
KeContact P30

Software release notes Package 1.5

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Automation by innovation.

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1. General

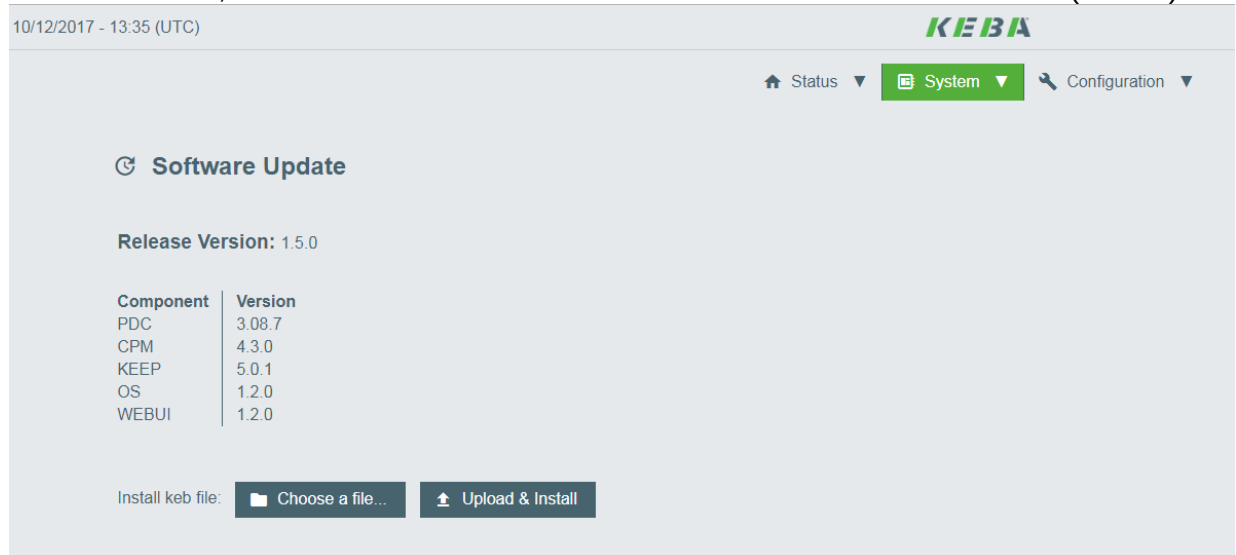
Purpose of this document is to inform about the changes of the latest software and firmware version. Detailed descriptions and instructions about the new features can be found in the product manuals. The content is categorized as enhancements; changes because of normative requirements; and bug fixes.

This new software brings a new system architecture. Therefore the old database will be deleted during the update and a new database is created. Unfortunately, not all user-specific data is transferred. Therefore it could be, that the ConnectorIDs are reassigned. Also the local whitelist is deleted and RFID Tokens have to be taught again.

Please consider this by the updating of your system, and check if any user specific data has been changed during the update.

1.1. Identification:

After installation, the software version 1.5 can be read on the web based interface (WebUI).



1.2. Compatibility information

This firmware is compatible with all KeContact P30 x-series charging stations and connected KeContact P30 c-series in slave mode.

To identify your charging station, please compare your product code with the product codes table in the installation manual.

Below you will find a list of the most important implemented features and fixed bugs.

1.3. Further Documents and Information

<http://www.keba.com/en/emobility/service-support/downloads/Downloads>

- User manual
- Installation manual
- Configuration manual
- FAQ for users and commissioning

2. Version Package 1.5

Date of release: 27.10.2017

Notice

The SW package 1.5 can only be installed on devices which already have installed the SW package 1.4.

2.1. Package components

The name file of the package is **kemove-bundle-p30-oneoff-1.5.0_40044.keb**
The current package contains the following components.

Version	Download
CPM	4.3.0
KEEP	5.0.1
P30 PDC	3.08.7
OS	1.2.0
WebUI	1.2.0

2.2. Implemented features and improvements

2.2.1. Improvement of the Housekeeping

The performance of the system has been improved by reducing the CPU usage and overall system load.

