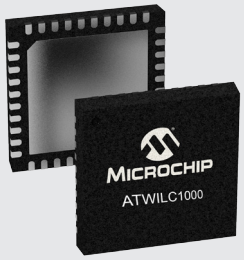
SmartConnect WILC1000

Wireless Link Controller

Summary

The SmartConnect WILC1000 is an IEEE 802.11 b/g/n IoT link controller SoC. It offers the ideal add-on to existing MCU solutions, making it easy to bring Wi-Fi® through SPI or SDIO-to-Wi-Fi interfaces into your designs.



Target Applications

- IoT applications
- Smart appliances
- Multimedia streaming
- Safety and security
- Home automation
- Consumer electronics
- Industrial automation

The most advanced mode in the WILC1000 is a single stream 1 x 1 802.11n mode, providing up to 72 Mbps PHY of throughput. The WILC1000 features a fully integrated power amplifier, LNA, switch and power management modes.

The WILC1000 provides SPI and SDIO host interface options. The only external clock source needed for the WILC1000 is a high-speed crystal or oscillator with a 26 MHz reference clock frequency. The WILC1000 is available in a QFN package.

Power Architecture and Consumption

The WILC1000 uses an innovative power architecture that delivers very-low power consumption along with high performance. This approach reduces the number of external components and optimizes your bill of materials.

WILC1000 Device States

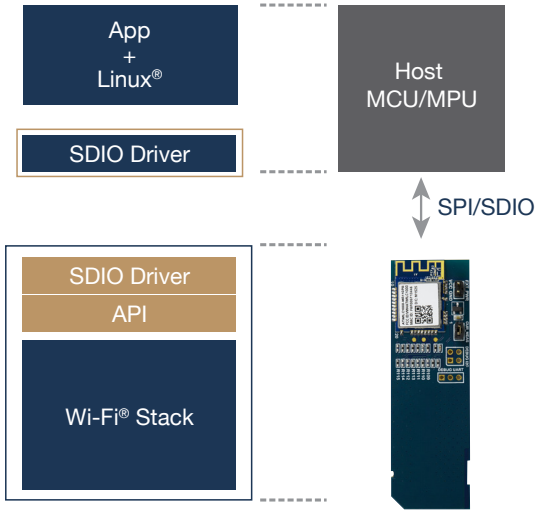
- PROVISION: Receive and Transmit data anytime; send beacons as Wi-Fi SoftAP
- IDLE LISTEN: Receive data via TIM/DTIM; transmit data anytime
- SUSPEND: Not receiving or transmitting data; no PS polls; completely disconnect from the AP

Accelerating RF Design

To help accelerate design development, Microchip offers the WILC1000 as a single-chip module for fast integration and as a SDIO-extension compatible with existing development boards. The standalone chip and module are available now.

Key Features

- IEEE 802.11 b/g/n (1 x 1) for up to 72 Mbps
- Integrated PA and T/R switch
- Superior sensitivity and range via advanced PHY signal processing
- Wi-Fi direct, station mode and soft-AP support
- Supports IEEE 802.11 WEP, WPA/WPA2 and enterprises security
- On-chip memory management engine to reduce host load
- SPI and SDIO as host interfaces
- Wireless Simple Configuration (WSC) WPS



Ordering Codes Description	
ATWILC1000B-MU-T/Y	Single 802.11 b/g/n chip, 5 x 5 QFN (Tape and Reel/Tray)
ATWILC1000-MR110PB	Certified WILC1000B Module with PCB Antenna
ATWILC1000-MR110UB	Certified WILC1000B Module with uFL connector
ATWILC1000-SDPRO	ATWILC1000-SDPRO extension board to connect over SD/MMC (SDIO) to peer host

DS70005265B