24.85	Peak	1.25	340	
5416.5	34.9	H	54	-19.1	Avg	1.25	340	
6319.25								N/A - Not in Restricted Band and done via Conducted
7222								No Emissions Detected
8124.75								No Emissions Detected
9027.5								No Emissions Detected

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-RC-CAS
Configuration: Protocol C - Module 4
ANT-916-WRT-RPS

Date: 02/03/2015
Lab: B
Tested By: Kenneth Lee

Low Channel
Transmit Mode - Y-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1805.5								N/A - Not in Restricted Band and done via Conducted
2708.25	40.18	H	74	-33.82	Peak	1	250	
2708.25	26.92	H	54	-27.08	Avg	1	250	
3611	45.53	H	74	-28.47	Peak	1.25	330	
3611	30.9	H	54	-23.1	Avg	1.25	330	
4513.75	43.52	H	74	-30.48	Peak	1.1	310	
4513.75	28.93	H	54	-25.07	Avg	1.1	310	
5416.5	49.98	H	74	-24.02	Peak	1.5	350	
5416.5	37.15	H	54	-16.85	Avg	1.5	350	
6319.25								N/A - Not in Restricted Band and done via Conducted
7222								No Emissions Detected
8124.75								No Emissions Detected
9027.5								No Emissions Detected

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-RC-CAS
Configuration: Protocol C - Module 4
ANT-916-WRT-RPS

Date: 02/03/2015
Lab: B
Tested By: Kenneth Lee

Low Channel
Transmit Mode - Z-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1805.5								N/A - Not in Restricted Band and done via Conducted
2708.25	41.54	H	74	-32.46	Peak	1	180	
2708.25	27.18	H	54	-26.82	Avg	1	180	
3611	45.46	H	74	-28.54	Peak	1.25	180	
3611	31.12	H	54	-22.88	Avg	1.25	180	
4513.75	42.79	H	74	-31.21	Peak	1.1	210	
4513.75	28.78	H	54	-25.22	Avg	1.1	210	
5416.5	49.51	H	74	-24.49	Peak	1.1	180	
5416.5	34.89	H	54	-19.11	Avg	1.1	180	
6319.25								N/A - Not in Restricted Band and done via Conducted
7222								No Emissions Detected
8124.75								No Emissions Detected
9027.5								No Emissions Detected

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-RC-CAS
Configuration: Protocol C - Module 4
ANT-916-WRT-RPS

Date: 02/03/2015
Lab: B
Tested By: Kenneth Lee

Middle Channel
Transmit Mode - X-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1817.5								N/A - Not in Restricted Band and done via Conducted
2726.25	42.22	V	74	-31.78	Peak	1.5	180	
2726.25	27.64	V	54	-26.36	Avg	1.5	180	
3635	45.31	V	74	-28.69	Peak	1	180	
3635	33.45	V	54	-20.55	Avg	1	180	
4543.75	43.33	V	74	-30.67	Peak	1.1	210	
4543.75	27.64	V	54	-26.36	Avg	1.1	210	
5452.49	50.18	V	74	-23.82	Peak	1.25	200	
5452.49	38.23	V	54	-15.77	Avg	1.25	200	
6361.24								N/A - Not in Restricted Band and done via Conducted
7269.99								No Emissions Detected
8178.74								No Emissions Detected
9087.49								No Emissions Detected

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-RC-CAS
Configuration: Protocol C - Module 4
ANT-916-WRT-RPS

Date: 02/03/2015
Lab: B
Tested By: Kenneth Lee

Middle Channel
Transmit Mode - Y-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1817.5								N/A - Not in Restricted Band and done via Conducted
2726.25	42.22	V	74	-31.78	Peak	1.5	310	
2726.25	27.16	V	54	-26.84	Avg	1.5	310	
3635	46.13	V	74	-27.87	Peak	1.75	260	
3635	31.06	V	54	-22.94	Avg	1.75	260	
4543.75	41.98	V	74	-32.02	Peak	1.75	210	
4543.75	29.48	V	54	-24.52	Avg	1.75	210	
5452.49	48.1	V	74	-25.9	Peak	2	245	
5452.49	33.18	V	54	-20.82	Avg	2	245	
6361.24								N/A - Not in Restricted Band and done via Conducted
7269.99								No Emissions Detected
8178.74								No Emissions Detected
9087.49								No Emissions Detected

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-RC-CAS
Configuration: Protocol C - Module 4
ANT-916-WRT-RPS

