When it **Absolutely Must** Connect

SX-ULPAN
802.11n Wi-Fi Module for IoT Applications

Easy to Evaluate, even Easier to Productize

The SX-ULPAN is an ultra-low-power, Wi-Fi module which supports both single and dual band options with both commercial and industrial temperature support. It features SPI or UART as host interfaces providing reliable connectivity for various micro controller-based networking applications that your customers need.

Founded on world-class expertise from Silex Technology, and powered by the Qualcomm Atheros 4004 intelligent networking platform, the new solder-down module connects your device to the Internet of Things and provides a reliable connectivity experience for your customers.

The module's small form factor, rich features, and ultra-low power make it perfect for many mobile wireless applications and portable battery-operated devices.

Typical Applications: SX-ULPAN will find its way into many IoT applications like remote equipment monitoring, asset tracking and telemetry, security, wireless audio, industrial sensors and controls, home automation, medical devices, and many more.

Key Features:

- **Host Interface Options**
  UART interface eliminates the need for any driver development, and uses AT command to configure the wireless radio. SPI interface option provides more flexibility and performance advantages.

- **Data Rates**
  MCS 0-6 for 802.11n, 1 -54 Mbps for 802.11b/g and 6 -54 Mbps for 802.11a. Due to the limitations of the host interface the actual throughput is limited to 10 Mbps in SPI mode and 460 kbps in UART.

- **Modular Certifications**
  FCC/IC/CE/TELEC modular certifications improves time-to-market and decreases costs.

- **Wi-Fi Protected Setup**
  WPS 2.0 implementation makes it easy to add new devices to an existing network without entering long passphrases.

- **IPv4, TCP, and UDP protocol supported on chip**
  It helps offload the host microcontroller. Functions supported are ARP, iPv4, UDP, TCP socket support, DHCPv4, neighbor discovery, broadcast, MTU discovery, address auto config, and TCP zero copy.

Specifications:

Product Name	SX-ULPAN-SB-2401	SX-ULPAN-2401	SX-ULPAN-240&
Interfaces	SPI Slave		UART
Radio Chip	QCA4004-BL3B		
Radio Specification	802.11 b/g/n	802.11 a/b/g/n	
Security	Open System, WPA/WPA2-PSK		
Operating Voltage	3.3 V		
Humidity	Operating 10 to 95 %RH Storage: 15 to 95 %RH		
Operating Temperature	0 to +85℃	-40 to +85℃	
Current Consumption	x ≤ 350mA Rx ≤ 100mA	Suspend (SPI) = 5uA Suspend (UART) = 1.2mA	
Dimensions	20 x 15 x 2.2 mm		

- **Evaluation Platform**

Supported NXP Platform	Kinetis, i.MX RT, LPC5500
Supported OS	NXP MQX v4.1, FreeRTOS

Ordering Information

	Single Band Commercial Temp	Dual Band Industrial Temp	
Bulk SKU	SX-ULPAN-SB-2401	SX-ULPAN-2401	SX-ULPAN-2404
Sample Pack	SX-ULPAN-SB-2401-SP	SX-ULPAN-2401-SP	SX-ULPAN-2404-SP
Evaluation Kit	SX-ULPAN-2401-SHIELD		SX-ULPAN-2404-SHIELD
Host Interface	SPI		UART

Mouser Electronics

Authorized Distributor

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