2.2.2. Reduction of the Boot time

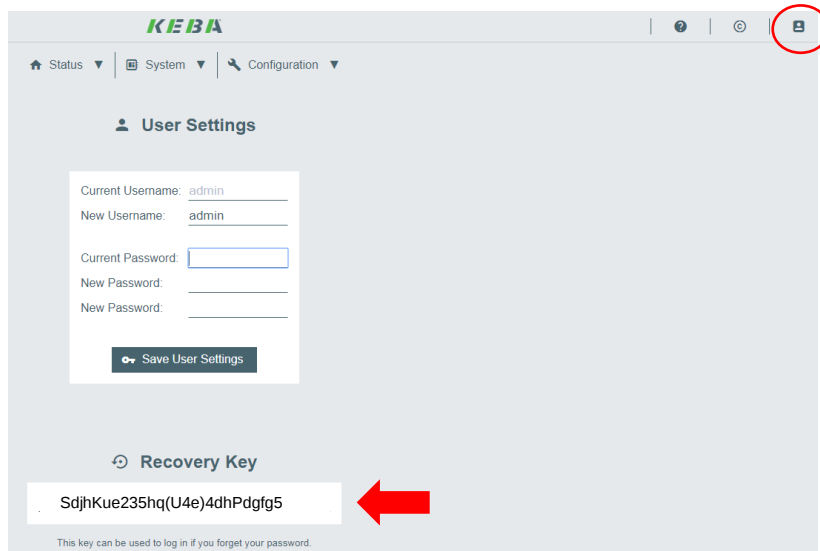
The time needed to reboot the P30 has been reduced.

2.2.3. WebUI password reset

In case you forget your password, you can use the unique recovery key of your P30 x-series to reset the password.

You can find your recovery key in the User settings.

Please check the configuration manual for detailed information.



2.2.4. Improvement NTP synchronisation

During the start-up of the wallbox the system tries to synchronise the time (UTC) via NTP. If the system has no internet access, the last available date is set as the valid time for the usage of the certificates.

2.2.5. Load management improvement: available current recalculation

On a master-slave installation, the calculation of the available current is triggered even when an EV has stopped charging but it is still plugged in.

2.2.6. Behaviour in case of power cut

After a power cut, all ongoing charging sessions are closed and new charging sessions are started if the EVs are still plugged in.

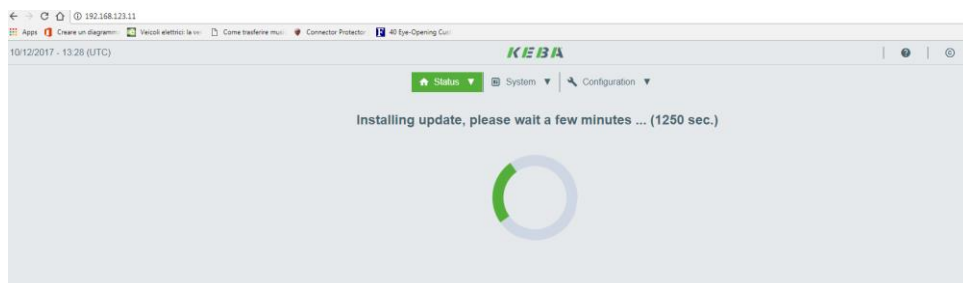
2.2.7. Security improvement

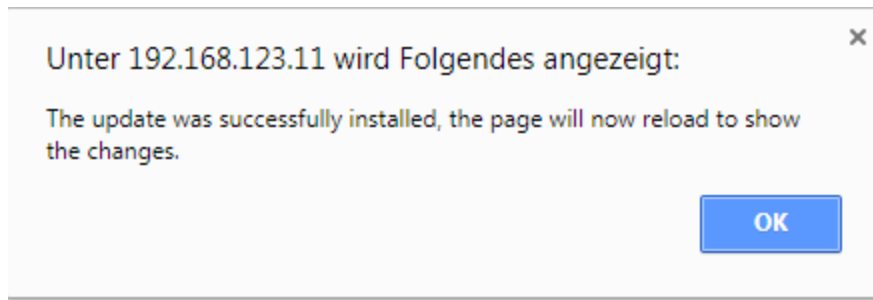
Updates are now encrypted instead of just being protected with the password.

2.2.8. Update feedback

The visual feedback during update has been improved. The WebUI shows the actual status of the update and provides feedback on whether the update has been successfully completed. During the update the 4 LED segments flash orange (breathing mode).

No charging session is possible during the update.





2.2.9. New feature: WIFI

With this new feature it is now possible to activate the already built-in WI-FI module in the electronics of the KeContact P30 x-series.

