

# SX-ULPAN-EVK

## NXP Tower System Module



### Conveniently Evaluate Silex Wi-Fi on your NXP Kinetis MCU Module

The SX-ULPAN-EVK, an ultra-low-power dual-band 802.11 a/b/g/n Wi-Fi tower module with industrial temperature support, enables leading-edge reliable Wi-Fi connectivity for the development of connected devices. This peripheral module for the Tower System features a fully certified Wi-Fi module with the Silex SX-ULPAN on-board.

Built on world-class expertise from Silex Technology, and powered by the Qualcomm Atheros 4004 intelligent networking platform, the Tower Module provides several modes of connectivity, including client mode, limited access point functionality, and Wi-Fi Direct for peer-to-peer networking, enabling easy transfer of content anytime, anywhere.

In summary, with the SX-ULPAN-EVK you can evaluate the SX-ULPAN module, that uses the Qualcomm Atheros 4004-BL3B chipset, with the NXP Kinetis MCU (TWR-K22F120M).

The SX-ULPAN-EVK is available in two versions (SPI and UART). These Tower EVK's can help you evaluate the basic wireless functions below:

- Basic wireless connectivity
- AP Scan, WEP/WPA configuration
- Basic TCP/IP function with HTTP, DNS and SNTP
- Soft Access Point (AP), WPA client
- Wireless Configuration (DTIM, Bitrate etc.)

#### ❖ Silex Deliverables:

- Silex Tower Module (SX-ULPAN-EVK – 802.11a/b/g/n)
- Web Downloads:
  - MQX 4.1 OS image [Only required for SX-ULPAN-2401-EVK(US)]
  - Silex Technology's optimized QCA4004 dual band driver
  - Functional Specifications
  - Command/API Specifications
  - EVK Quick Start Guide

#### ❖ Software Features:

- **Modes:** Supports Client and Access Point mode
- **Authentication Methods:** Open System & WPA2-PSK (WPA-PSK)
- **Encryption Method:** None, WEP, TKIP, and AES
- **UART Host Interface** eliminates the need for the radio driver and uses AT command to configure/control the wireless radio
- **IPv4, TCP, and UDP Protocols Supported on Chip:** Helps offload the host microcontroller. Functions supported include ARP, IPv4, UDP, TCP socket support, DHCPv4, Neighbor discovery, broadcast, MTU discovery, address auto config, and TCP zero copy

#### ❖ Specifications:

Product Name	SX-ULPAN-2401-EVK	SX-ULPAN-2402-EVK
Wi-Fi Module	SX-ULPAN-2401	SX-ULPAN-2402
Interfaces	SPI	UART
Radio Specifications	802.11a/b/g/n	
Security	Open System, WPA/WPA2-PSK.	
Operating Voltage	3.3 V	
Operating Temperature	Continuous Tx/Rx: -40 to +75 degrees C Periodic Tx/Rx: -40 to +85 degrees C	
Current Consumption	Tx ≤ 350mA    Suspend (SPI) = 5uA Rx ≤ 100mA    Suspend (UART) = 1.2mA	

#### ❖ Ordering Information

**SX-ULPAN-2401-EVK(US):** Wi-Fi Tower Module for SX-ULPAN-2401  
**SX-ULPAN-2402-EVK(US):** Wi-Fi Tower Module for SX-ULPAN-2402

#### Requires:

- Freescale Kinetis Tower Module (TWR-K22F120M)
- Freescale Tower System Elevator Module (TWR-ELEV)

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