

## Product description

This module features a KW41Z SoC that runs NXP's Thread and BLE stack to provide secure IPv6-based networking over a local wireless mesh network. Thread uses 6LoWPAN, which in turn uses the IEEE 802.15.4 wireless protocol, and pairs these well-established mesh communication technologies with AES encryption and a resilient routing algorithm. The stack is able to support up to 250 devices in one local network. It is simple to set up and it provides security at the network layer. SPARROW includes an on board chip antenna and is supplied with a development board. An external antenna can be connected to the antenna pad.

## Software development kit provided by NXP includes:

- Certified Thread & BLE wireless stacks
- OS abstraction layer to run your application on FreeRTOS, uCOSII or bare metal
- Modularized framework for common functionality
- Expansive set of hardware drivers
- Additional middleware for file system access, USB, other wireless protocols etc.

## Features:

- Simple usage & power efficient
- AES-encryption mode
- Standard IEEE 802.15.4
- Robust mesh network
- Open IPv6-based protocol
- Ideal for climate control, energy management, home automation
- 2.4 GHz ISM band
- ARM® Cortex-M0+ core
- Low power UART

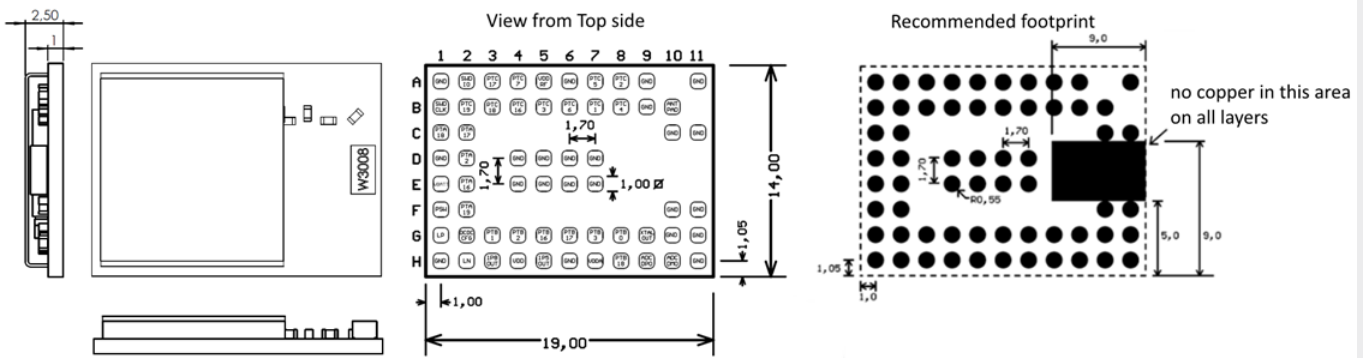
### SPARROW Gold

- Dual-mode-module providing Thread & BLE (KW41Z)

### SPARROW Grey

- Thread-only-module using the NXP KW21Z

## Dimensions and Pinout



All dimensions in mm