Date: 02/03/2015
Lab: B
Tested By: Kenneth Lee

Middle Channel
Transmit Mode - Z-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1817.5								N/A - Not in Restricted Band and done via Conducted
2726.25	43.05	V	74	-30.95	Peak	1	210	
2726.25	28.45	V	54	-25.55	Avg	1	210	
3635	46.87	V	74	-27.13	Peak	1.5	200	
3635	32.04	V	54	-21.96	Avg	1.5	200	
4543.75	41.79	V	74	-32.21	Peak	1.5	180	
4543.75	30.02	V	54	-23.98	Avg	1.5	180	
5452.49	50.24	V	74	-23.76	Peak	1.25	180	
5452.49	39.86	V	54	-14.14	Avg	1.25	180	
6361.24								N/A - Not in Restricted Band and done via Conducted
7269.99								No Emissions Detected
8178.74								No Emissions Detected
9087.49								No Emissions Detected

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-RC-CAS
Configuration: Protocol C - Module 4
ANT-916-WRT-RPS

Date: 02/03/2015
Lab: B
Tested By: Kenneth Lee

Middle Channel
Transmit Mode - X-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1817.5								N/A - Not in Restricted Band and done via Conducted
2726.25	42.96	H	74	-31.04	Peak	1.5	160	
2726.25	28.18	H	54	-25.82	Avg	1.5	160	
3635	45.99	H	74	-28.01	Peak	1.5	180	
3635	31.06	H	54	-22.94	Avg	1.5	180	
4543.75	44.12	H	74	-29.88	Peak	1.75	200	
4543.75	30.15	H	54	-23.85	Avg	1.75	200	
5452.49	50.49	H	74	-23.51	Peak	1.1	210	
5452.49	35.21	H	54	-18.79	Avg	1.1	210	
6361.24								N/A - Not in Restricted Band and done via Conducted
7269.99								No Emissions Detected
8178.74								No Emissions Detected
9087.49								No Emissions Detected

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-RC-CAS
Configuration: Protocol C - Module 4
ANT-916-WRT-RPS

Date: 02/03/2015
Lab: B
Tested By: Kenneth Lee

Middle Channel
Transmit Mode - Y-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1817.5								N/A - Not in Restricted Band and done via Conducted
2726.25	41.67	H	74	-32.33	Peak	1.5	180	
2726.25	27.96	H	54	-26.04	Avg	1.5	180	
3635	46.35	H	74	-27.65	Peak	1.5	190	
3635	31.45	H	54	-22.55	Avg	1.5	190	
4543.75	43.76	H	74	-30.24	Peak	1.25	230	
4543.75	29.13	H	54	-24.87	Avg	1.25	230	
5452.49	50.33	H	74	-23.67	Peak	1	180	
5452.49	37.04	H	54	-16.96	Avg	1	180	
6361.24								N/A - Not in Restricted Band and done via Conducted
7269.99								No Emissions Detected
8178.74								No Emissions Detected
9087.49								No Emissions Detected

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-RC-CAS
Configuration: Protocol C - Module 4
ANT-916-WRT-RPS

Date: 02/03/2015
Lab: B
Tested By: Kenneth Lee

Middle Channel
Transmit Mode - Z-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1817.5								N/A - Not in Restricted Band and done via Conducted
2726.25	41.41	H	74	-32.59	Peak	1.15	180	
2726.25	26.98	H	54	-27.02	Avg	1.15	180	
3635	45.07	H	74	-28.93	Peak	1.15	250	
3635	28.89	H	54	-25.11	Avg	1.15	250	
4543.75	42.82	H	74	-31.18	Peak	1.75	210	
4543.75	27.18	H	54	-26.82	Avg	1.75	210	
5452.49	50.02	H	74	-23.98	Peak	1.1	210	
5452.49	37.48	H	54	-16.52	Avg	1.1	210	
6361.24								N/A - Not in Restricted Band and done via Conducted
7269.99								No Emissions Detected
8178.74								No Emissions Detected
9087.49								No Emissions Detected

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-RC-CAS
Configuration: Protocol C - Module 4
ANT-916-WRT-RPS

