======= Software Version TW-EAV510 AC 1.1.00-61 Released on 20190718 ========

Based on version 1.1.00-60 and added the following changes.

1. Fixed the issue that Port Forwarding list table can not show interface name 3G/4G/LTE correctly.

======= Software Version TW-EAV510 AC 1.1.00-60 Released on 20190510 ========

Based on version 1.1.00-59 and added the following changes.

- 1. Fixed the issue when click EWAN or PTM WAN's Disconnect/Connect button that makes 3G/4G/LTE connection down issue.
- 2. Added information to show running default gateway on WEB GUI. It can be found at WEB page Status -> Device.
- 3. Fixed some minor issues.
- 4. Show DSP code build date on device status page.
- 5. Added OpenVPN LAN to LAN support. (For TW-EAV510 AC-LTE only)

======== Software Version TW-EAV510 AC 1.1.00-59 Released on 20190306 ========

Based on version 1.1.00-58 and added the following changes.

1. Improved the USB dongle hotplug function. (only apply to TW-EAV510 AC)

======== Software Version TW-EAV510 AC 1.1.00-58 Released on 20190227 ========

Based on version 1.1.00-56 and added the following changes.

- 1. Supported Half Bridge function for 3G/4G LTE WAN interface. This option can be found at
- 2. Improved the keep alive function for 3G/4G LTE WAN.
- 3. Improved the system log display to prevent the log full by some regulare messages.
- 4. Improved the 3G/4G LTE recovery prodedure when dongle is jam.
- 5. Show boot loader version on WEB GUI.
- 6. Changed 3G/4G LTE network preference to LTE only as default. It is for TW-EAV510 AC-LTE only.
- 7. Disabled DSL capability SRA option as default.

======= Software Version TW-EAV510 AC 1.1.00-56 Released on 20190130 =======

Based on version 1.1.00-55 and added the following changes.

1. Fixed the wrong memory allocation issue.

======== Software Version TW-EAV510 AC 1.1.00-55 Released on 20190129 ========

Based on version 1.1.00-54 and added the following changes.

1. Fixed the bug that some WEB GUI pages can not display correctly.

======== Software Version TW-EAV510 AC 1.1.00-54 Released on 20190129 ========

Based on version 1.1.00-53 and added the following changes.

1. Improved the OpenVPN client function can support both IP and domain name for server field.

- 2. Added new patch from chipset vendor.
- 3. Improved the driver for TW-EAV510 AC-LTE built-in LTE module.
- 4. Improved the system log to show related WAN interface when sending DHCP renew regust.

======== Software Version TW-EAV510 AC 1.1.00-53 Released on 20190107 =======

Based on version 1.1.00-52 and added the following changes.

- 1. Fixed the issue that firmware upgrade failed sometimes.
- 2. Issue fixed for LRO error message.
- 3. Added 3G/4G LTE into WAN mode setting.

Note: Issue 1 must upgrade .bfw file to upgrade the boot loader version to 00.01.11rc-02.

======== Software Version TW-EAV510 AC 1.1.00-52 Released on 20190103 ========

Based on version 1.1.00-51 and added the following changes.

- 1. Improved the style of table/button on WEB GUI.
- 2. Improved the LTE module power reset procedure.

======== Software Version TW-EAV510 AC 1.1.00-51 Released on 20181218 ========

Based on version 1.1.00-50 and added the following changes.

1. Fixed the issue that language selection and firmware upgrade do not work with Safari browser.

======== Software Version TW-EAV510 AC 1.1.00-50 Released on 20181210 ========

Based on version 1.1.00-49 and added the following changes.

- 1. Improved the DSL detectoin behavior.
- 2. Added IMEI information for TW-EAV510 AC-LTE on WEB GUI.
- 3. Improved the 3G/4G log display.
- 4. Improved the version display of LTE module.

======== Software Version TW-EAV510 AC 1.1.00-49 Released on 20181126 ========

Based on version 1.1.00-48 and added the following changes.

- Changed wording "EP06" to "LTE-CAT6".
- 2. Improved the load balancing function for SSL connection.

