



Alfen AHP series **Release notes**

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1 Introduction

Firmware release **2.0.0** is a release that incorporates a number of general improvements, stability improvements, bug fixes and some main features. The main new feature is:

- Added support for Twin 5 Plus

2 Twin 5 Plus

Firmware 2.0.0 added support for Twin 5 Plus:

- Display functionality with charging states and information over charging session
- QR code support
- Added new model names AHP01-52750 and AHP01-52752
- Licenses in general

3 QR code support

AFIR (European Law) requires transaction specific QR codes and specific price information, these are introduced in this firmware release.

QR codes are shown on the display of the Twin 5 Plus. Users can scan the QR-code with their phone for ad-hoc payments. The QR code receives the end-point over OCPP.

Price information needs to show four components, in specific order. A specific implementation guide for AFIR compliance is available [at our knowledge base](#).

3.1 QR feature overview

- Display QR codes (URL), per socket. If the CS is configured as standalone (not connected to a backend) QR codes will not be displayed.
- QR codes are only regenerated when the CS is booting or if the QR code is updated every minute
- If only the QR code for socket 1 is set, the endpoint for socket 2 will be the same as socket 1
- QR codes (URL) have a maximum length of 193 characters, per socket
- QR code URLs can be configured via OCPP 1.6
- Screen is set to full brightness (configurable) when QR codes are shown. The auto dim function can now be configured, depending on the time (sundown/night/sundown) of day.
- After sun set and before sun rise, dim the display if QR codes are shown
- Tariff information is displayed as configured in Pricing-ShowComponents
- Add a custom tariff field (other tariffs) to enable customers to set their own tariff price and description
- It is possible to display both positive and negative tariffs (-999.99 to 999.99) when the tariff is outside this range, display a '-'

- Tariffs take a maximum of 4 rows of space (to make more space for QR codes). The font size of the tariffs are reduced when too much tariffs takes too much space
- Tariffs can be configured via OCPP 1.6
- Tariffs and QR codes are combined under one license

3.2 License

With the introduction of QR codes as payment options, all the direct payment functions are bundled in one convenient license key. This license key is new in this firmware.

From firmware 2.0.0 onwards the Direct Payment Solutions license key unlocks the following functions:

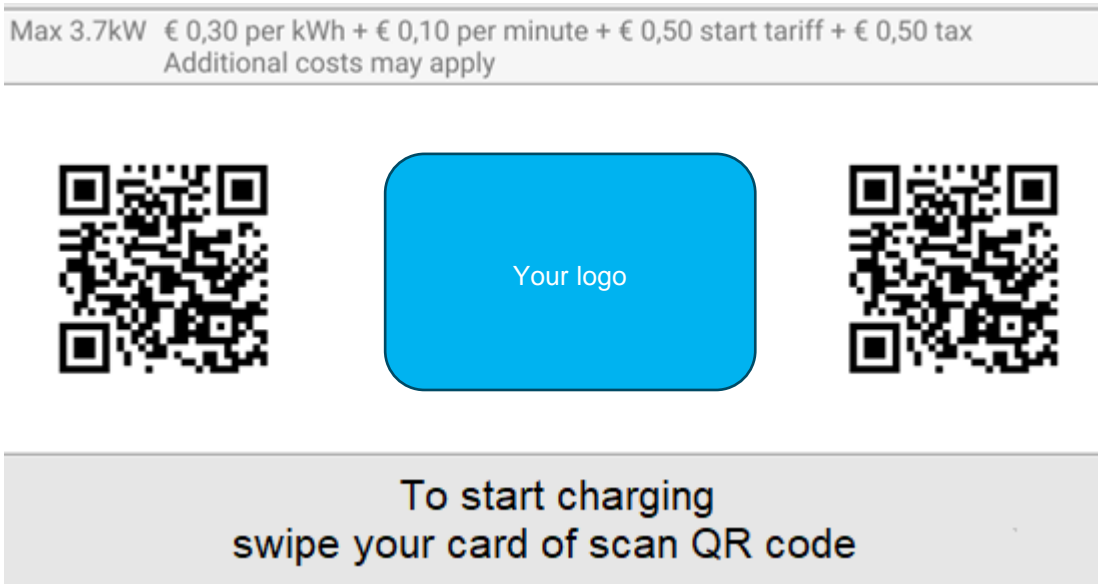
- QR code support
- External payment options (kiosk, payment terminal, apps)¹ with the following functions:
 - Direct stop (always stop transaction if cable unplugs, override of OCPP Key “StopTransactionOnEVSideDisconnect” settings)
 - NB: Remote start functionality is not part of this direct payment license.

Please contact your sales representative to unlock this license for your charger.

3.3 Configuration of QR codes

Configuration of Direct Payment Solutions possibilities is possible by using the backoffice or using the Service Installer Application revision 3.6.13 (will be released soon).

3.3.1 QR-code examples



Example of interface of Twin 5 Plus

¹ Payment terminal, kiosk, app, OCPP connection and other needed and not part of this license

4 Licenses

Just like with all our products, additional functionalities can be unlocked with license keys. With the introduction of FW2.0.0 the license keys are also available on the Twin 5 and Twin 5 Plus:

- Power increase 32A dual socket;
- Load balancing standard;
- Smart Charging Network;
- RFID Authorisation;
- Personalized Display;
- Direct Payment Solutions.