Date: 02/03/2015
Lab: B
Tested By: Kenneth Lee

**High Channel
Transmit Mode - X-Axis**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1829.49								N/A - Not in Restricted Band and done via Conducted
2744.24	44.26	V	74	-29.74	Peak	1.5	180	
2744.24	30.45	V	54	-23.55	Avg	1.5	180	
3658.99	50.09	V	74	-23.91	Peak	1.75	210	
3658.99	34.2	V	54	-19.8	Avg	1.75	210	
4573.74	42.98	V	74	-31.02	Peak	2	180	
4573.74	29.03	V	54	-24.97	Avg	2	180	
5488.48	49.22	V	74	-24.78	Peak	1.75	160	
5488.48	33.79	V	54	-20.21	Avg	1.75	160	
6403.23								N/A - Not in Restricted Band and done via Conducted
7317.98								No Emissions Detected
8232.72								No Emissions Detected
9147.47								No Emissions Detected

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-RC-CAS
Configuration: Protocol C - Module 4
ANT-916-WRT-RPS

Date: 02/03/2015
Lab: B
Tested By: Kenneth Lee

**High Channel
Transmit Mode - Y-Axis**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1829.49								N/A - Not in Restricted Band and done via Conducted
2744.24	41.05	V	74	-32.95	Peak	1.25	60	
2744.24	26.87	V	54	-27.13	Avg	1.25	60	
3658.99	44.78	V	74	-29.22	Peak	1.1	90	
3658.99	29.66	V	54	-24.34	Avg	1.1	90	
4573.74	43.12	V	74	-30.88	Peak	1	90	
4573.74	28.77	V	54	-25.23	Avg	1	90	
5488.48	49.51	V	74	-24.49	Peak	1.15	45	
5488.48	38.45	V	54	-15.55	Avg	1.15	45	
6403.23								N/A - Not in Restricted Band and done via Conducted
7317.98								No Emissions Detected
8232.72								No Emissions Detected
9147.47								No Emissions Detected

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-RC-CAS
Configuration: Protocol C - Module 4
ANT-916-WRT-RPS

Date: 02/03/2015
Lab: B
Tested By: Kenneth Lee

**High Channel
Transmit Mode - Z-Axis**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1829.49								N/A - Not in Restricted Band and done via Conducted
2744.24	42.16	V	74	-31.84	Peak	1.5	200	
2744.24	28.07	V	54	-25.93	Avg	1.5	200	
3658.99	46.76	V	74	-27.24	Peak	2	210	
3658.99	32.09	V	54	-21.91	Avg	2	210	
4573.74	43.35	V	74	-30.65	Peak	1.75	180	
4573.74	29.26	V	54	-24.74	Avg	1.75	180	
5488.48	49.4	V	74	-24.6	Peak	2	210	
5488.48	35.14	V	54	-18.86	Avg	2	210	
6403.23								N/A - Not in Restricted Band and done via Conducted
7317.98								No Emissions Detected
7317.98								
8232.72								No Emissions Detected
8232.72								
9147.47								No Emissions Detected
9147.47								

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-RC-CAS
Configuration: Protocol C - Module 4
ANT-916-WRT-RPS

Date: 02/03/2015
Lab: B
Tested By: Kenneth Lee

**High Channel
Transmit Mode - X-Axis**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1829.49								N/A - Not in Restricted Band and done via Conducted
2744.24	41.78	H	74	-32.22	Peak	1.25	160	
2744.24	27.63	H	54	-26.37	Avg	1.25	160	
3658.99	44.08	H	74	-29.92	Peak	1.75	160	
3658.99	29.99	H	54	-24.01	Avg	1.75	160	
4573.74	44.48	H	74	-29.52	Peak	2.25	140	
4573.74	29.88	H	54	-24.12	Avg	2.25	140	
5488.48	48.49	H	74	-25.51	Peak	2.75	230	
5488.48	34.57	H	54	-19.43	Avg	2.75	230	
6403.23								N/A - Not in Restricted Band and done via Conducted
7317.98								No Emissions Detected
8232.72								No Emissions Detected
9147.47								No Emissions Detected

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-RC-CAS
Configuration: Protocol C - Module 4
ANT-916-WRT-RPS

Date: 02/03/2015
Lab: B
Tested By: Kenneth Lee

**High Channel
Transmit Mode - Y-Axis**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1829.49								N/A - Not in Restricted Band and done via Conducted
2744.24	42.54	H	74	-31.46	Peak	1.25	30	
2744.24	28.02	H	54	-25.98	Avg	1.25	30	
3658.99	43.67	H	74	-30.33	Peak	1.25	60	
3658.99	28.78	H	54	-25.22	Avg	1.25	60	
4573.74	42.88	H	74	-31.12	Peak	1.35	350	
4573.74	31.1	H	54	-22.9	Avg	1.35	350	
5488.48	49.97	H	74	-24.03	Peak	1.5	20	
5488.48	35.64	H	54	-18.36	Avg	1.5	20	
6403.23								N/A - Not in Restricted Band and done via Conducted
7317.98								No Emissions Detected
8232.72								No Emissions Detected
9147.47								No Emissions Detected