======= Software Version TW-EAV510 AC 1.1.00-48 Released on 20181113 ========

Based on version 1.1.00-47 and added the following changes.

Added OpenVPN support. (For TW-EAV510 AC-LTE only)

======== Software Version TW-EAV510 AC 1.1.00-47 Released on 20181108 ========

Based on version 1.1.00-46 and added the following changes.

- 1. Added patch for "TCP ACK Loop" and "TCP DUP ACK".
- 2. Once LTE module is down, wait for 3 seconds then up again everytime.
- 3. Added Linux fine tune script.

======== Software Version TW-EAV510 AC 1.1.00-46 Released on 20181026 ========

Based on version 1.1.00-45 and added the following changes.

- 1. Fixed the bug that WEB GUI will crash when setting 3G/4G/LTE network preference.
- 2. Updated Finnish translation.
- 3. Changed TW-EAV510 AC-LTE CAT 6 default prefix of Wi-Fi SSID to "TW-EAV510AC".

======== Software Version TW-EAV510 AC 1.1.00-45 Released on 20181017 ========

Based on version 1.1.00-44 and added the following changes.

- 1. Improved the network informatoin update for Quectel module only.
- 2. Changed wording "USB dongle" to "LTE module", and "plugged" to "detected" for all TW-EAV510AC series.
- 3. Improved the dirver support for Huawei E3276 LTE dongle.
- 4. Improved the keep alive function for LTE connection.

======= Software Version TW-EAV510 AC 1.1.00-44 Released on 20181008 ========

Based on version 1.1.00-43 and added the following changes.

1. Added QENG/QCAINFO/QNWINFO AT command for Quectel module only.

======= Software Version TW-EAV510 AC 1.1.00-43 Released on 20181003 ========

Based on version 1.1.00-39 and added the following changes.

- 1. Added interface selection for port forwarding.
- 2. Removed the WPS PIN code support function to improve the security.
- 3. Improved the 3G/4G LTE dongle suppport module.
- 4. Updated Finnish translation.

======= Software Version TW-EAV510 AC 1.1.00-39 Released on 20180816 ========

Based on version 1.1.00-38 and added the following changes.

- 1. Added WAN interface selection for port forwarding setting.
- 2. Hide WiFi key display and can be shown when move mouse over the field.

======= Software Version TW-EAV510 AC 1.1.00-38 Released on 20180514 =======

Based on version 1.1.00-37 and added the following changes.

- 1. Fixed the DNS security issue CVE-2017-14491.
- 2. Fixed the issue that 2.4G auto channel+11N only+40MHz, iPhone7 cannot connect issue.
- 3. Fixed the bug that NAT lookback is not work when internal and external port are different.
- 4. Fixed some WEB GUI minor bugs.

======= Software Version TW-EAV510 AC 1.1.00-37 Released on 20180413 ========

Based on version 1.1.00-36 and added the following changes.

1. Fixed the issue that IPTV has mosaic when doing speedtest with upload direction.

======= Software Version TW-EAV510 AC 1.1.00-36 Released on 20180401 ========

Based on version 1.1.00-35 and added the following changes.

- 1. Improved the DHCP Server module to fix the problem that over 30 clients connecting at the same time.
- 2. Fixed the bug that Statistics-> Interface shows TX error always with ADSL connection.
- 3. Fixed the probelm that Load Balancing function can not be disabled if 3G/4G connection is the first priority.
- 4. Improved the watch dog monitor function.
- 5. Improved the DHCP Client module to fix the problem that DHCP PID is not removed correctly.

======== Software Version TW-EAV510 AC 1.1.00-35 Released on 20180321 ========

Based on version 1.1.00-34 and added the following changes.

1. Fixed the bug that port forwarding table shows many UPnP entries with Plex media server.

======= Software Version TW-EAV510 AC 1.1.00-34 Released on 20180313 ========

Based on version 1.1.00-33 and added the following changes.

- 1. Added Zhone special customization and sfotware requirements.
- 2. Added G.INP option back and set to disable as default.
- 3. Updated auto firmware path for TW-EAV510ACv2 and TW-EAV510AC-LTE.

