Date: 25th April 2022

WIFI SENSOR FIRMWARE VERSION 10-0-6-0 RELEASE NOTES

This document describes how to update WiFi Sensors to firmware version 10-0-6-0. Update from version 10-0-1-1 and later is possible via device web page. Older firmware versions (10-0-1-0 and 10-0-0-8) needs to be updated via USB cable and software WiFiSensorUtility. This software can be used for update via USB for all versions of firmware. Software can be obtained from technical support. **Before proceeding update, please read instruction at this document carefully.**

OVERVIEW

Supported device types: W0710, W0711, W0741, W3710, W3711, W3721, W3745, W4710, W5714, W7710
Device serial numbers: supported are all production devices (till date of this file)
Important notes:

- Do not upload firmware into unsupported types of devices. Uploading into unsupported device may to damage your device permanently.
- Upload firmware obtained from manufacturer or official distributor only. Firmware from unknown source may to compromise device security.
- Do not turn off device or disconnect WiFi during the update process.
- Do not refresh web browser page or close browser window during update.
- Update process should not be terminated manually. Please wait till update ends.
- Update process via device web pages takes one minute. Update process via USB take approximately 3 minutes.
- Firmware update to version 10-0-6-0 from the older versions should persist device settings.
- When update is performed at Access point mode and mode was switched manually by buttons, update will end with timeout error message. This is due to automatic switching device into client mode after device restart.
- Firmware downgrade via web pages is not supported.
- It is widely recommended disable on PC firewalls and antivirus software during firmware update.

UPDATE PROCEDURE

1. Please make sure that device is not equipped by firmware 10-0-0-8 or 10-0-1-0. Update from this firmware version needs to be performed by WiFiSensorUtility software.
2. Open device webpages at Advanced options / Service menu / Firmware update and insert firmware .img file.
3. Wait until the update process is over. This will take approximately one minute.
4. Check device settings after update.

FIRMWARE CHANGELOG

Version 10.0.6.0 - update-EAP (2022-04-25):
- **Overview**
  - Major update which improves capabilities of the device
  - Update to version 10.0.6.0 is recommended for users which want to use WiFi Enterprise security
- **Improvements**
  - Added support for WiFi EAP security (IEEE 802.1X)
- **Bugfixes**
  - Minor bugfixes at webpages
- **Checksum**
  - SHA1 WiFi-10-0-6-0.img: 1ad639167274aa18d646b8d0828c71848221aecb

Version 10.0.5.0 - update-6 (2022-02-09):
- **Overview**
  - Minor update which improves capabilities of the device
  - Update to version 10.0.5.0 is recommended for users of SNMP protocol
- **Improvements**
  - Added support for SNMPv3 protocol. Supported SNMPv3 modes are NoAuthNoPriv, AuthNoPriv, AuthPriv. Supported authentication MD5, SHA and privacy DES, AES128.
- **Bugfixes**
  - Fix of typos at Dutch translations
- **Checksum**
  - SHA1 WiFi-10-0-5-0.img: ab7f8f40dd017187913f3b0b8c14046cc55c50c2

Version 10.0.4.0 - update-5 (2021-12-15):
- **Overview**
  - Major update which improves capabilities of the device
  - Update to version 10.0.4.0 is recommended due to new features
- **Improvements**
  - Added support for SNMP protocol (SNMPv1 and SNMPv2c)
  - Added capability for save and restore device setup into backup file via webpages
  - Changed behavior of alarm LED (one alarm LED is blinking, multiple alarms LED is solid)
  - Changed input filter to be able add character & into URL for Cloud user server
  - Improvement of factory default 1 restore procedure
- **Bugfixes**
  - Fixed showing 'nan' text instead of Error in case of measurement error from humidity sensor
  - Fixed vulnerability related to ping utility at webserver (CVE-2021-21966)
- **Checksum**
  - SHA1 WiFi-10-0-4-0.img: 87d450439548cfa2c6fa0f7b5771cf650ecd8689

Version 10.0.3.0 - anniversary-update (2021-09-23):
- **Overview**
  - Major update which improves capabilities of the device
  - With release this firmware we are celebrating first year anniversary of WiFi sensors production
  - Update to version 10.0.3.0 is recommended due to new features
- **Improvements**
  - Added support for connection into backup WLAN (Settings / Network / Advanced networks / Backup Wifi network)
  - Symbol "MEMORY" at LCD display is shown when there are unsent values inside memory for Cloud

- Improved security of web server
- **Bugfixes**
  - Fixed potential issue refusing download diagnostic file when device security is enabled
- **Checksum**
  - SHA1 WiFi-10-0-3-0.img: c67c6ab87f9fc83b4a188d0661e70372cefb4f72

Version 10.0.2.2 - update-4 (2021-07-15):
- **Overview**
  - Major update which improves capabilities of device
  - Update to version 10.0.2.2 is recommended due to new features
- **Improvements**
  - Asynchronous message into Cloud is sent now after connection into WLAN
  - Increased size of memory for unsent messages into Cloud from 960 to 2240 records. This means up to 14 days recording at Cloud sending interval 10 min.
  - Added capability to set DHCP hostname
  - Added capability for set sea level compensation for barometric pressure measurement at (m)
- **Checksum**
  - SHA1 WiFi-10-0-2-2.img: 6fd58e390769046d42c015d4cd13ce522d4bc5bb

Version 10.0.2.1 - hotfix-1 (2021-05-13):
- **Overview**
  - Minor update with security fixes only
  - It is strongly recommended update to version 10.0.2.1
- **Bugfixes**
  - Improved stability of internal webserver (WIFI-0016)
  - Fixed FragAttacks vulnerabilities (CVE-2020-24588, CVE-2020-26140, CVE-2020-26143) (WIFI-0017)
  - Added kind for W3745 into SDK files
- **Checksum**
  - SHA1 WiFi-10-0-2-1.img: d3d6f00941f1e92bd817a84d264f7e69ae613433