FCC 15.247

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-RC-CAS
Configuration: Protocol C - Module 4
ANT-916-WRT-RPS

Date: 02/03/2015
Lab: B
Tested By: Kenneth Lee

**High Channel
Transmit Mode - Z-Axis**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1829.49								N/A - Not in Restricted Band and done via Conducted
2744.24	45.03	H	74	-28.97	Peak	1	180	
2744.24	29.13	H	54	-24.87	Avg	1	180	
3658.99	50.21	H	74	-23.79	Peak	1.25	160	
3658.99	33.28	H	54	-20.72	Avg	1.25	160	
4573.74	43.77	H	74	-30.23	Peak	1	160	
4573.74	29.58	H	54	-24.42	Avg	1	160	
5488.48	50.09	H	74	-23.91	Peak	1	210	
5488.48	35.46	H	54	-18.54	Avg	1	210	
6403.23								N/A - Not in Restricted Band and done via Conducted
7317.98								No Emissions Detected
8232.72								No Emissions Detected
9147.47								No Emissions Detected

FCC 15.247 and FCC Class B

Linx Technologies
Hummingbird MCA Module
Model: HUM-900-RC-CAS
Configuration: Protocol C - Module 4
ANT-916-WRT-RPS Antenna

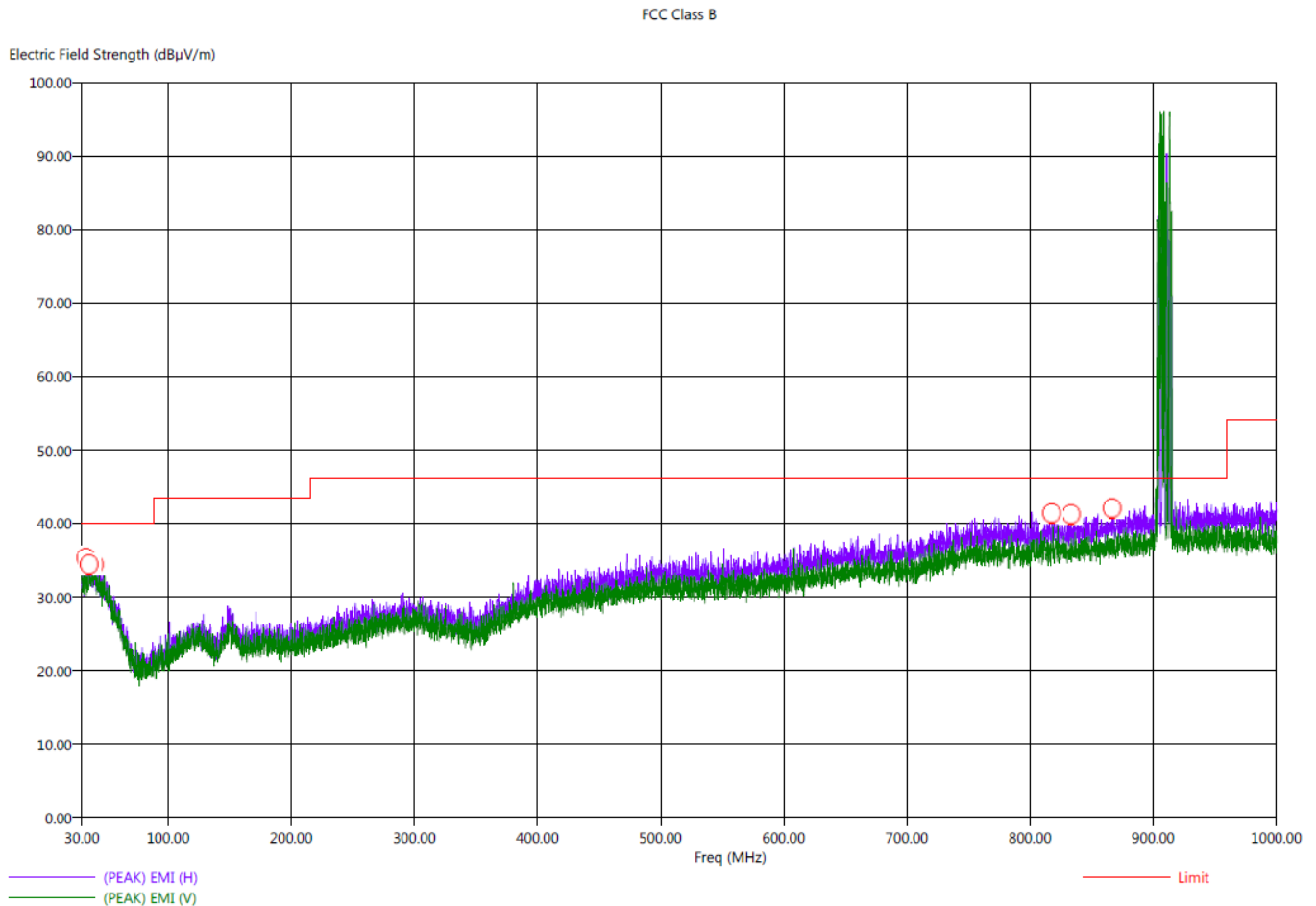
Dates: 02/03/2015 and 02/05/2015
Labs: B and D
Tested By: Kenneth Lee

