Application Note:

AN_RF_003 Ver 1.1

Difference between 2.4 Ghz Frequency and 868/900 MHz

Benchmark table 2.4 GHz Vs 868 MHz

	IEEE 802.15.4 - 2.4 GHz	868 MHz (wavenis, IEEE 802.15.4 -868 MHz)
Range	√ √ √	√ √ √ √ √
Number of available channels	16	1 or 2
Data Rate	√ √ √ √	√
Collision Immunity	√ √ √ √ √ √	√ √ √ √
Antenna Design	More choice (omndirectionnal, Yagi, patch, PIFA, Panel….)	Few choice – Intrusive antenna
Wireless Network Topolgy	Mesh, Tree, Star, Peer-to-Peer	Mesh, Tree, Star, Peer-to-Peer
Class of measurement applications	Dynamic: vibration, acceleration, strain gage Static: temperature, pressure	Static: temperature, pressure
Environment	▪ AD-HOC Wireless Network ▪ Dynamic or static wireless measurement ▪ Adapted for harsh and industrial applications	▪ Not adapted for Ad-HOC Wireless Network ▪ Static measurement (Automated meter reading, Building management) ▪ More adapted for « line-of-sight « application