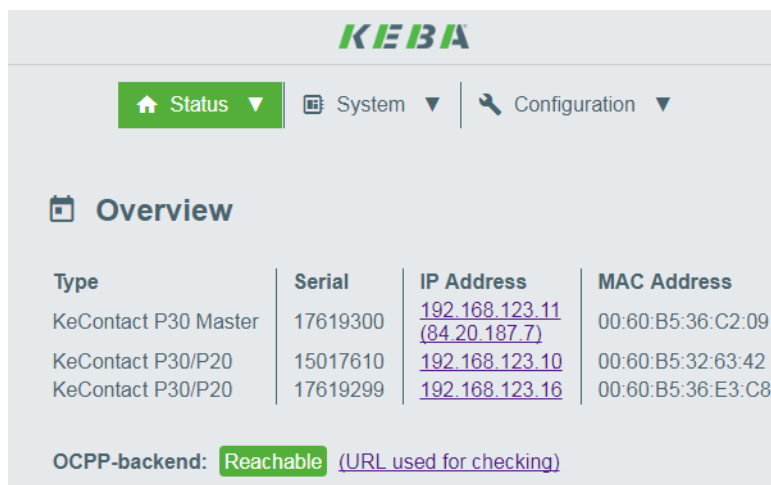
You can configure your KeContact P30 x-series to connect to an existing WI-FI network or to be used as hotspot. For more details on how to configure and use the WI-FI function please read the configuration manual.

2.2.10. More information in the logs

The logs and diagnostics downloads have been enhanced to deliver more information on the wallbox. The WebUI includes all logs to download.

2.2.11. More information in the WebUI

In the overview section of the WebUI the IP Addresses and MAC Addresses of the master and slave wallboxes are shown.



2.2.12. RFID whitelist

The master broadcasts its RFID whitelist to the slaves. Each Slave can only store the first 20 RFID tags. Should any slaves go offline, they will only be able to use their local whitelist based on a maximum of 20 RFID tags. Please read the configuration manual for more details.

2.2.13. Authorization Disabled

When the Authorization in the WebUI is set to OFF, the LEDs of the P30 Master and Slaves will flash green.

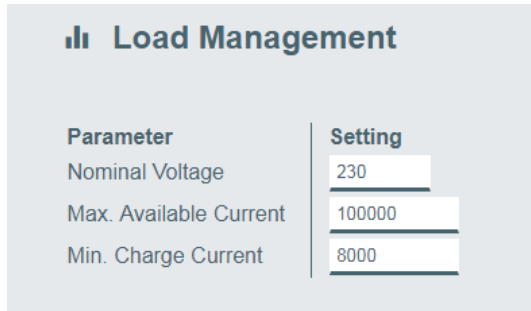
2.2.14. RFID Teaching

The teaching process has been changed. Please read the configuration manual where you can find detailed information about this process.

2.3. Fixed bugs

2.3.1. Keyboard inputs

It is now possible to select the value of the maximum or minimum current and input a new value.



Parameter	Setting
Nominal Voltage	230
Max. Available Current	100000
Min. Charge Current	8000

2.3.2. Load management recalculation

In the past, if a Master-Slave installation had no backend connection and the backend connection was established again during the charging session, it was possible for the load management to execute an incorrect calculation. The KeContact P30 is now able to manage the case of disconnection to the backend and execute correct calculations.

2.3.3. OCPP GetDiagnostic

GetDiagnostic upload now works with all FTP servers. Error on FTP Code 150 is fixed.

2.3.4. OCPP ResetRequest

A bug is fixed where the Reset command could randomly stall.

2.3.5. OCPP UnlockConnector

The UnlockConnector command no longer stalls.

2.3.6. Configuration of the serial numbers of slaves via WebUI

Now the configuration of more than 10 slaves serial numbers via the webUI does not stall the system.

2.3.7. GSM communication

GSM stability and reconnection capabilities has been improved.

2.3.8. Load management recalculation

In a master/slave installation, if an EV stops the charge because it is fully loaded, the load management will now correctly recalculate the available current for the other still charging EVs.

2.3.9. RFID authorization

It is not possible to restart a charging session with the RFID card on an EV that has been temporarily suspended by the load management function.

2.3.10. Load management charge rotation

The charge rotation of the load management now rotates correctly between all EVs.

2.3.11. OCPP communication: GetConfiguration

GetConfiguration returns the serial numbers of the connected connectors. In the past only the serial numbers of the first 2 connectors were acknowledged.

2.3.12. OCPP: Missing Transaction ID

In the past, the ID tag was sometimes missing in offline Start Transaction request. The KeContact P30 is now able to recover the ID Tag.

3. Version Package 1.4

Date of release: 24.03.2017

3.1. Package components

The current package contains the following components.

