Alfen NG9xx series Release notes

Release notes version 4.11.0
Document version 3.1

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1   Introduction

Firmware release **4.11.0** is a release that is largely focused on the implementation of support for reading Girocards (which requires the latest NFC reader hardware: revision L / v3) and using them for Transactions.

Note that all 'YY-xxxx' numbers described in this document are internal Alfen reference numbers that are linked to the Alfen issue tracking system.

2 New features

2.1 Giro-e

The charging station now supports Giro-e sessions. These are charging sessions / Transactions that are started by a Girocard, which is a type of EMV card used in Germany. EMV cards are more secure than regular RFID cards and provide a form of direct payment. For Giro-e charging sessions, the Transaction details are forwarded to and validated by an authentication server.

In order to make use of this new functionality, the CSMS (OCPP definition) needs to support this as well. The firmware of the update of the Giro-e NFC reader can be updated remotely. Giro-e tags are not added to the whitelist list.

A Giro-e configuration guide is created that elaborates how to configure Giro-e functionality for Alfen charging stations connected to ICU connect.

3 Improvements

- Previously, a bug was solved where a Transaction could not be closed if the power meter was unavailable after a power outage. To expand onto this, this behavior is now also fixed if the power meter becomes unavailable during a Transaction. In case of an Eichrecht-compliant charging station, the Transaction would be closed with the same signed meter value as contained within the OCPP StartTransaction message.
- Resolved an issue where the periodic connection check immediately disconnected the connection after it was re-established.
- Previously, OCPP reply parameters were not allocated, meaning upon an error (such as not being able to process the message due to invalid format), the callbacks were not called. This in turn would prevent the charging station from marking the invalid message as sent. If that happened, the charging station was unable to ever transmit any further Transaction database messages. This has now been fixed.

4 User interface changes

- Solved an issue where the user experience flow didn't match the manual. A cyan hourglass would appear at a certain state, whereas a green checkmark was expected.

5 CSMS communication changes

Property	Description	Values	Access
Added			
DeviceIdentifier	An identifier string that is unique per charging station. Usage example: as base of power outlet ID as part of EVSE ID. Keep in mind that the socket id (1 or 2) would still have to be appended.	String of 24 alphanumeric characters.	Read-Only
DPSGiroeMethodStatus	Used to enable or disable Giro-e functionality. **Note**: this configuration key is only visible if the RFID and Giro-e feature keys are unlocked, and the charging station is Eichrecht-compliant.	"enabled" "disabled"	Read-Write
DPSAvailableMethods	A comma-separated list of the Direct Payment Solutions that are available. Currently this only entails "Giroe", so if Giro-e is not supported, this configuration key is hidden.	"Giroe"	Read-Only
Modified			
Removed			

6 Error code changes

- No error code changes were made in this firmware release.

7 Minor changes

- Fixed an issue where the internal authorization state machine does not always properly wait for the OCPP Authorize response. This could occur in certain situations, such as the CSMS sending a delayed OCPP Authorize response.
- Fixed non responding card reader after presenting card at end of charging session.

8 Roll-out heads up

- Important parts of the authentication handling are changed due to the integration of giro-e.
- The changes to the backoffice connection statemachine could cause different behavior and timing than earlier firmware versions, especially in "autodetect" mode.
- DPSGiroeMethodStatus will be factory configured as "enabled" upon Giro-e order.

9   Revision control

Date	Version	Description / status	Author
2020-Sept-08	1.0	Initial version	R. Löhlefink
2020-Sept-14	1.1	Added ticket	R. Löhlefink
2020-Okt-14	1.2	Added more tickets	T. Nederlof
2020-Nov-03	3.0	Added ticket	T. Nederlof
2020-Nov-03	3.1	Updated for external use	M. Maspaitella

10 Appendix A: List of resolved issues

The tables below show the changes between release **4.10.0** and the release **4.11.0**, including references to the Alfen issue tracking system.

Solved issues:

Issue #	Summary
GE-82	Implementation of Giro-e functionality
LA-3895	Cannot close transaction when powermeter is lost during transaction
LA-4216	Authorisation statemachine does not wait for authorized reply
LA-4360	User experience Authorization flow modification
LA-4253	Modem_PPP_lwip Connection loss error results in a deadlock for the modem until the periodic connection check
LA-4376	Card reader sometimes stops responding
LA-4400	state authorization now stays in the state "authorizing" after reconnection