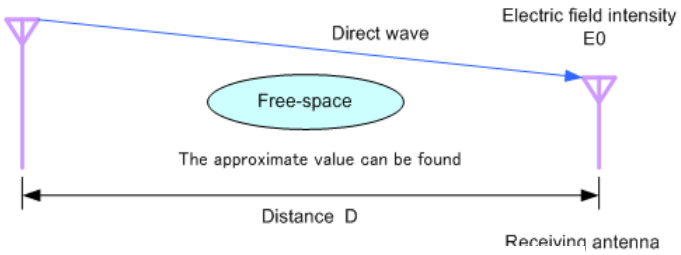

Received power formula: Friis' transmission formula

$$Pr = \left(\frac{\lambda}{4\pi D}\right)^2 \cdot Gt \cdot Gr \cdot Pt \quad [W]$$

Antenna Examples	
Antenna	**Directivity (dBi)**
Isotropic	0
Half-wave Monopole	5.15
Short Dipole	1.76
Half-wave Dipole	2.15
Patch	6 (typ)
Horn	10-20

Inputs
Outputs

Setup	
Frequency (MHz)	868
Wavelength (m)	0.35
Transmitted EIRP (dB) [1]	28
Effective Receiver Gain (dBi)	0
Passive Tag IC Sensitivity (dBm)	-20.00

Range	
Available Path Loss (dB)	48.00
Maximum Achievable Range (m)	**6.91**

Fade Margin	
Desired Range (m)	2.0
Path Loss at Desired Range (dB)	37.23
Fade Margin (dB) [2]	**10.77**

[1] This is the product of transmitted power and transmitter antenna gain (or sum when expressed in dB)

[2] This is the margin between transmitted EIRP and required EIRP.