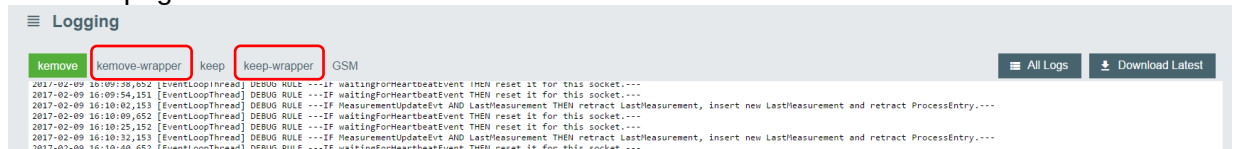
Version	Download
CPM	4.0.72
KEEP	4.0.23
P30 PDC	3.08.1
P20 PDC	2.5a4
MID-LED	2.3.6
OS	1.1.0

3.2. Implemented features

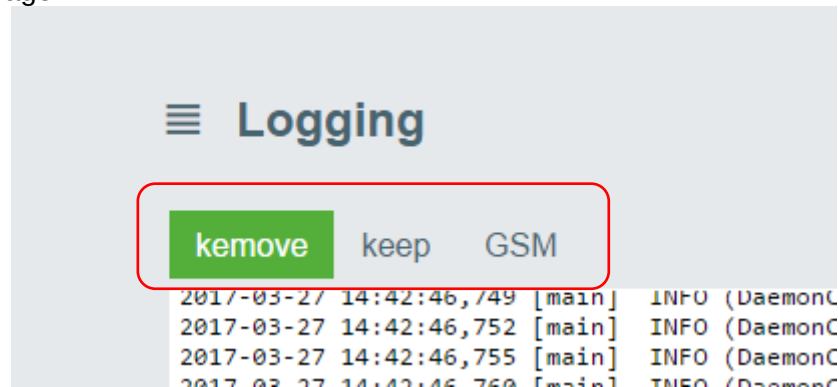
3.2.1. Unused logs have been removed

Unused tabs like "kremove-wrapper" and "keep-wrapper" have been removed from the logging web page.

Old web page



New web page



3.3. Fixed bugs

3.3.1. Update process interrupted by Master with no P20 slaves

During the update process of a standalone master (no slaves connected), the master tried to update broadcast the firmware of the P20 even though no P20 was in the system and as consequence the whole update process was interrupted because the master did not receive any response of P20.

3.3.2. Heartbeats were sent but no transaction possible

The Wallbox seemed to be offline because showed 3 leds flashing blue, but even though was sending regularly HeartbeatRequest to the backend and HeartbeatRequest were received successfully.

No OCPP messages like authorizeRequests, startTransactionRequests or meterValuesRequests could be sent except HeartbeatRequests.

3.3.3. GSM connection dropped every hour

Every hour the connection with the backend dropped due to the synchronisation with the NTP server and not always recovered in few minutes as expected.

3.3.4. Updates via HTTP not stable

Updates via HTTP could not be resumed due to no timeouts.

3.3.5. Housekeeping causes a disconnection to backend

Every day circa ten minutes after start of the Housekeeping (00:00 UTC), the connection to the backend was interrupted and the P30 was not able to recover and stayed offline.

3.3.6. Wrong logging of the P30

After copying kremove.log to backup files at least one process still was writing in the old file. This resulted in log entries missing in the current storage file.

3.3.7. Wrong version of WebUI

In the software update page of the WebUI it was displayed the wrong version of the WebUI, 1.0.6 instead of 1.0.8.

4. Version Package 1.3

Date of release: 09.02.2017

4.1. Package components

The current package contains the following components.

	Version
OSSSCRIPT	1.0.8
WebUI	1.0.6
P20 PDC	2.5a4
P30 PDC	3.07.1a1
CPM	4.0.71
KEEP	4.0.22
MID-LED	2.3.6

4.2. Compatibility information

This firmware is compatible with all KeContact P30 x-Serie charging stations and connected KeContact P30 c-series in slave mode.

To identify your charging station, please compare your product code with the product codes table in the installation manual.

Follows a list of most important implemented features and fixed bugs.

All the features and fixed bugs related to the FW 3.07.1a1 included in this software package are reported in the release notes of the firmware 3.07.1a1.

4.3. Implemented features

4.3.1. Added firewall ports

The ports as PortCP and portHost are now taken into account in the firewall.

