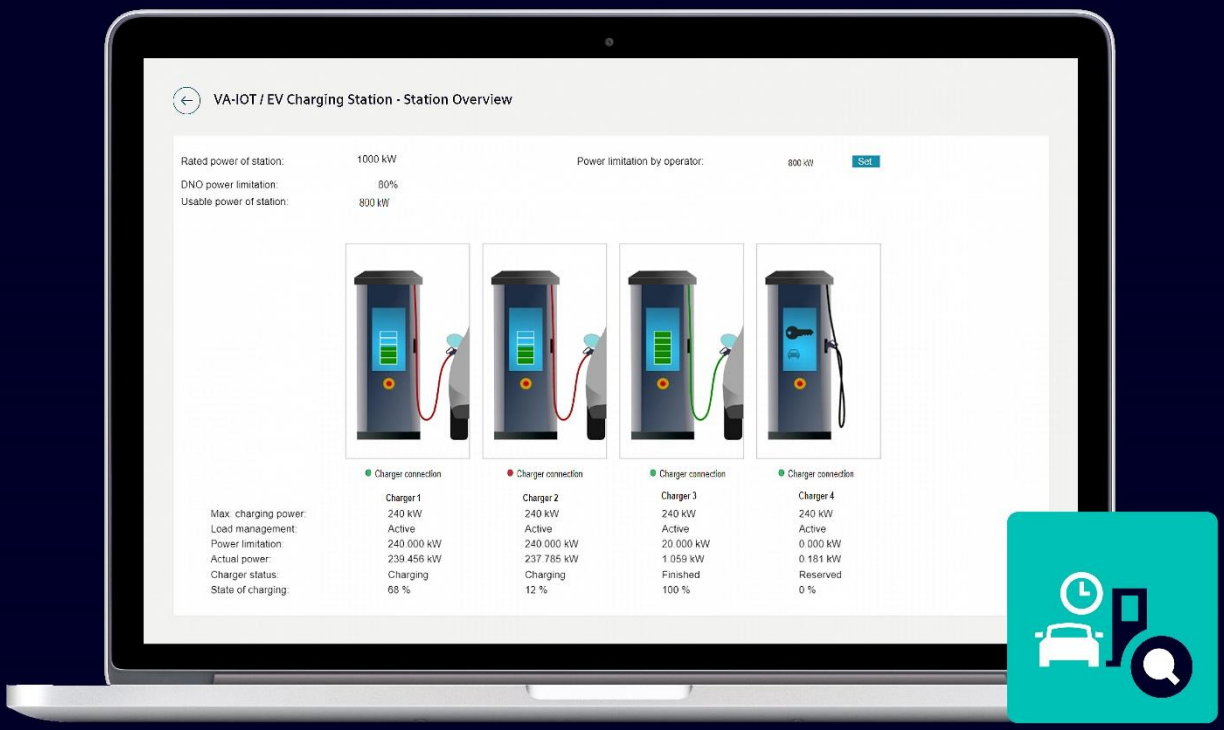


Electrification X

Load Management

Efficient and save operation of EV charging stations,
Dynamic Load Management and Remote control

SIEMENS

Contents

Overview

The larger your charging station network grows, the more challenging it is to offer the charging service in an efficient and reliable way. Electrification X - Load Management enables you to take the necessary actions directly using the remote-control feature or by briefing your team on the ground.

Without any concerns or consequences for the operational business, a fully automatic, dynamic load management follows instantly power restraints from Distribution Network Operator avoiding costly limit violations.

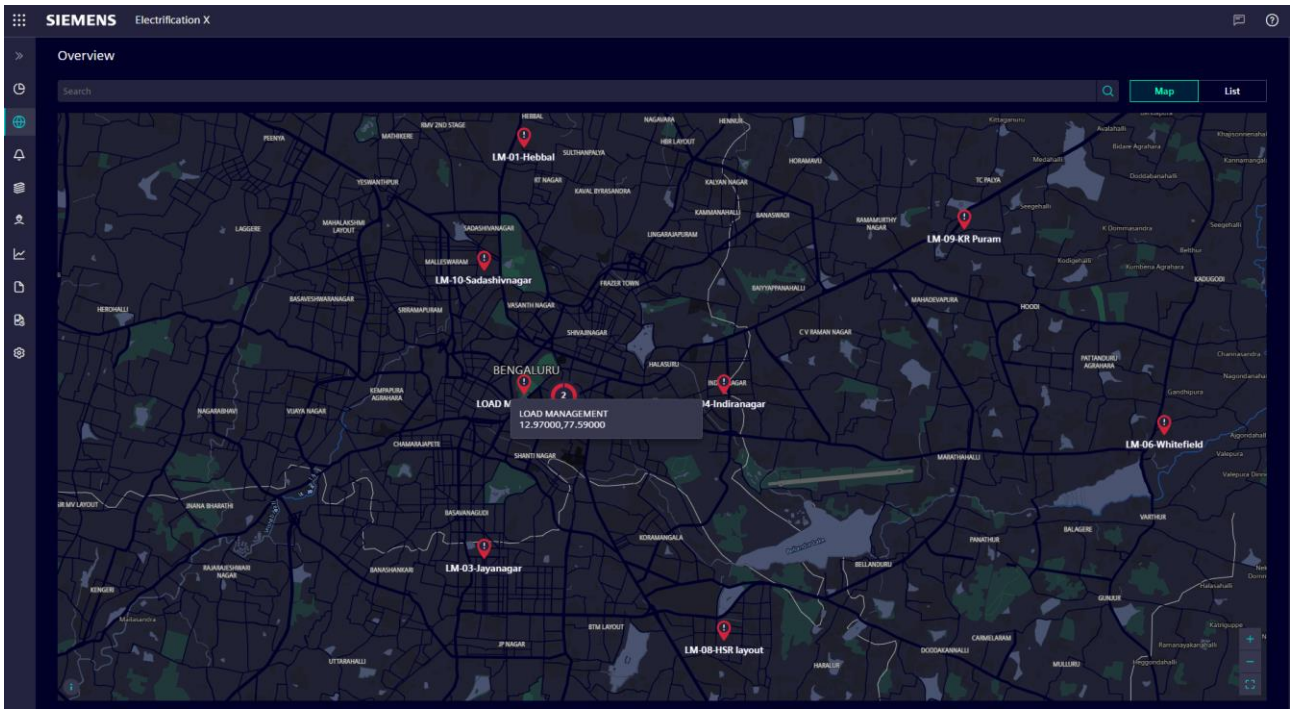
- Transparency of MV and LV asset health to reduce future capex
- Visualization of Charging network status and load to increase uptime
- Load Management setpoints to manage peak demand
- LV Feeder Remote control to reduce maintenance costs
- Early warning and alarms to increase availability.
- Holistic view on Key Performance Indicators of the charging network