======== Software Version TW-EAV510 AC 1.1.00-33 Released on 20180305 ========

Based on version 1.1.00-32 and added the following changes.

- 1. Fixed the issue that ADSL+LTE dongle may not work correctly after software rebooting.
- 2. Changed MAC display format to xx:xx:xx:xx:xx and all use uppercase.
- 3. Fixed the bug that refresh button will make PPPoE/LTE connection connect and disconnect on status page.
- 4. Enabled hardware watchdog for TW-EAV510ACv2 and TW-EAV510AC+LTE.
- 5. Improved the LTE dongle support module for TW-EAV510ACv2 and TW-EAV510AC-LTE.
- 6. 3G/4G/LTE Info page can show current band frequency for TW-EAV510AC-LTE.
- 7. Fixed the NAT loopback issue with 3G/4G LTE connection.

======== Software Version TW-EAV510 AC 1.1.00-32 Released on 20180227 ========

Based on version 1.1.00-31 and added the following changes.

- 1. Fixed the bug that NAT loopback function may not work in some cases.
- 2. Improved the VLAN ID setting and won't block VLAN ID 1~10 now.

======== Software Version TW-EAV510 AC 1.1.00-31 Released on 20180222 ========

Based on version 1.1.00-30 and added the following changes.

Improved the load balancing multi-WAN handling.

2. Improved Reboot and Firmware Upgrade WEB GUI page, it will jump to login page directly after rebooting or upgrading done.

======== Software Version TW-EAV510 AC 1.1.00-30 Released on 20180213 ========

Based on version 1.1.00-29 and added the following changes.

- 1. Removed some uncessary files in httpd module.
- 2. Added note message for load balance function on WEB GUI.
- 3. Added Interface selection for DDNS function on WEB GUI. The interface must be specified when load balance function is enabled.

======== Software Version TW-EAV510 AC 1.1.00-29 Released on 20180212 ========

Based on version 1.1.00-28 and added the following changes.

- 1. Chaned default TKIP AES Group Key Update Timer to 3600s from 86400s.
- 2. Improved the DHCP client module to prevent the case that traffic will be stoped for 1~2 seconds when doing WAN IP renew.

Note: The NAT Loopback won't work when client and server are on the same PC. In case, can just use local host IP 127.0.0.1 to test server function.

======= Software Version TW-EAV510 AC 1.1.00-28 Released on 20180208 ========

Based on version 1.1.00-26 and added the following changes.

- 1. Added Load Balance support. The optoin can be found at WAN -> Default Routing. Once checked, it can use bandwidth of all WAN connections.
- 2. Supported Huawei E3276 dongle.
- 3. Removed HWVER file.
- 4. Changed RESET button behavior as below.

0~1s: Do nothing.

1s~5s: Do firmware upgrade automatically.

over 5s: Reset to factory default.

======== Software Version TW-EAV510 AC 1.1.00-26 Released on 20180126 ========

Based on version 1.1.00-25 and added the following changes.

- 1. Improved Virtual Server port range checking rule, it is now follow list order for traffic matching.
- 2. Improved the configuration check function to avoid configuration conflict issue between different firmware version.

======== Software Version TW-EAV510 AC 1.1.00-25 Released on 20180124 ========

Based on version 1.1.00-24 and added the following changes.

- 1. Fixed the problem that WiFi will be lost after upgrading without reset to factory default.
- 2. Supported DDNS updating interval setting on WEB GUI.

======== Software Version TW-EAV510 AC 1.1.00-24 Released on 20180123 ========

Based on version 1.1.00-23 and added the following changes.

- 1. Updatted the Finnish translation on WEB GUI.
- 2. Changed the default time zone server.
- 3. Improved the performance for bridge channel.
- 4. Supported Huawei E392 dongle.
- 5. Supported two more DDNS service provider, TZO and dyndns.dk.

======= Software Version TW-EAV510 AC 1.1.00-23 Released on 20180104 ========

Based on version 1.1.00-22 and added the following changes.

