

Metric	Legend		
	Good	Neutral	Bad
	Wi-Fi	Zigbee	
Technology Penetration into Home Products - 2009 (USA)	>35%	<1%	
Number of Certified Products (2009 October) Source: Wi-Fi Forum Website and Zigbee Forum Website	6356	<30	
Band (most used)	2.4-2.5GHz	2.4-2.5GHz	
Effective Bandwidth / Channel Spacing (most used)	20MHz / 25MHz	3MHz / 5MHz	
Tolerance of Interference	Good. Wider-bandwidth Spreadpectrum	Bad. Narrower-bandwidth Spreadpectrum	
Tolerance of Multipath - RMS Delay spreads (Implementation dependent)	150ns RMS @ 54Mbps, 500ns RMS @ 1Mbps	500ns RMS @ 250kbps	
MAC/PHY Security	WPA/WPA2/CCX are Industry Tested Security Certifications	MAC layer security Not available. Relies on Higher layer Security	
Availability of Off-the-shelf, Self-contained Wireless TCP/IP modules that are FCC-IC-CE certified	Yes (e.g., Redpine Signals Connect-io-n™)	Availability Unknown	
Additional Infrastructure	Zero (Infrastructure exists)	Needs additional infrastructure and Zigbee to Wi-Fi gateways	
Cost of Modules (radio + TCP/IP)	Very low due to large volumes!	Not known	
Vendors	Many	Few	
Data-rate (Max/Typ/Min)	54Mbps / 36Mbps / 1Mbps (802.11b/g)	250kbps (802.15.4-2006 Section 6.5)	
Receiver Sensitivity (at Max/Typ/Min data-rates)*	-75dBm / -81dBm / -98dBm	-98dBm	
Max Packet Length supported	4KBytes (b/g), 64KBytes (n)	127 bytes	
IP Layer directly ported over the MAC?	Yes	No. Adaptation layer: 6LowPAN	
Peak Rx Current @ 3.3V (min/max values)*	100 - 250mA	50 - 100mA	
Peak Tx Current @ 3.3V for 20dBm Tx Power (min/max values)*	250 - 350mA	250 - 350mA	
Shutdown current (min/max values)*	1 - 5uA	1 - 5uA	
Energy Efficiency of Reception @ highest datarate (using max value)	15nJ / bit	1320nJ/bit	
Energy Efficiency of Reception @ lowest datarate (using max value)	825nJ / bit	1320nJ/bit	
Does the PHY have error correction?	Yes	No	
Certification for Peer to Peer Low-power	Yes (Wi-Fi Direct)	Yes	

* Note: Values are Implementation Dependent. Typical or Min/Max values for current implementations in the Market are presented

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