

**Environmental evaluation and exposure limit according to FCC CFR 47part 1, §1.1307, §1.1310**

The transceiver SSRM 3.65GHz is classified as fixed (pole mounted) and limited for use in “Cisco 1000 series” products, i.e. more specifically in the outdoor platform “Cisco 1240”.

The “Cisco 1240” engineering analysis as per FCC section 2.1093 was included in Application for certification under FCC ID:LDKALMT0556 (Supplementary Appendix to Report EDCS#1104807). Three modules

FCC ID:LDKALMT0556

FCC ID:N7NMC8705

FCC ID:SK9ITR9002

were evaluated for Maximum Permissible Exposure compliance.

The calculation with additional transmitter “SSRM 3.65GHz” for end-use multi-radio is provided below. The simultaneous transmission of 4 above mentioned transmitters is evaluated.

Limit for power density for general population/uncontrolled exposure is 1 mW/cm<sup>2</sup> for 1500 -100000 MHz frequency range.

The power density  $P \text{ (mW/cm}^2\text{)} = P_T / 4\pi r^2$ , where

$P_T$  is the transmitted power, which is equal to the peak transmitter output power plus maximum antenna gain.

26.8 dBm is the SSRM maximum conducted output power of the both RF chains (Table 7.1.3 of the AIRRAD\_FCC.23306 test report),

5.6 dBi – antenna gain.

**Table of estimated safe distance calculation**

Tx	Frequency, MHz	Peak Tx power		Antenna gain, dBi	Duty cycle	Power density, mW/cm <sup>2</sup>	Limit, mW/cm <sup>2</sup>	% of Std
		dBm	mW					
Tx1*	824-849	32.8	1905.5	2.5	1.0	0.67	0.56	1.206
Tx2	3650-3700	26.8	478.6	5.6	1.0	0.346	1.0	0.346
Tx3*	902-928	28.0	630.0	3.0	1.0	0.25	0.61	0.41
Tx4*	2412-2462	11.3	13.5	4.0	1.0	0.006	1.0	0.066
Total								1.968

**Note:** Recommended MPE distance is 20 cm when all antennas are within 20 cm of each other.

\*- data used from Supplementary Appendix to Report EDCS#1104807, FCC ID:LDKALMT0556.

Total % of standard: Tx1 + Tx2 + Tx3 + Tx4 = 1.968

Distance (estimated) = 20 x  $\sqrt{1.968}$  = 28 cm.

Below are given two cases of % MPE contour map and Table prepared in accordance with FCC recommendations worksheet

<http://transition.fcc.gov/oet/ea/presentations/files/oct05/MPE-mobile.xls>

Case 1: according to the calculation represented above and X=0.0, Y=0.0.

Case 2: X & Y values used from Antenna Location exhibit, FCC ID:LDKALMT0556:

X: -7.6, 7.6, 7.6, 7.6;

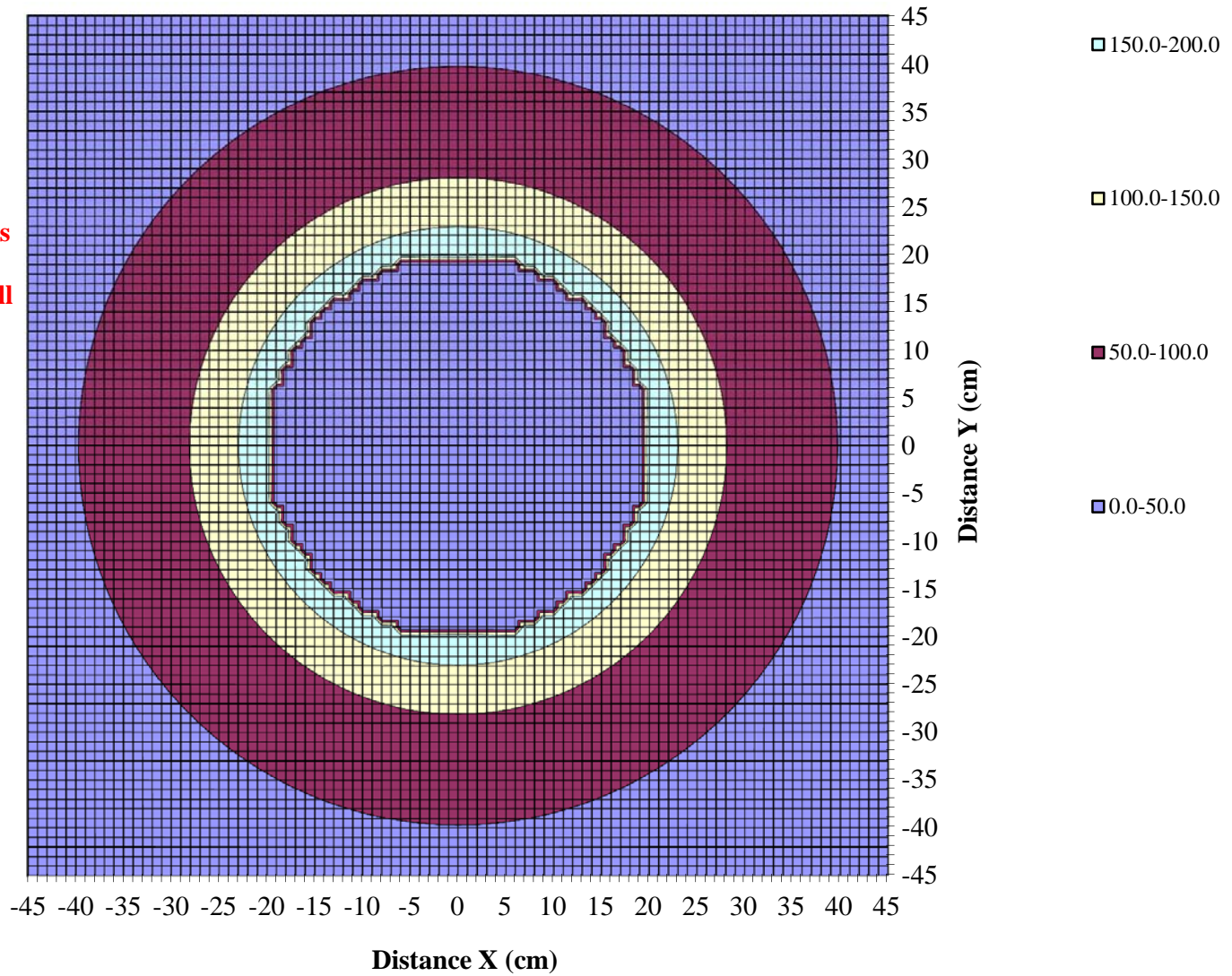
Y: -5.9, -5.9, 5.9, 5.9.