New license keys will be added for functionality like Load balancing active and ISO15118 autorisation for Autocharge in future.

4.1 Adding licenses for your chargers

With the release of FW2.0.0 your chargers based on AHP:

- 934452650 – Twin 5 CAM
- 934452651 – Twin 4XL V2G
- 934452652 – Twin 5
- 934452655 – Twin 5
- 934452660 – Twin 4XL V2G
- 934452661 – Twin 4XL V2G
- 934452698 – Twin 5 retrofit
- 934452699 – Twin 5 retrofit

Needs activated licenses for the functionalities of those licenses. Chargers delivered with FW version before 2.0, will automatically handle licenses to keep using the functionalities on those chargers.

[How to update license keys - knowledge.alfen.com](https://knowledge.alfen.com)

5 Bug fixes

- Do not transmit a PowerSwitchError or PowerMeterError status notification when an ExternalRCDError occurs within two minutes of either of them.
- Fixed an issue where the EVSE did not trigger a wake-up sequence if the EV once closed S2 during the same session.
- Fixed a bug where a configuration change from the CPMS would always return accepted even when the internal validation rejected the change.
- Fixed power value in socket meter value log line being a factor 1000 too big
- The webserver of the charging station now only allows connections with TLS version 1.2. Lower TLS versions are no longer supported.
- Fixed an issue where charging would be shortly suspended when using simplified mode on a station with load balancing.
- All socket meters are now sampled on a 2 second interval instead of different intervals ranging from 1.5 to almost 4. The timestamps are now communication to the SCB with millisecond precision.

6 Improvements

- Device errors are now stored persistently. This makes it possible that the station can recover it's error state after a power cycle or reset.
- Added brightness control based on activity sunrise/sunset and QR
- AHP based charging stations that support a display are now AFIR compliant.
- The AHP based charging stations now support the following license codes like NG9xx: 32A RFID SCN and SLB.
- Improved auto network connect functionality
- Added support for 2 cipher suites for backoffice communication:
 - TLS_ECDHE_RSA_AES_128_GCM_SHA256
 - TLS_ECDHE_RSA_AES_256_GCM_SHA384.
- Updated active current logging to be similar to the NG9xx
- Personalized display support to show custom logo on the charger, filetype: PNG, 1Mb max file size.
- Added star-configuration connectivity for Smart Charging Network setups.

7 Back-end communication changes

Several configuration parameters were introduced in this firmware release.

Property	Description	Values	Access
Added			
FeatureLicenseKey	Current installed LicenseKey. A new LicenseKey that unlocks features can be purchased from Alfen via a purchase order (webshop or cporders@alfen.com).	Default: Determined per order	Read / Write
FeatureObjectId	The product unique ID used to purchase a new LicenseKey. Make sure to share this ID on your purchase order.	Default: Determined per order	Read only
UnlockedFeatures	String representation of all unlocked features	String	Read
Language	System language	String[9] Default en_GB	Read / Write
QRCodeURL1	QR code url to display for connector 1	String[244]	Read/W rite
QRCodeURL2	QR code url to display for connector 2	String[244]	Read/W rite
Pricing-Currency	Currency to display	String[4] ISO 4217 code that should be replaced by the currency symbol when available. Available symbols: USD, GBP, EUR and DKK.	Read/W rite
Pricing-StartPrice	Start price of a new transaction	Float	Read/W rite
Pricing-EnergyPrice	Energy price of a new transaction	Float	Read/W rite
Pricing-MinutePrice	Minute price of a new transaction	Float	Read/W rite

Pricing-ShowComponent	Show specific price components	String list, following options: disclaimer,perKwh,perHour,perSession,perOther These will determine which pricing elements will be shown on the screen. <ul style="list-style-type: none"> • disclaimer: This is a hardcoded text field in the translations file. • perKwh: Display Pricing-EnergyPrice • perMinute: Display Pricing-MinutePrice • perSession: DisplayPricing-StartPrice • perOther: DisplayOther price, but only if Other specifier is filled in as well 	
Pricing-Other	Other price of a new transaction	Float	Read/W rite
Pricing-OtherSpecifier	Other specifier for Pricing-Other	String[33] Specifier for Pricing-Other. If this is empty Pricing-Other won't be displayed.	Read/W rite
UniqueQrConfiguration	If the QR should be made unique by the station.	String: default: Alfen . "" for not unique, Alfen for adding a post fix every minute to the QR code to make it unique. Postfix format ?/&id=<object_id, truncated to 11 bytes> &c=<connector_index>&h=<hash of timestamp, truncated to 8 bytes>	Read/W rite
TemperatureHigh	The set upper internal temperature limit (°C) on which a CS will send a temperature alert and pauses charging.	Float Default: 75.0	Read / Write
TemperatureLow	The set lower internal temperature limit (°C) on which a CS will send a temperature alert and pauses charging	Float Default: -25.0	Read / Write
Modified			
No properties were modified			

Removed			
No properties were removed			