Version 10.0.2.0 - update-3 (2021-02-10):
- **Overview**
  - Major update which improves capabilities of device
  - Update to version 10.0.2.0 is recommended due to new significant features
- **Improvements**
  - Capability to provide current values via http GET via files values.json and values.xml at port 80
  - Added support for STARTTLS encryption for SMTP protocol (WIFI-0005)
  - Added support for W3745 device
- **Bugfixes**
  - Fix of typos at the translations
  - Fix of forwarding to main page after setup of WLAN parameters at some types of cell phones (WIFI-0014)
  - Fix of forwarding to main page after setup of DNS IP or Gateway IP at some types of cell phones (e.g. LG V30)
  - Fix of typos at SDK files modbus.zip and cloud.zip
  - Fixed potential memory allocation vulnerabilities (CVE-2021-22636, CVE-2021-27429, CVE-2021-27502)
- **Checksum**
  - SHA1 WiFi-10-0-2-0.img: 31f8b3102276b3cc93e6c7b69631eafb276b0e5e

Version 10.0.1.1 - update-2 (2020-12-11):
- **Overview**
  - Minor update which adds capability to firmware update via Web pages

- Update from version 10.0.1.0 is optional
- **Improvements**
  - Capability for local OTA update via device Web
- **Checksum**
  - SHA1 WiFi-10-0-1-1.img: 0d99c189e07a9a5c707a4726649603e102c9b060

Version 10.0.1.0 - update-1 (2020-11-06):

- **Overview**
  - 2nd production version with major bugfixes and improvements
  - Update from version 10.0.0.8 to version 10.0.1.0 is recommended
- **Improvements**
  - Added support for WPA3 and WPA2 PMF at Client mode
  - Capability to set manually time
  - Active acoustic is shown at main page
  - Graphic improvements at channel detail
  - Optimization for Cloud protocol
  - Optimization of Web server
  - Added system for detection of conflict of LAN parameters at setup (WIFI-0002)
  - Units are shown at edit dialogs at setup
  - Added capability to set power mode
  - Improvements at library page (JSON SDK)
  - Improvement at diagnostic file
- **Bugfixes**
  - Fix of issue when neighbor WiFi networks are not found (WIFI-0003)
  - Fix of issue when alarm state was not deactivated at manual Digi probe detection request (WIFI-0006)
  - Fix of issue when system alarm was not deactivated at manual Digi probe detection request
  - Fix of acoustic for system alarms (WIFI-0009)
  - Added error message when is not possible download diagnostic file (e.g. using old MS Edge browser)
  - Fix at the Czech translations (WIFI-0008)
  - Fix at the Dutch translations

Version 10.0.0.8 - RTM (2020-08-31):

- **Overview:**
  - Initial production release version
  - Older pre-production firmware versions are not supported anymore
- **Downgrade capability:**
  - Downgrade to firmware version 10-0-0-8 is not recommended
  - Downgrade is possible via USB cable and software WiFiSensorUtility only
  - Before starting downgrade, please make sure that WPA3 and WPA2 PSK security for Client mode is not used

SOFTWARE VALIDATION NOTE

In case software / firmware validation is needed by application, following table allow to recognize whether new software re-validation is required after firmware update. Software re-validation is recommended in case of firmware changes related to measurement or alarming. Table below is a manufacturer recommendation only. End-user may to have own regulations related to software validation.

New firmware version	Previous firmware version								
	10.0.5.0	10.0.4.0	10.0.3.0	10.0.2.2	10.0.2.1	10.0.2.0	10.0.1.1	10.0.1.0	10.0.0.8
10.0.6.0	no	no	Yes [2)3)]	Yes [2)3)]	Yes [2)3)]	Yes [2)3)]	Yes [2)3)]	Yes [2)3)]	Yes[1)2)3)]
10.0.5.0	-	no	Yes [2)3)]	Yes [2)3)]	Yes [2)3)]	Yes [2)3)]	Yes [2)3)]	Yes [2)3)]	Yes[1)2)3)]
10.0.4.0	-	-	Yes [2)3)]	Yes [2)3)]	Yes [2)3)]	Yes [2)3)]	Yes [2)3)]	Yes [2)3)]	Yes[1)2)3)]
10.0.3.0	-	-	-	no	no	no	no	no	Yes[1)]
10.0.2.2	-	-	-	-	no	no	no	no	Yes[1)]
10.0.2.1	-	-	-	-	-	no	no	no	Yes[1)]
10.0.2.0	-	-	-	-	-	-	no	no	Yes[1)]
10.0.1.1	-	-	-	-	-	-	-	no	Yes[1)]
10.0.1.0	-	-	-	-	-	-	-	-	Yes[1)]

Notes:

This table cover firmware upgrade only. In case of firmware downgrade, full re-validation is recommended.

no … No software re-validation is needed after firmware update. But please make sure that data are properly sent from device into data acquisition system.

1) … There are changes related to system alarms and acoustic signalization. In case these features are used, please re-validate them.

2) … There is minor change related to measurement from humidity sensor. If measurement from humidity sensor is used, may to consider re-validation of them.

3) … There is change of behavior of alarm LED. If alarm LED is used, please re-validate this feature.

TECHNICAL SUPPORT AND FEEDBACK

Technical support for WiFi sensors is provided by distributor of the device. In case of any issue feel free contact us at email support@cometsystem.com. Together with support request is recommended to send diagnostic file download from the device. **We highly appreciate feedback from end user side regardless is positive or negative. Let us know about your experiences and potential improvements of our products.**

Comet R&D team