

WICED Wi-Fi FAQ

What is WICED?

- WICED™ is a development system that vastly reduces the effort required to add wireless connectivity to embedded devices. The SDK enables developers to quickly create network connected applications targeted for low-resource microcontrollers. Apple MFi HomeKit ready and Universal Bluetooth Smart to WLAN bridge designs are also available.

What is included in the WICED™ SDK?

The WICED SDK includes:

- An open source build system and toolchain based on GNU make.
- A GUIDE based on Eclipse CDT that seamlessly integrates with a programmer and single-step, thread-aware, debugger based on OpenOCD and gdb.
- A complete software stack that includes advanced security and networking features such as SSL/TLS, IPv4/IPv6 networking, and mDNS/Bonjour.
- Production ready example applications.

Which Operating Systems does the SDK run on?

- The WICED SDK runs on all major operating systems including Windows®, Mac OS X and Linux.

How much does the SDK cost?

- The SDK is available free when developing applications on microcontrollers connected to Cypress Wi-Fi products.

Which RTOS & Network Stacks are available with the SDK?

- Two options are available: a commercial option which is provided as linkable object files, and an open source option. Both options are free when used with microprocessors connected to a Cypress Wi-Fi chip. The commercial option, ThreadX/NetXDuo from Express Logic, provides full IPv4 and IPv6 networking functionality. The open source option, FreeRTOS/LwiP only provides IPv4 networking functionality.

What if I want to use a different RTOS or Network Stack?

- The WICED™ API abstracts the RTOS & networking stack in an attempt to avoid the need for developers to interact directly with these software components. The abstraction layer is written to minimize the effort required to port to other RTOS & Network Stacks if desired.

Does the SDK support Wi-Fi Protected Setup (WPS)?

- Yes. WPS 1.0 and 2.0 are supported. The WPS supplicant runs on the microcontroller.

How much Flash and RAM does my application need?

- Application resource requirements vary depending on networking and security features required by the application. Most applications require at least 512kB Flash memory and 64-128kB RAM.

Where do I buy WICED™ evaluation boards?

- WICED™ modules and evaluation boards are available from Digi-Key.
- Order Here: [WICED Evaluation Boards](#)

Does WICED™ support SSL/TLS security?

- Yes. WICED™ supports TLS up to version 1.2. Coupled with the included http client and http server modules, WICED™ supports full HTTPS encryption. The SSL/TLS supplicant runs on the microcontroller.

Which Microcontrollers are supported by the SDK?

- The SDK supports a range of STM32 microprocessors from ST Microelectronics, the SAM4 series from Atmel and Kinetis K60 from NXP/Freescale. Support for microprocessors from additional vendors is in progress.

Does the WICED™ SDK support Wi-Fi Direct?

- Full Wi-Fi Direct functionality is supported in the WICED SDK. The console app provides all the reference functionality including GO/GC; the stack will be WFA certified in the near future

Does the Wi-Fi security supplicant run on the microcontroller?

- The IEEE 802.11i supplicant within WICED is implemented via the BESL library and runs as a combination of software on the MCU and firmware on the WLAN device to offload aspects of the handshake.