- 1. Added 3G/4G LTE IPv6 information to IPv6 status page.
- 2. Improved 3G/4G LTE module.
- 3. Added L2TP/IPSec function support on WEB GUI.

Note:

- 1. Still use DSL drver version v134fc17.
- 2. No longer to support pure L2TP connection, it is L2TP/IPSec always to support Android, MacOS/iOS and Windows 10.
- 3. 3G/4G LTE IPv6 may still not work well and keep working on it.

======== Software Version TW-EAV510 AC 1.1.00-22-new-DSP Released on 20171227 ========

Based on version 1.1.00-22 and added the following changes.

- 1. Changed to new DSL PHY Driver version v136h720 to fix two issues below.
 - -Fixed low download rate with ZTE DSLAM(BCM chip)
 - -Fixed the large attenuatoin value display issue on WEB GUI.

Note: Old drver version: v134fc17.

======== Software Version TW-EAV510 AC 1.1.00-22 Released on 20171227 ========

Based on version 1.1.00-21 and added the following changes. 1. Fixed the bug that DDNS update not work well on 3G/4G LTE connection.

======== Software Version TW-EAV510 AC 1.1.00-21 Released on 20171227 ========

Based on version 1.1.00-19 and added the following changes.

- 1. Fixed the bug that DDNS update not work well on 3G/4G LTE connection.
- 2. Removed Interface select option from DDNS setting page. It is follow the default gateway interface.
- 3. Changed DDNS page refresh timer to 120s from 60s.

======== Software Version TW-EAV510 AC 1.1.00-20 Released on 20171220 ========

Based on version 1.1.00-19 and added the following changes.

1. Fixed the bug that devcie can not reset to factory default after upgrading.

Note: It will force router to reset to factory default after upgrading to version 1.1.00-19.

======= Software Version TW-EAV510 AC 1.1.00-19 Released on

20171220 ======

Based on version 1.1.00-18 and added the following changes.

- 1. Updated new default settings for DSL driver.
- 2. Improved the DDNS update schedule.
- 3. Fixed the bug that ACL can not block PING from WAN side correctly.
- 4. Added modify function for ACL, IP/Port Filtering and Port Forwarding on WEB GUI.
- 5. Removed some unnecessary syslog to prevent any confusion.
- 6. Fixed the bug that ACL default settings for LAN ICMP is wrong.
- 9. Improved the LAN/WLAN Clients table display on WEB GUI.
- 10. Updated default settings for WLAN 2.4G and 5G.
- 11. Updated default settings for DoS. It is set to disable as default.
- 12. Fixed some minior issues.
- 13. Enabled Watchdog function as default. It will be trigged after 30s when system is jam.

Note: It will force router to reset to factory default after upgrading to version 1.1.00-19.

======== Software Version TW-EAV510 AC 1.1.00-18 Released on 20171114 ========

Based on version 1.1.00-17 and added the following changes.

1. Updated Finnish language for WEB GUI.

======= Software Version TW-EAV510 AC 1.1.00-17 Released on 20171111 ========

Based on version 1.1.00-14 and added the following changes.

- 1. Changed 2.4G default channel to Auto and bandwidth to 20MHz.
- 2. Supported keep alive function for 3G/4G LTE dongle.
- 3. Modified default ACL setting and allows PING/HTTP/HTTPS to device's LAN IP only.
- 4. RESET Button support behavior below:
- Less than 2s, trigger auto firmware upgrade.
- 2s~5s, just reboot.
- over 5s, reset to factory default.

======= Software Version TW-EAV510 AC 1.1.00-14 Released on 20171108 ========

Based on version 1.1.00-09 and added the following changes.

- 1. Support LED on/off by pressing WiFi button.
 - Press 1 sec and release can trigger LED on/off function.
 - Press and hold over 5 seconds can trigger WiFi on/off

function.

- 2. Updated Finnish language for WEB GUI.
- 3. Improved syslog display.
- 4. Fixed some minor issues.
- 5. Fixed the issue that DoS will block mutlitcast traffic.
- 6. Improved the WiFi key and can accept special character like "? T5rE39KL!x?gk!zQA?".

