

# Ecosystem Radio Test Report

v3.13



Report Date 14 June 2023

## General Information

Casambi project number COEM-AB0333  
 Casambi Ecosystem project manager Rod Attenburrow  
 Tested by Pekka Tallgren  
 Test date 13/06/2023

## Sample Identification

Company GRE Manufacturing  
 Country of origin China  
 Product number/name SLD-DIM-CB5-UL Revision A  
 Radio design (CBM, other module, chip-down )

## Radio Design Verification

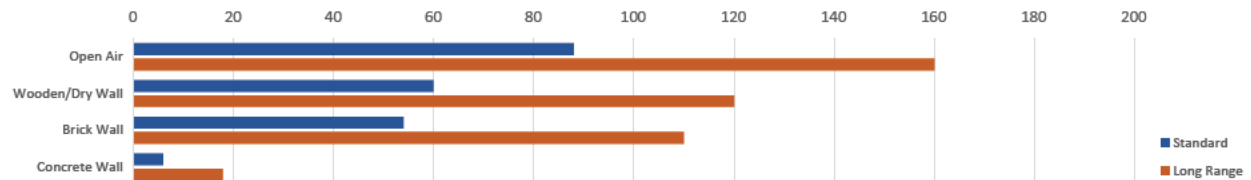
### Test Result

Total Radiated Power (TRP) -0.1 dBm  
 Long range compatible? (Only CBM003 or nRF52840) Y  
 Design Quality Rating (1-10) 10

Item	Details	Unit
Test transmit power	4.7	dBm
Antenna height (standard height for test measurement)	1.3	m
Antenna efficiency	-4.8	dBm
RX sensitivity +4dBm standard network	-95	dBm
RX sensitivity +8dBm long range network	-102	dBm
Link margin	15	dBm

## Range Estimate (Estimated useful range)

Item	Standard	Long Range	Unit
Nominal Transmit power	4	8	dBm
Link budget	75.1	85.0	dB
Range in open air (LOS)	88	160	m
Range with single wooden/dry wall (5 cm) -5 dBm	60	120	m
Range with single brick wall (10 cm) -6 dBm	54	110	m
Range with single concrete wall (10 cm) -25 dBm	6.1	18.0	m



## Rating

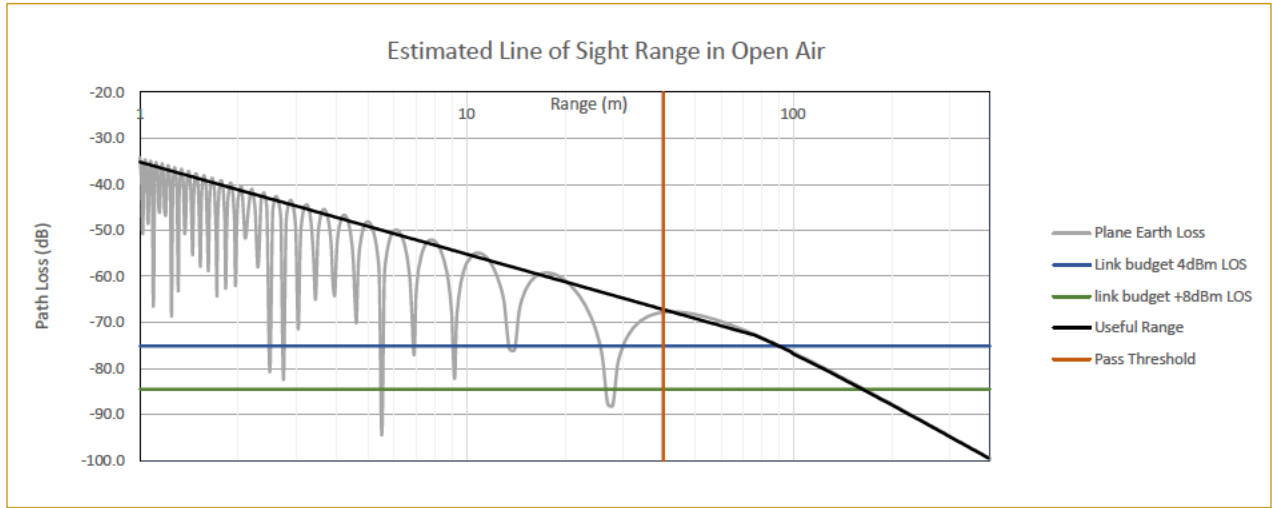
Item	Rating	Maximum
Design quality	10	10
Range	88.0	
Total rating	98.0	

RATING:  
PASS

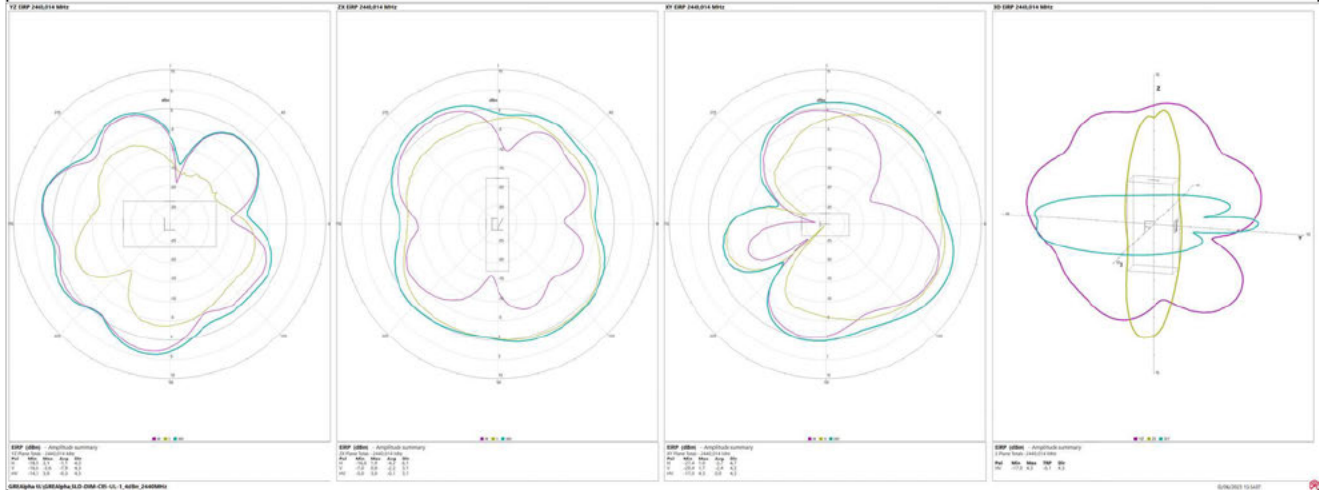
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:( fail  
 \* Poor  
 \*\*\* Average  
 \*\*\*\*\* Excellent

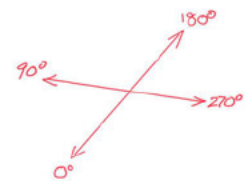
Technical Report



Radio Test Result



Orientation



Antenna Match (@ +4dBm)

Frequency GHz	TRP dBm	TRP - Good antenna dBm
2400	-0.2	2
2440	0.1	2
2480	0.2	2

