

# Ecosystem Radio Test Report

v3.13



Report Date 14 June 2023

## General Information

Casambi project number COEM-AB0330  
 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-CB2 Revision A  
 Radio design (CBM, other module, chip-down ) [REDACTED]

## Radio Design Verification

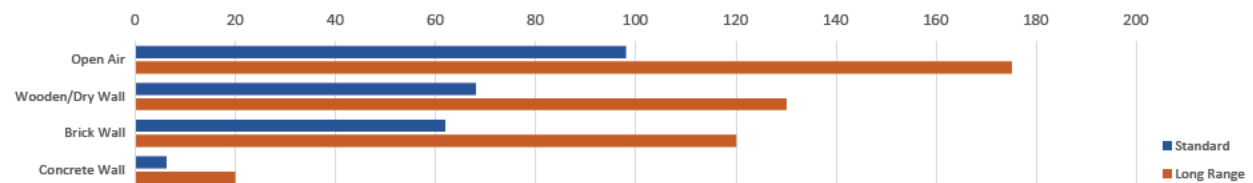
### Test Result

Total Radiated Power (TRP) 0.6 dBm  
 Long range compatible? (Only CBM003 or nRF52840) Y  
 Design Quality Rating (1-10) 7

Item	Details	Unit
Test transmit power	4.7	dBm
Antenna height (standard height for test measurement)	1.3	m
Antenna efficiency	-4.1	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	76.5	86.4	dB
Range in open air (LOS)	98	175	m
Range with single wooden/dry wall (5 cm) -5 dBm	68	130	m
Range with single brick wall (10 cm) -6 dBm	62	120	m
Range with single concrete wall (10 cm) -25 dBm	6.3	20.0	m



## Rating

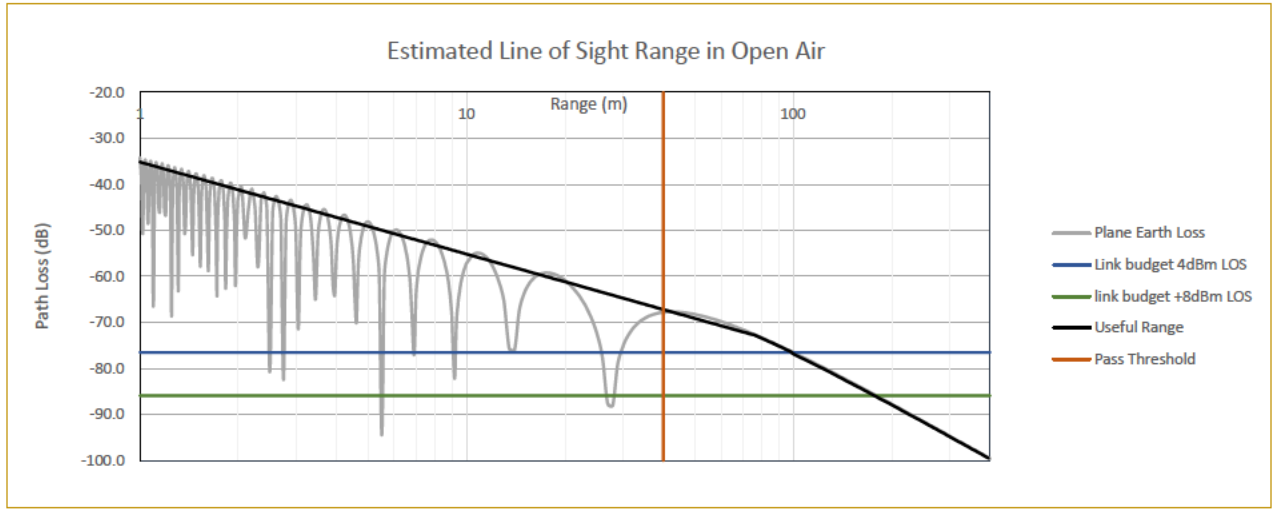
Item	Rating	Maximum
Design quality	7	10
Range	98.0	
Total rating	105.0	

RATING:  
PASS

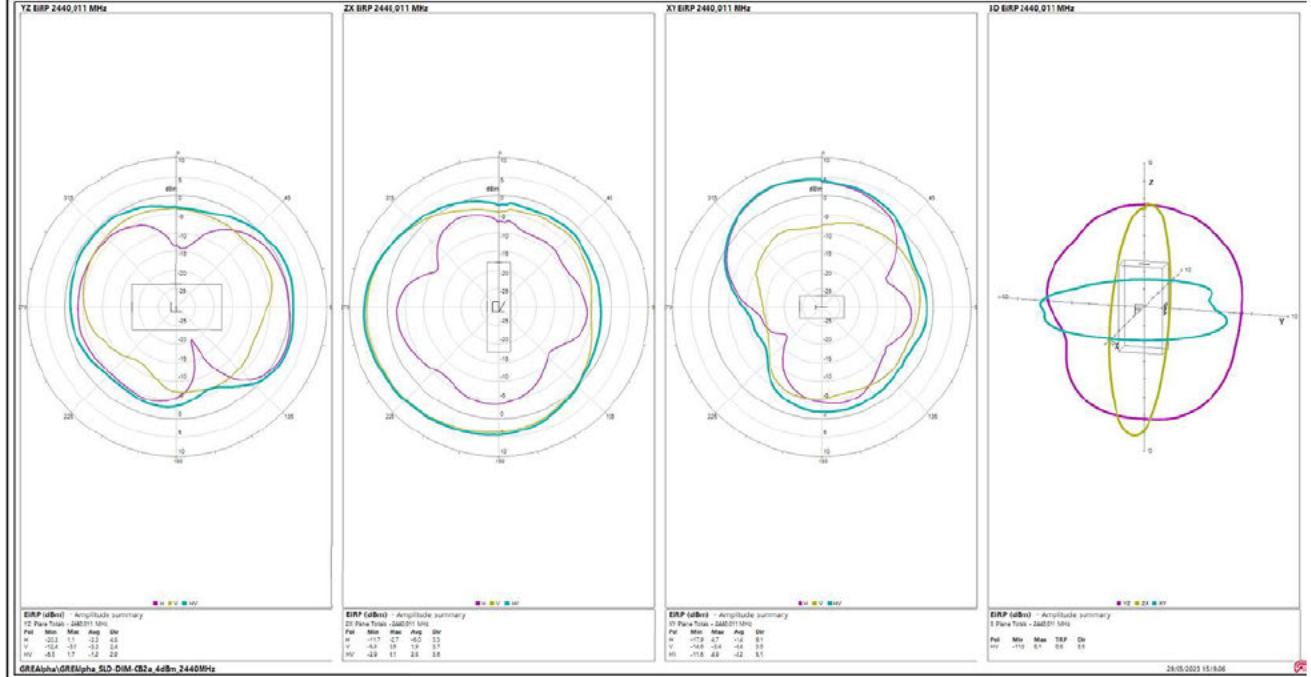
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:( fail  
 \* Poor  
 \*\*\* Average  
 \*\*\*\*\* Excellent

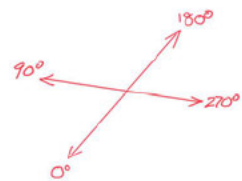
Technical Report



Radio Test Result



Orientation



Antenna Match (@ +4dBm)

Frequency GHz	TRP dBm	TRP - Good antenna dBm
2400	-1.5	2
2440	-0.1	2
2480	0.9	2