4.3.2. Save charging sessions

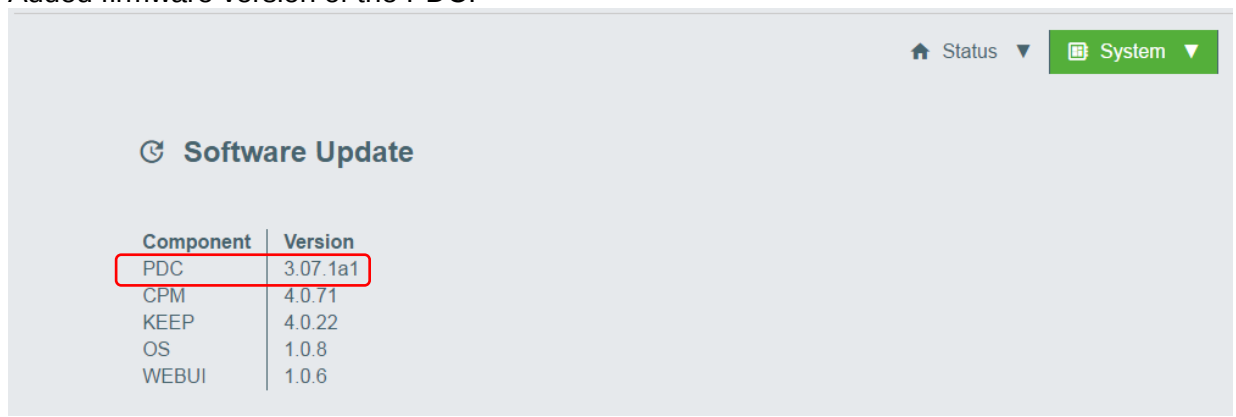
When the P30 is powered off during the charge, the date of the charging sessions are saved.

4.3.3. Logging - Outbound message

The P30 log all communication between master and slaves.

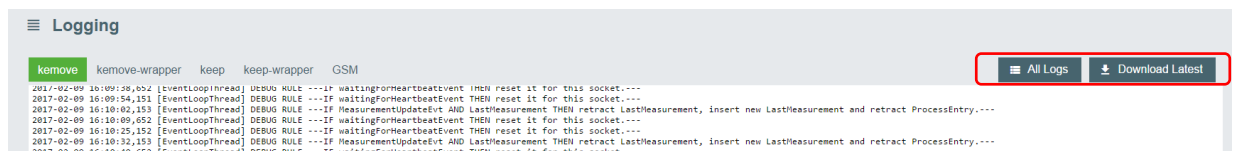
4.3.4. WebUI – visualisation of firmware

Added firmware version of the PDC.

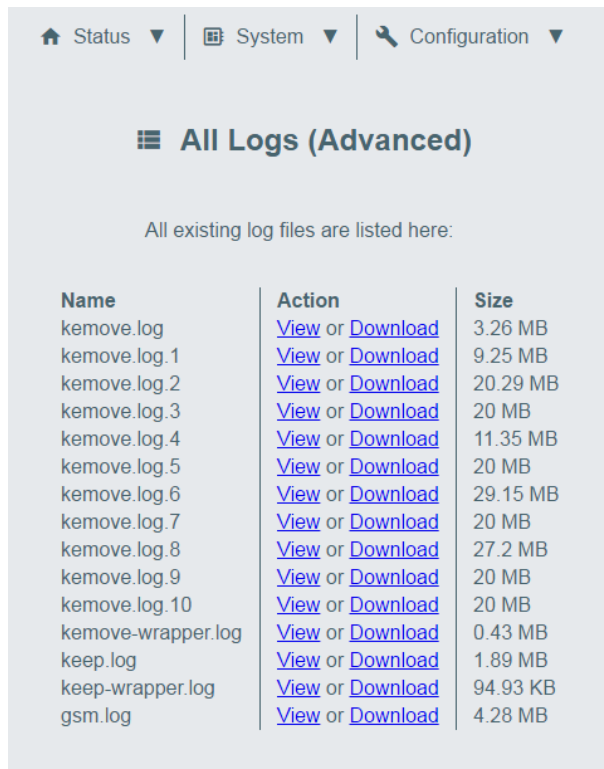


4.3.5. WebUI – Logging

Added "All Logs" button to "Logging" tab, allows individually viewing and downloading every single log file.



Here is shown a screen shot of what the user can see if clicking on “ All Logs”.



The screenshot shows a web interface with a top navigation bar containing 'Status', 'System', and 'Configuration' tabs. Below the navigation bar is a section titled 'All Logs (Advanced)'. Under this title, it says 'All existing log files are listed here:'. Below this is a table with three columns: 'Name', 'Action', and 'Size'. The table lists various log files, including 'kemove.log', 'kemove.log.1' through 'kemove.log.10', 'kemove-wrapper.log', 'keep.log', 'keep-wrapper.log', and 'gsm.log'. Each row has a 'View' or 'Download' link in the 'Action' column and a size in the 'Size' column.