======== Software Version TW-EAV510 AC 1.1.00-09 Released on 20171025 ========

Based on version 1.1.00-07 and added the following changes.

- 1. Fixed the issue that LAN PC will get IP address from WAN side sometimes.
- 2. Supported HTTPS access to router's WEB GUI.
- 3. Supported Interface Grouping for WAN pure bridge port and specify LAN/WLAN port.
- 4. Added Multicast setting on WEB GUI.
- 5. Set default WEB GUI login password to be the same as WiFi key.
- 6. Added TR069 setting page with hidden link http://192.168.0.254/tr069config.asp.
- 7. Added new patch for Wireless driver to prevent KRACK attack.

======= Software Version TW-EAV510 AC 1.1.00-07 Released on 20171003 =======

Based on version 1.1.00-06 and added the following changes.

- 1. IPSec Gateway Address can support both IP address and domain name.
- 2. Supported 3G/LTE band mode setting for TW-LTE v3 dongle.
- Updated MCC/MNC list for Finland.
- 4. Added EWAN port status to WEB GUI. It is located at Status -> LAN Port.
- 5. Improved the 3G/4G dongle detection method.
- 6. Added TCP/UPD option for IP Port Filtering web page.
- 7. Changed some wording display on WEB GUI.

======== Software Version TW-EAV510 AC 1.1.00-06 Released on 20170830 ========

Based on version 1.1.00-05 and added the following changes.

- 1. Fixed the bug that 3G/4G LTE dongle disconnect/connect button not work issue with Finnish language.
- 2. Updated MCCMNC table for TeliaSonera.
- 3. Improved the log display in Console.
- 4. Added DoS attack log to System Log with level Alert.
- 5. Updated new WiFi driver to v3.6.2 (2017-07-07 from v3.6.1(2017-05-19).

======== Software Version TW-EAV510 AC 1.1.00-05 Released on 20170824 ========

Based on version 1.1.00-04 and added the following changes.

- 1. Added new description for ACL setting page.
- 2. Added 3G/4G LTE dongle band selection and AT command field in 3G/4G LTE settings page.
- 3. Set WPS disabled as default.
- 4. Set Port Forwarding enabled as default.

Note: AT command response can be found in system log.

======= Software Version TW-EAV510 AC 1.1.00-04 Released on 20170816 ========

Based on version 1.1.00-03 and added the following changes.

- 1. Moved DoS to section Firewall.
- 3. Changed System Log display level to informational.
- 4. Improved the system log display, top one has the latest log shown.

- 5. Fixed the bug that tracert will show wrong model name.
- 6. Improved the WAN interface name display on WEB GUI.
- 7. Changed default gateway priority to 4G/VDSL/ADSL/EWAN.
- 8. Change DHCP Pool calculator algorithm, if last one is 1 or 254 with class C, then pool range is $100\sim200$ always.
- 9. Updated Finnish translation for System Log page.
- 10. Improved the 3G/4G operator name display in 3G/4G/LTE status page.

======= Software Version TW-EAV510 AC 1.1.00-03 Released on 20170816 ========

Based on version 1.1.00-02 and added the following changes.

- 1. Removed TR069 function totally.
- 2. Updated Finnish translation.
- 3. Enable G.INP option on WEB GUI. WAN -> DSL Settings.
- 4. Added 3G/4G status page and mode.
- 5. Added patch to improve the trhoughput between LAN/WLAN and WAN.
- 6. Make IPv6 disabled as default.

======== Software Version TW-EAV510 AC 1.1.00-02 Released on 20170811 ========

Based on version 1.1.00-01 and added the following changes.

- Added DDNS dy.fi support.
- 2. Updated Finnish translation for WEB GUI.
- 3. Supported remote firmware upgrade from Telewell server automatically.
- 4. Changed WiFi default security to WPA2 Mixed, both TKIP and AES enabled.
- 5. Updated WiFi default PSK to up to 16 characters.
- 6. Improved some wording display on WEB GUI.
- 7. Supported Auto Reboot function on WEB GUI.