OPM15 Specification

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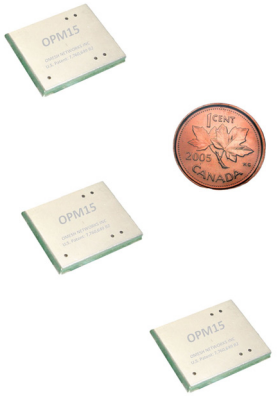
The OPM15-E module is based on IEEE 802.15.4 standard to realize OPM (Opportunistic Mesh) dynamic networking with multi-frequency (or large-scale cognitive networking). OPM dynamically establishes wireless networks without the need for predetermined topology or spectrum allocation, magnifying the deployment convenience. Reliable and real-time (multi-hop) wireless communications can be achieved in large-scale wireless networks, disregarding dynamic networking environment. Especially, network performance increases with the network scale (density and the number of stations). Major advantages are listed: 1) dynamic drop-and-play (supporting station mobility); 2) guaranteed real-time communications over unlimited number of wireless hops; 3) low power consumption and small footprint; 4) compatible with current wireless networking standards; 5) adaptable to interference in unlicensed spectrum.



Single Hop Range	Up to 1000m (outdoor with 14dBi antenna); and 200m (indoor with 3dBi antenna)
Communication Protocol	OPM dynamic networking with multi-frequency (broadcast, unicast, data aggregation)
Switching Latency	<15ms
Communication Bandwidth	250kbps (Application throughput up to: ~100kbps)
Communication Latency	<12ms/hop
Communication Jitter	Decreases to zero with larger network scale
Frequency Band	2.4GHz
Transmission Power	0.1-3mW
Power Consumption (Sleep)	4uW
Power Consumption (Active)	60mW
Receiver Sensitivity	-94dBm
Physical Size	12mm X 14.25mm X 2.25mm
Applications	Sensor/Location and Emergency Network; Supporting Data, Audio, Image; Long Battery (over one year) Life.