

# REMONI WIRELESS RANGE TESTS

The following tests are made to simulate real life scenarios, rather than the lab scenarios usually use to design antennas.

Our antenna is optimized for operation close to cables, pipes and walls inside buildings. In this environment, it performs better than most other solutions on the market.

The color indications of signal strength are the one used at the ReMoni cloud, meaning:

- **Green: strong signal, and much room for extra signal interference.**
- **Yellow: Acceptable signal, with limited room for interference.**
- **Red: Weak signal, where extra interference might destroy the signal.**
- **None: Data telegrams are interfered, so the data is corrupt and therefore not accepted.**

Test	Signal status			
	Green	Yellow	Red	None
<b>Line of sight 800 m</b> , same polarization of the two antennas, signal path 1.5 m above ground or more.	X			
<b>Line of sight 800 m</b> , "random" polarization of the two antennas, signal path 1.5 m above ground or more.		X		
<b>Line of sight 800 m</b> , strict opposite polarization of the two antennas, signal path 1.5 m above ground or more.			X	
<b>Line of sight 800 m</b> , random polarization of the two antennas, signal path <0.1 m above ground or more.				X
<b>Through 1.35 meter walls</b> (0.3 m concrete + 0.25 m light concrete + 0.2 m wood + 0.6 m concrete) between 1 m and 3 m air between the walls. Same polarization of the two antennas, signal path 1 m above ground.	X			
<b>Through 1.35 meter walls</b> (0.3 m concrete + 0.25 m light concrete + 0.2 m wood + 0.6 m concrete) between 1 m and 3 m air between the walls. Opposite polarization of the two antennas, signal path 1 m above ground.	X			
<b>Through 1.85 meter walls</b> (0.3 m concrete + 0.25 m light concrete + 0.2 m wood + 0.6 m concrete + 0.35 m insulated bricks + 0.15 m bricks) between 1 m and 3 m air between the walls. Same or random polarization of the two antennas, signal path 1 m above ground.		X		
<b>Through 1.85 meter walls</b> (0.3 m concrete + 0.25 m light concrete + 0.2 m wood + 0.6 m concrete + 0.35 m insulated bricks + 0.15 m bricks) between 1 m and 3 m air between the walls. Opposite polarization of the two antennas, signal path 1 m above ground.			X	

Notes:

- All tests are made at temperature between 15 and 25 degree Celsius.
- All tests are made with the sensors in encapsulation.