Summary

The MAC API is designed to be a very simple programming interface for developers of non-beacon IEEE 802.15.4 applications. It may be used for the rapid application development of single-hop products with minimal prior knowledge of the IEEE 802.15.4 specification or radio communications.

IEEE 802.15.4 is designed for single-hop low-power, low data rate networks. Its multi-hop extension. known as ZigBee, is more well-known. However, the multi-hop nature of ZigBee means that it is more complicated to implement. In addition, broadcasting to all nodes in the network is much more efficient in a single-hop network, making it more suited to data-bus (e.g. RS485) cable replacement.

Certain IEEE 802.15.4 devices may sleep. However, in order to do so, their messages must be cached by the network coordinator and their ability to participate in direct communications with other devices in the network will be limited.

Compatibility

The API is fully compatible with all non-beacon IEEE 802.15.4 products, including:

- *StarLite*
- *StarLite USB*
- *MAC API*
- *MACdongle*

Features

MAC API incorporates the following features:

- Long- and short-address data communications
- Association and disassociation
- Active, passive energy density and orphan scans
- Device sleep and coordinator polling
- Orphan indication
- Promiscuous mode for packet sniffing

MAC API is free, provided it is used with FlexiPanel Pixie radio products only.