Non Harmonic Emissions from the Tx and Digital Portion - 10 kHz to 30 MHz
Non Harmonic Emissions from the Tx and Digital Portion - 1 GHz to 9.3 GHz

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
								No Emissions Found for the
								Digital Portion
								from 10 kHz to 30 MHz
								for both Vertical and Horizontal
								Polarizations
								No Non Harmonic Emissions Found
								for the Tx Mode
								from 10 kHz to 30 MHz
								for both Vertical and Horizontal
								Polarizations
								Investigated in the X-Axis, Y-Axis,
								and Z-Axis
								No Emissions Found for the
								Digital Portion
								from 1 GHz to 9.3 GHz
								for both Vertical and Horizontal
								Polarizations
								No Non Harmonic Emissions Found
								for the Tx Mode
								from 1 GHz to 9.3 GHz
								for both Vertical and Horizontal
								Polarizations
								Investigated in the X-Axis, Y-Axis,
								and Z-Axis

Title: Pre-Scan - FCC Class B
File: Agilent - Radiated Pre-Scan 30-1000Mhz - FCC Class B_Module_4_Protocol_C_ANT-916-WRT-RPS_Z-Axis_02-05-2015.set
Operator: Kenneth Lee
EUT Type: Hummingbird MCA
EUT Condition: Continuously Transmitting - Frequency Hopping - Protocol C - Module 4 - Z-Axis - Worst Case
Comments: Customer: Linx Technologies
M/N: HUM-900-RC-CAS
Note: Antenna - ANT-916-WRT-RPS

2/5/2015 5:24:03 PM
Sequence: Preliminary Scan



Title: Radiated Final - 30-1000 MHz - FCC Class B
File: Agilent - Radiated Final Scan 30-1000Mhz - FCC Class B_Module_4_Protocol_C_ANT-916-WRT-RPS_Z-Axis_02-05-2015.set
Operator: Kenneth Lee
EUT Type: Hummingbird MCA
EUT Condition: Continuously Transmitting - Frequency Hopping - Protocol C - Module 4 - Z-Axis - Worst Case
Comments: Customer: Linx Technologies
M/N: HUM-900-RC-CAS
Note: Antenna - ANT-916-WRT-RPS

2/5/2015 5:39:12 PM
Sequence: Final Measurements

Final Scan - FCC Class B

Freq (MHz)	Pol	(PEAK) EMI (dB μ V/m)	(QP) EMI (dB μ V/m)	(PEAK) Margin (dB)	(QP) Margin (dB)	Limit (dB μ V/m)	Transducer (dB)	Cable (dB)	Twr Ht (cm)	Ttbl Agl (deg)
33.40	H	34.50	30.81	-5.50	-9.19	40.00	23.58	0.38	254.95	232.75
35.90	V	36.50	30.98	-3.50	-9.02	40.00	23.83	0.40	207.85	166.25
40.10	V	35.20	31.40	-4.80	-8.60	40.00	24.17	0.43	207.97	295.00
817.50	H	41.08	37.01	-4.92	-8.99	46.00	26.07	2.42	399.85	301.00
833.30	H	41.55	37.13	-4.45	-8.87	46.00	26.24	2.47	127.49	201.75
866.60	H	42.25	37.62	-3.75	-8.38	46.00	26.61	2.56	288.08	110.25