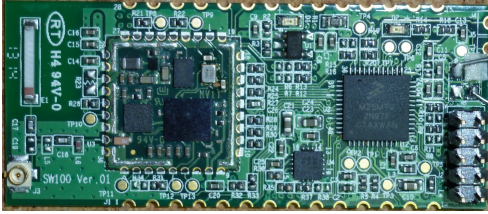




# pLink board SW100 – Serial to WiFi Module



**Dimension: 52mm x 22mm x 2.5mm**

## Overview

pLink-boards are designed to build sophisticated network connectivity to your product quickly and simply. pLink-board is a compact, integrated solution to web-enable devices with serial capability. pLink-board eliminates the development effort and helps to offer network connectivity within weeks. Your products can be accessed and controller over ethernet.

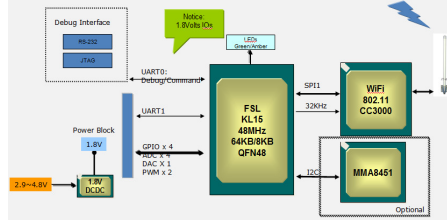
pLink SW100 is one member of our pLink board series product. SW100 is a small form-factor, single stream, low-power and programmable UART to WiFi module. Like other pLink board members, SW100 enables rapid application development of ultra low power devices with the complete software support on module. Developers can choose his need from a wide range of software packages with the well-documented APIs.

SW100 integrates Freescale Kinetis Lite series MCU, TI Simple Link 802.11b/g WiFi, a built-in antenna, an external antenna jack and the interface port. The interface port includes Power supply pins, ADC, DAC, GPIOs, I2C and UARTs.

## Target Applications

- \* Meters & Controllers with UART
- \* Household appliances
- \* Building Automation Controllers
- \* Connected Digital Signage Controller
- \* Directly Digital Controllers
- \* Serial Bus Data Converter
- \* Vehicle electronic applications

## Block Diagram



## Features and Specifications

### WiFi – TI CC3000 Simple Link

- Standard: 802.11b/g
- Mode: BSS STA
- Security modes: WEP, WPA/WPA2(AES and TKIP – Personal)
- Stack: TCP/IP(IPv4), ARP, DHCP Client, DNS, 4 TCP, UDP Sockets
- Max Throughput:
  - ◆ Tx: 4Mbps TCP
  - ◆ Rx: 2.9Mbps TCP
- Shutdown mode: <5uA using FET
- Init time: Cold start 700ms (from Shutdown)
- Power Consumption
  - ◆ Tx: Continuous Peak – 11g 185mA, 11b 280mA
  - ◆ Tx: Average during UDP (4Mbps) 110mA
  - ◆ Rx: Active (no connection) <95mA
  - ◆ Rx: Idle Connection – 95.5mA
  - ◆ Rx: UDP max TP – 98.5mA
- RF Performance (target)
  - ◆ Tx Power: +20dBm @ 11Mb - CCK
  - ◆ Rx Sens: -89dBm @ 11Mb - CCK
- Certification: WPA Certified

### Antenna

- On board 2.4GHz Chip Antenna x 1
- External Antenna connector x 1

### External Interface (28pins)

1. UART x 2 (Tx/Rx)
2. GPIOs x 4 with TPM(PWM)
3. ADC x 4
4. DAC x 1
5. +3.3Vdc\_in & GND
6. USB x 1 (optional)

### Other Interface

1. Debug UART x 1 (Tx/Rx)

2. SPI x 1
  3. Button x 1
  4. JTAG x 1
  5. LED Green & Amber x 1
- Power and WiFi status indication  
WiFi signal strength indication @ first configure mode if CC3000 provides the signal strength API

### Built-in 3-axis accelerometer

- MMA8451Q (Optional)

### System Information

- CPU: ARM Cortex M0 Core based 32bits processor, up to 48Mhz
- RAM: 8KBytes
- Flash: 64Kbytes
- SDK: Comprehensive APIs for development
- Firmware: upgradeable via TFTP or UART

### Power

Input Voltage: +2.9~4.8VDC

### Notice

- All IO and interface is at 1.8Volts rating and 3.3Volts tolerant

### About Portalinks

Portalinks Technology Corp. located in New Taipei City, Taiwan, designs and develops embedded system solutions, for wide-ranged kinds of applications e.g. PDA, Tablet, In-home Display, Multimedia devices, eReader, Medical devices, automation controllers and other common bus infrastructures. From the beginning in 2003, customized solutions offering longevity are a strong part of Portalinks business as well. Successfully deployed products span from embedded modules up to fully integrated systems and products.

pLink board series is a new member to expand our product portfolio. This flexible and modular can be used for both, evaluation purposes of processor technology and directly integrating in customers' system of production.

Portalinks should have the right to change or modify this specification at any time without prior notice.

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