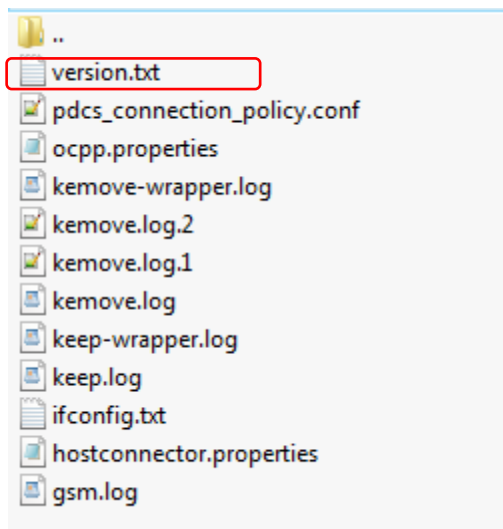
Name	Action	Size
kemove.log	View or Download	3.26 MB
kemove.log.1	View or Download	9.25 MB
kemove.log.2	View or Download	20.29 MB
kemove.log.3	View or Download	20 MB
kemove.log.4	View or Download	11.35 MB
kemove.log.5	View or Download	20 MB
kemove.log.6	View or Download	29.15 MB
kemove.log.7	View or Download	20 MB
kemove.log.8	View or Download	27.2 MB
kemove.log.9	View or Download	20 MB
kemove.log.10	View or Download	20 MB
kemove-wrapper.log	View or Download	0.43 MB
keep.log	View or Download	1.89 MB
keep-wrapper.log	View or Download	94.93 KB
gsm.log	View or Download	4.28 MB

4.3.6. WebUI - Wording

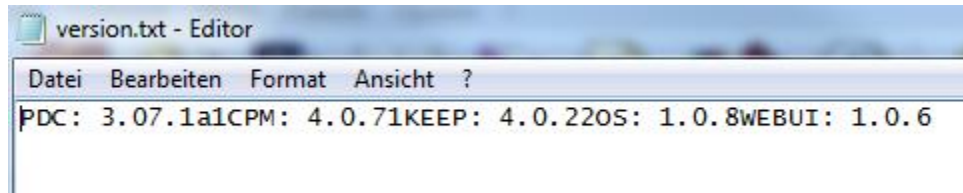
Renamed "Download All" to "Download Latest" in "Logging" tab (see 2.3.5).

4.3.7. WebUI – component version

Added the text file “version.txt” in zip file accessible by clicking on "Download Latest".



In this file are enclosed the information related to the versions of the software component.



4.3.8. WebUI - Browser responsiveness

Improved responsiveness on outdated versions of Microsoft Internet Explorer.

4.4. Fixed bugs

4.4.1. Update via GSM failed

While updating the P30 with a FirmwareUpdateRequest via GSM the download failed because the FTP server timed out.

Improvements have been implemented in this software package to reduce the possible time outs of the FTP server.

4.4.2. FileKeyStore Failure

Sometimes the Keystore was corrupted and could not be opened. Improvements have been done to reduce the probability of corruption of the Keystore.

4.4.3. House keeping

After a long running installation, in case the host communication was down, a lot of host communication session objects were created. The Housekeeping function did not clean up all the host communication sessions causing an overload of data.

4.4.4. OCPP - Improve reconnection after failure

In case the connection is bad, then the GSM connection could fail, or transmitting data could be slow causing a timeout. A reconnection function has been implemented to restore the connection.

4.4.5. OCPP –ResetRequest

The ResetRequest did not work as expected. The P30 did not restart.

4.4.6. OCPP – Bootnotification not compliant

The Bootnotification was not compliant because the field ChargeBoxSerialNumber had more than 25 characters, maximum prescribed in the ocpp specifications. The BootNotification will now contain only the charge point serial number.

4.4.7. Connector ID mismatch

The P30 did assign the same connector ID to two different sockets. This mismatch has been fixed in this release.

4.4.8. OCPP –StatusNotification errorCode field

When the P30 had an error and status=failed in the StatusNotification, then the errorCode was missing. Now the field errorCode is included in the Statusnotification.

4.4.9. OCPP – ChargePointService

When the GSM connection was restarted by the P30 because of a connection problem, the ChargePointService was not republished and the P30 did not respond to remote commands through the new ip address. A solution has been implemented so that the ChargepointService will be republished with its new ip address.

4.4.10. Update rollback

In case of an update failure the rollback did not work properly.

