Bluegiga WF111 Software Driver Release Notes

This document contains details about changes between WF111 Software Driver releases starting with the latest officially released driver.

KEY POINTS

- Changes: 5.2.2-r4 Compared to 5.2.2-r3
- Changes: 5.2.2-r3 Compared to 5.2.2-r2
- Changes: 5.2.2-r2 Compared to 5.2.2
- Changes: 5.2.2 Compared to 5.1.0

1. Changes: 5.2.2-r4 Compared to 5.2.2-r3

Date: May 21, 2018

Changes

- Added a mechanism to protect against a replayed ARP broadcast message. To protect against Key Reinstallation Attacks (KRACK) in a 4-way handshake, it is required to use at least wpa_supplicant v2.6 with applied patches from https://w1.fi/security/2017-1/.

Limitations

- Same as in 5.2.2.

Known Issues

- Same as in 5.2.2.

2. Changes: 5.2.2-r3 Compared to 5.2.2-r2

Date: December 21, 2016

Changes

- Support added for Linux kernel up to 4.9.

Limitations

- Same as in 5.2.2.

Known Issues

- Same as in 5.2.2.

3. Changes: 5.2.2-r2 Compared to 5.2.2

Date: August 9th, 2015

Changes

- Support added for Linux kernel up to 4.1.
- The latest wpa_supplicant v2.4 recommended.
- Improved roaming documentation by adding instructions to disable roaming from wpa_supplicant. WF111 driver has its own roaming algorithm.

Fixes

- Fixed error handling when an incorrect WPA2 passphrase is given.
- Disabled RSSI averaging reset, which causes unfiltered RSSI measurements and unintended roaming.
- Improve radio performance in AP mode when temperature changes.
- Fix corrupted mib111_drv_coex_led.dat configuration file.

Limitations

- Same as in 5.2.2

Known Issues

- Same as in 5.2.2

4. Changes: 5.2.2 Compared to 5.1.0

Date: June 27th, 2014

Changes

- Support added for Linux kernels up to 3.14.
- Support for Cloaked/Hidden SSID.
- All files all delivered in one tar.gz package.
- Updated makefile-based build system.
- Moved firmware files to /lib/firmware/unifi-sdio. SDIO slot number is not in the path anymore.
- Added support for 3rd and 4th SDIO slots in the Linux OS.
- Disabled power save mode by default because of possible data loss. It can be re-enabled with "iwconfig wlan0 power on".
- Added wf111_supportinfo.sh script for collecting system information for support requests.
- Added configuration samples (wpa_supplicant_sample.conf) for wpa_supplicant.
- Added SIOCGIWESSID functionality in access point mode. Now it is possible to read the ESSID of WF111 in access point using "iwconfig wlan0" command.
- Removed the CCX support.
- Removed IBSS (ad hoc) mode.
- Removed the PowerPC® architecture support.

