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With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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## WLS1271L Wireless Module Product Brief





The WLS1271L provides 2.4 GHz WLAN plus Bluetooth functionality in an ultra-small module. The WLS1271L is based on Tl's WL1271L SOC. The module features optimized RF performance including a high-efficiency RF front end circuit. An integrated DC-DC converter allows the module to operate from a single input voltage. The module is designed to fit into small spaces, and requires a minimum of external components to operate. Software drivers are available for Linux, Android and WinCE operating systems.

#### **Features**

- IEEE 802.11b/g + IEEE 802.11n WLAN MAC baseband processor
- IEEE 802.11n single stream data rates (MCSO-7) and SGI support
- Single-ended digital radio processor (DRP) RF implementation with internal LNA
- SDIO WLAN host interface
- Cisco Client eXtension (CCX) support
- Bluetooth Version 4.0 including 2 and 3 Mbps enhanced data rates
- High Rate 4-wire UART HCI (H4) and 3-wire UART HCI (H5)
- Lower Bluetooth layers up to HCI included
- Optimized for low current consumption in all operating modes
- Extremely low current sleep mode
- Flexible reference clock input 19.2, 26, 38.4 or 52 MHz reference clock
- Integrated DC-to-DC converter provides single supply operation
- Package dimensions: 9 x 11 x 1.4 mm maximum

### WLAN Specifications

- IEEE 802.11a/b/g/n compliant
- Operating Frequency Range: 2.412 to 2.472 GHz
- Data Rates

802.11b: 11, 5.5, 2, 1 Mbps 802.11g: 54, 48, 36, 24, 18, 12, 9, 6 Mbps 802.11n: 65, 58.5, 52, 39, 26, 19.5, 13, 6.5 Mbps

- Transmit Power: +18 dBm
- Receive Sensitivity

802.11b, 11 Mbps: -87 dBm 802.11g, 54 Mbps: -74 dBm 802.11n, 65 Mbps: -70 dBm

Supply Current
 Transmit: 250 mA

 Receive: 100 mA

Front End IC and RF Filtering

WL1271L

PCM

UART

VIO

DC-DC

Converter

VBAT

### **Bluetooth Specifications**

- V4.0 + RDR, Power Class 1.5 + BLE
- Operating Frequency Range: 2.4000 to 2.4835 GHz
- Data Rates: 1, 2, 3 Mbps
- Transmit Power: +8 dBm
- Receive Sensitivity, 1 Mbps: -90 dBm
- Transmit/Receive Supply Current: 35 mA (DH1)

#### Security

- Hardware-based encryption/decryption for 64-, 128- and 256-bit WEP, TKIP and AES keys
- IEEE 802.11 d/e/h/i/k/r/s PICS compliant
- WEP, TKIP, WPA & WPA2, AES/CCMP per 802.11i

### Standard Host Processors/Operating Systems with Driver Support

- OMAP 3, OMAP 4, AM 18x, AM 37x
- Linux 2.6
- Android
- WinCE

#### **Environmental**

- Supply Voltage: 3.0 to 4.2 Vdc
- Operating Temperature Range: -40 to +85 °C
- RH: 5 to 95% non-condensing
- RoHS Compliant

#### Interfaces

- WLAN: SDIO
- BT: UART

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### **Ordering Information**

• Evaluation Kit: DR-WLS1271L-EV

Module: WLS1271L