4.4.11. Firmware Updates of slave P20s

The P30 master was not able to update the connected P20.

4.4.12. GSM – Connection Timeout

In case of bad connection, timeouts occurred and the P30 did not handle them properly. This is improved in this release.

4.4.13. Load management

The P30 did not recalculate the current after a vehicle unplugged or did a wrong recalculation. This is fixed in this release.

4.4.14. Logging - files size

The log files had no size limitation causing a data overload. This is improved in this release.

5. Version Package 1.2

Date of release: 17.11.2016

5.1. Package components

The current package contains the following components.

	Version
OSSCRIPT	1.0.8
WebUI	1.0.2
P20 PDC	2.5a4
P30 PDC	3.04.2a1
CPM	4.0.68
KEEP	4.0.18

5.2. Compatibility information

This firmware is compatible with all KeContact P30 x-Serie charging stations.
To identify your charging station, please compare your product code with the product codes table in the installation manual.

5.3. Implemented features

5.3.1. The security of the updates has been improved

All SW Version starting from 1.2 will be encrypted. This imply that future updates from version 1.0 or 1.1 to version 1.3 won't be possible

5.3.2. The usability of the WebUI has been improved.

5.3.3. The use of the USB-stick can be deactivated

It is possible to disable the USB functions via the web-user interface. This means that it will be possible to avoid that non authorised personal could copy data of the P30 into a usb stick or that the P30 could be updated. With this new feature of the wallbox higher safety standards are guaranteed.

⚙️ Device		
Parameter	Value	Description
Authorization	false ▾	Enable/Disable the authorization on the wallbox. If authorization is enabled, the local whitelist is used if available (if no token is found in the list then the authorization request is forwarded to the OCPP-backend)
Number of Slaves	0	Defines the number of connected KeContact P30/P20 charging stations
SerialNo. Master	16802940	
Time Sync. Method	OCPP ▾	How this KeContact P30 should set its local clock
Allow USB init	true ▾	If an empty USB stick is plugged in, should the complete current configuration and log files be written to it?
Allow USB config	true ▾	Should the configuration be changeable by plugging in a USB stick containing a CFG folder and a corresponding config file?

5.3.4. Increased timeouts of FTP downloads for weak network connections.

With this feature the download of updates is more stable.

5.3.5. More logs are attached to the log-download via the WebUI.

5.3.6. Improvement of the GSM reconnection functionality.

The P30 monitors the GSM connection and in case the GSM connection goes down the P30 will restart the connection procedure. This feature is available already in the previous version and has been improved in the present version.

5.3.7. On the WebUI is available a GSM signal test function to test the GSM signal strength for the current installation.

5.3.8. Timing of “Remove USB” improved

The message "Remove USB" on the display of the wallbox was shown only one time by the use of a USB-stick. Now the message is shown endless until the USB-stick is removed.

5.3.9. Time synchronisation improved

The wallbox tries to synchronise the system time via a NTP time server during the boot of the system. If the synchronisation is successful then a further synchronisation via the OCPP backend is not necessary and the second reboot of the application is not needed.

5.3.10. Load management improvement

On Master/Slave installations the recalculation of the charging plans for all EVs was adapted in the case a vehicle is getting unplugged.

5.3.11. Security improvement in the commissioning mode

Power will be turned off if a EV is plugged during commissioning mode.

5.3.12. Security improvement

Security improvement in the case of a contactor fault during power on. Charging will be prohibited right after the start up and an error code is shown by the HMI Leds.



5.3.13. Unlock command

Via smart-home it is possible to send a UDP command "unlock" to unlock the cable

UDP command:	unlock
Reply:	"TCH-OK :done"
Description:	For this command you have to stop the charging process first. For this, please use the command „ena 0“. Afterwards you can unlock the socket.

5.3.14. Unlock procedure improved

If an unlock is executed but the charging cable is not plugged off from the socket, the unlock is executed again twice.

5.3.15. Improvement on Logging

More information will be provided on the WebUI concerning of the start-up of the system.

5.3.16. Improvement of the PWM signal

Short spikes that used to appear before PWM starts have been removed

5.3.17. China norms and standards compatibility

The P30 firmware includes parameters for current monitoring that if activated bring the P30 compatible to Chinese norms and standards.

5.3.18. Authorisation with KEY switch implemented

5.3.19. “output” UDP command settings

Settings of number of pulse are now limited to a maximum of 150.

5.4. Fixed bugs

5.4.1. WebUI occp status

Although the connection to a HTTPS OCPP backend was established, the visualisation on the WebUI showed the status as "Unreachable".