Distance (estimated) = 20 x  $\sqrt{1.775}$  = 26.6 cm

Account		Date		Description		Amount		Balance	
Account	Account	Year	Month	Date	Description	Debit	Credit	Debit	Credit
1000000	1000000	2000	1	1/1	Balance			1000000	
1000000	1000000	2000	12	12/31	Balance			1000000	
1000000	1000000	2001	1	1/1	Balance			1000000	
1000000	1000000	2001	12	12/31	Balance			1000000	
1000000	1000000	2002	1	1/1	Balance			1000000	
1000000	1000000	2002	12	12/31	Balance			1000000	
1000000	1000000	2003	1	1/1	Balance			1000000	
1000000	1000000	2003	12	12/31	Balance			1000000	
1000000	1000000	2004	1	1/1	Balance			1000000	
1000000	1000000	2004	12	12/31	Balance			1000000	
1000000	1000000	2005	1	1/1	Balance			1000000	
1000000	1000000	2005	12	12/31	Balance			1000000	
1000000	1000000	2006	1	1/1	Balance			1000000	
1000000	1000000	2006	12	12/31	Balance			1000000	
1000000	1000000	2007	1	1/1	Balance			1000000	
1000000	1000000	2007	12	12/31	Balance			1000000	
1000000	1000000	2008	1	1/1	Balance			1000000	
1000000	1000000	2008	12	12/31	Balance			1000000	
1000000	1000000	2009	1	1/1	Balance			1000000	
1000000	1000000	2009	12	12/31	Balance			1000000	
1000000	1000000	2010	1	1/1	Balance			1000000	
1000000	1000000	2010	12	12/31	Balance			1000000	
1000000	1000000	2011	1	1/1	Balance			1000000	
1000000	1000000	2011	12	12/31	Balance			1000000	
1000000	1000000	2012	1	1/1	Balance			1000000	
1000000	1000000	2012	12	12/31	Balance			1000000	
1000000	1000000	2013	1	1/1	Balance			1000000	
1000000	1000000	2013	12	12/31	Balance			1000000	
1000000	1000000	2014	1	1/1	Balance			1000000	
1000000	1000000	2014	12	12/31	Balance			1000000	
1000000	1000000	2015	1	1/1	Balance			1000000	
1000000	1000000	2015	12	12/31	Balance			1000000	
1000000	1000000	2016	1	1/1	Balance			1000000	
1000000	1000000	2016	12	12/31	Balance			1000000	
1000000	1000000	2017	1	1/1	Balance			1000000	
1000000	1000000	2017	12	12/31	Balance			1000000	
1000000	1000000	2018	1	1/1	Balance			1000000	
1000000	1000000	2018	12	12/31	Balance			1000000	
1000000	1000000	2019	1	1/1	Balance			1000000	
1000000	1000000	2019	12	12/31	Balance			1000000	
1000000	1000000	2020	1	1/1	Balance			1000000	
1000000	1000000	2020	12	12/31	Balance			1000000	
1000000	1000000	2021	1	1/1	Balance			1000000	
1000000	1000000	2021	12	12/31	Balance			1000000	
1000000	1000000	2022	1	1/1	Balance			1000000	
1000000	1000000	2022	12	12/31	Balance			1000000	

### % MPE Contour

**Note: The 0% contour surrounding the antennas identifies a 20 cm perimeter surrounding all active antennas**







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