Fixes

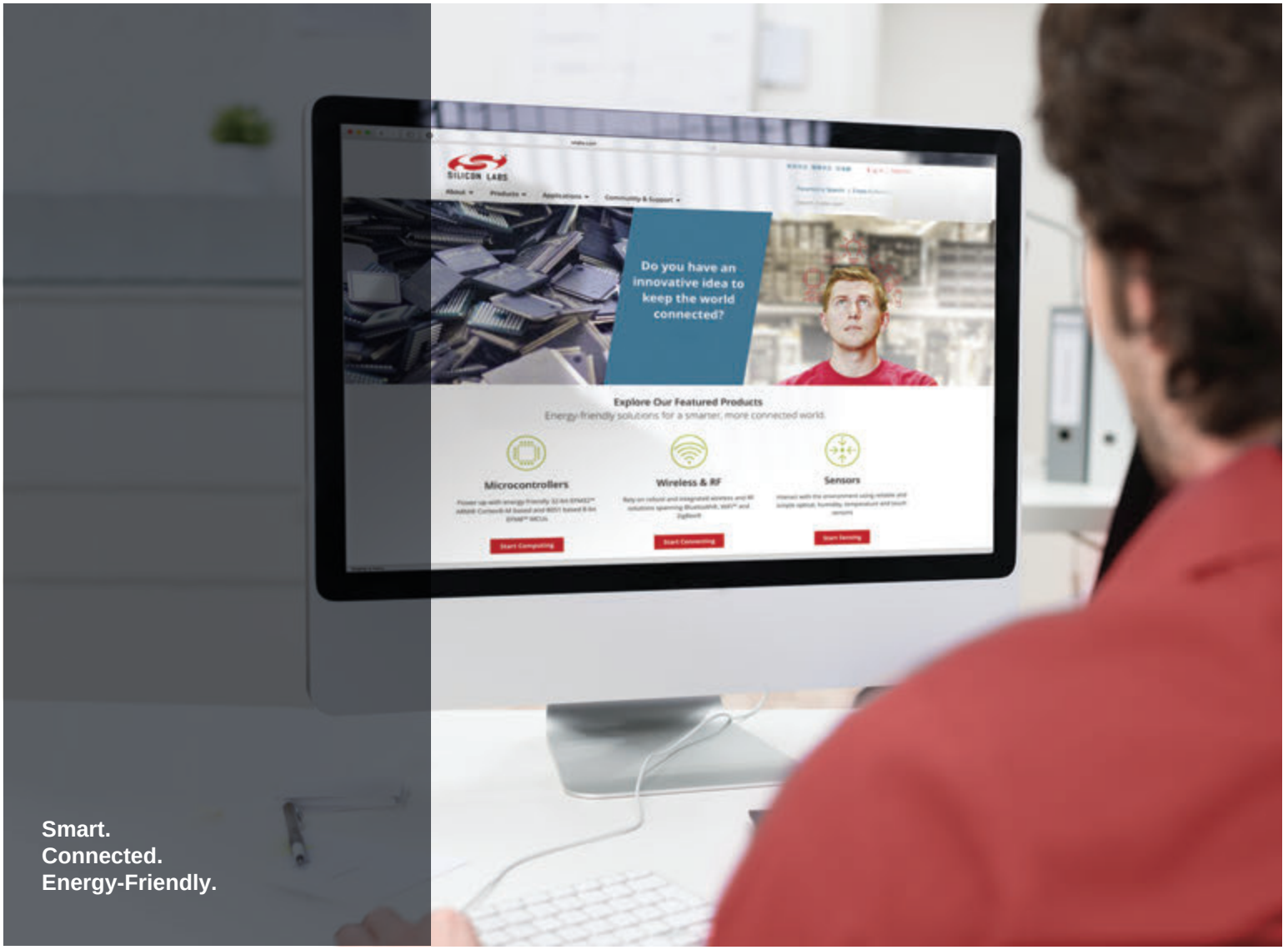
- A logical error could cause UniFi to reset when the user disconnects from an AP.
- Some memory leaked during turning the AP on/off. This could eventually cause the application to crash due to lack of memory.
- Cleaned the unnecessary data from output of wireless tools when in AP mode.
- Duplicate scan records with different SSIDs.
- WPA timeout too low for connections to some APs.
- Disassociation frames were not handled.
- Poor Rx throughput with WPA2 observed with some APs.
- Incorrect WEP key settings during a connection are now rejected and the keys are invalidated.
- Block Ack session not established with Cisco-AP 1252AG.

Limitations

- Station mode:
  - IBSS (ad hoc) support is removed completely.
  - Tx Block Ack is not supported due to interoperability issues with some popular commercial phones and also due to a reduction in throughput for TCP Tx in IEEE® 802.11n mode against some APs.
  - Data may be lost and the latency may increase significantly in power save mode.
- Access point mode:
  - Group re-keying is not supported.
  - Bandwidth may not be equally distributed among connected stations. In particular, IEEE 802.11n Block Ack (Rx) capability is only supported for one connection at a time.
  - AP mode does not support Tx Block Ack capability.

Known Issues

- In AP mode, stations which are in power save may experience dropped packets. The Wi-Fi host driver for the AP can buffer a maximum of 512 packets shared across all connections. This system limitation can cause stations in power save to experience dropped packets when the application sends traffic at high speed and with large packet size, filling up the buffer.
- Linux OS stability: TCP Rx stopped with WMMPS STA. When Wi-Fi station is operating with WMM-PS TCP Rx data streams and a significant amount of data is transferred, stream might stop after several hours. Workaround: Restart the data stream.
- In AP mode, all formats of Virtual LAN packets are not supported. Some types of Virtual LAN packets are dropped, which may cause problems in some environments.



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