5.4.2. WebUI – special signs in ocpp URL

Configuring the OCPP backend URL via the WebUI didn't work if the URL contained a "=" character.

5.4.3. OCPP – encrypted connection

Importing a zip file via USB-stick containing certificates for setting up an encrypted OCPP connection caused a NullPointerException.

5.4.4. Diagnostics – Download of large log files

The download of large log files (>14MB) via WebUI took longer than the default maximum execution time of 30 seconds. The download of large files was then interrupted. The timeout has been adapted and the download of large log-files is now possible.

5.4.5. WebUI – SIM card PIN visualisation

Even though the wallbox was configured with a PIN of the SIM, the “GSM SIM PIN” was shown as an empty field in the WebUI. This does not allow to verify if a PIN was configured or not. Now if a SIM-PIN is configured it is also shown on the WebUI.

5.4.6. Charging in offline mode

Misbehaviour of the wallbox in the case of starting a charging session in offline mode. As soon as the Wallbox was online again, the backend rejected the charging session but the wallbox continued to charge.

5.4.7. Update of P20 via master

P20 c-series slave firmware update via a P30 x-series Master did not work. Now is possible to update a P20 c-series slaves via the P30 x-series master.

5.4.8. Wrong Metervalues

On some Master/Slave installations happened that meterValues of the slave and master were mixed and wrongly registered by the OCPP backend

5.4.9. Configuration of serial numbers of slaves

On a MASTER/SLAVE installations there was only the possibility to configure the serial number of two SLAVES. Additional serial numbers were ignored by the system. Now is possible to configure up to 15 SLAVE serial numbers.

5.4.10. Single phase charging with a Zoe

The P30 checks the phases only with contactor off, not during charging.

5.4.11. iMiev - Delay time

It has been removed a delay time of 3 seconds ahead of charging to solve a compatibility problem with the i-Miev

5.4.12. OCPP – Unlock command

Under certain circumstances the OCPP unlock command did not work as expected because right after the unlock command the P30 locked again the cable.

5.4.13. Problem with Loxone

Automatically turn enable ON (ena 1) when connection to CPM is established (3 blue leds blinking) for FAILSAFE logic in case of on PDC without XPU.

5.4.14. Tesla charging switching from single phase to three phase

This feature has been implemented to avoid that the P30 detects an overcurrent failure in case of switching the supply line from single phase to three phase while charging a Tesla.

With this release is now possible to switch from single phase to three phase without a failure being detected.

6. Version Package 1.1

Date of release: 01.09.2016

6.1. Package components

The current package contains of the following components.

	Version
CPM	4.0.67-RC
KEEP	4.0.15-SNAPSHOT
OS	1.0.7
WebUI	1.0.1
PDC	3.02.4

6.2. Compatibility information

This firmware is compatible with all KeContact P30 charging stations of the type KC-P30-xxxxxxx-x0x-xx.

6.3. Implemented features

Description
WebUI - Added GSM Signal Test for testing the signal strength
WebUI - Extended log file download to receive more logs
WebUI - Improvement of the update procedure
WebUI - new symbols, adapting naming and descriptions
LED - to notification "Remove USB" on the .Matrix is shown longer

6.4. Fixed bugs

Description
GSM - Reconnecting procedure of a GSM connection which is down had timing problems
WebUI - OCPP Availability Check didn't work when a "=" was included in the OCPP backend URL
WebUI - timeout occurred when downloading large log-files.

7. Version Package 1.0

Date of release: 07.04.2016

7.1. Package components

The current package contains of the following components.

	Version
CPM	4.0.67-RC (05.04.2016)
KEEP	4.0.14
OS	1.0.6
WebUI	1.0.0
PDC	3.02.4

7.2. Compatibility information

This firmware is compatible with all KeContact P30 charging stations of the type KC-P30-xxxxxxxx-x0x-xx.

7.3. Resolved issues

This is the first version for the customer

8. Glossary

CPM

Charge Point Manager is the application running on the XPU which

Keep

This is the software component

OSSCRIPT

PDC

Power Distribution Controller is the hardware which controls the power circuits of the KeContact P30.

WebUI

This is the web based user interface which allows the user to interact with the KeContact P30 by identifying the system, configuring, updating and debugging.

EV

Electric drive vehicle.

NTP

Network Time Protocol (NTP) is a networking protocol for clock synchronization between computer systems over packet-switched, variable-latency data networks. NTP is intended to synchronize all participating computers to within a few milliseconds of Coordinated Universal Time (UTC).