Features

Station & Charger Monitoring feature

The Station and Charger Monitoring feature must be activated once per station. It monitors the status of all general components such as transformers, medium-voltage and low-voltage incomer and peripheral elements like doors, smoke detectors and various temperatures. Furthermore, the overall load situation, charging and consumption patterns of the charging station can be monitored in a heatmap.

In case of incidents, the affected location will be shown on a map and in a list view, and alarms will be sent automatically to the operator and/or service crew according to configuration.



Electrification X – Load Management: Map view

You can also monitor the status of all chargers and low-voltage feeders, including connection status, switching position, phase currents, power consumption and various temperatures. The load situation of a specific feeder or its charging and consumption patterns (as well as the alternative low-voltage feeder) can be monitored in the load profile view.

Comprehensive dashboard with widgets informs you about the key performance indicators that are influenced by load management like Top 10 sites by Peak demand or Bottom 10 sites by power usage comparing P99 demand to Peak demand.

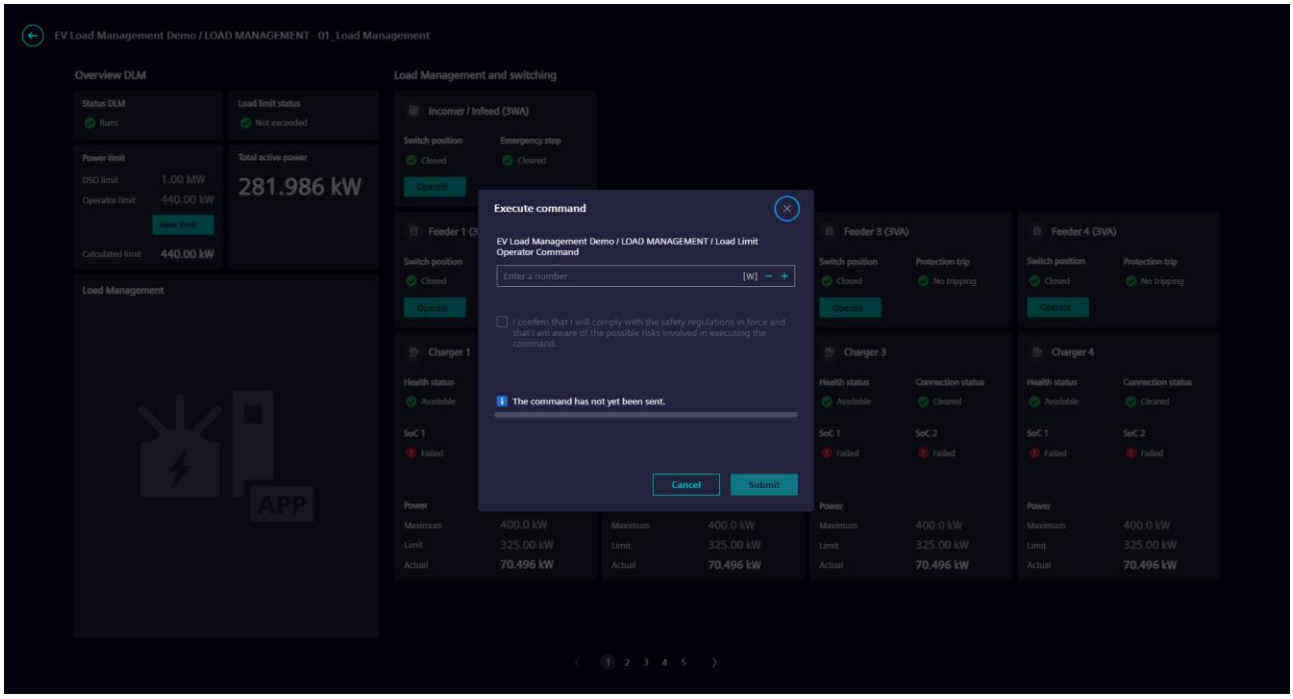
Electrification X – Load Management: Charging pattern as heat map

Electrification X – Load Management: Dashboard with KPI widgets

Load Management Setpoints feature

The Load Management Setpoints feature add-on must be activated once per station. The charging point operator can use this feature to remotely set a power limitation due to operational needs e.g., because of maintenance work. It also allows for the monitoring of the Distribution Network Operators power limit settings that are transmitted via the onsite controller.

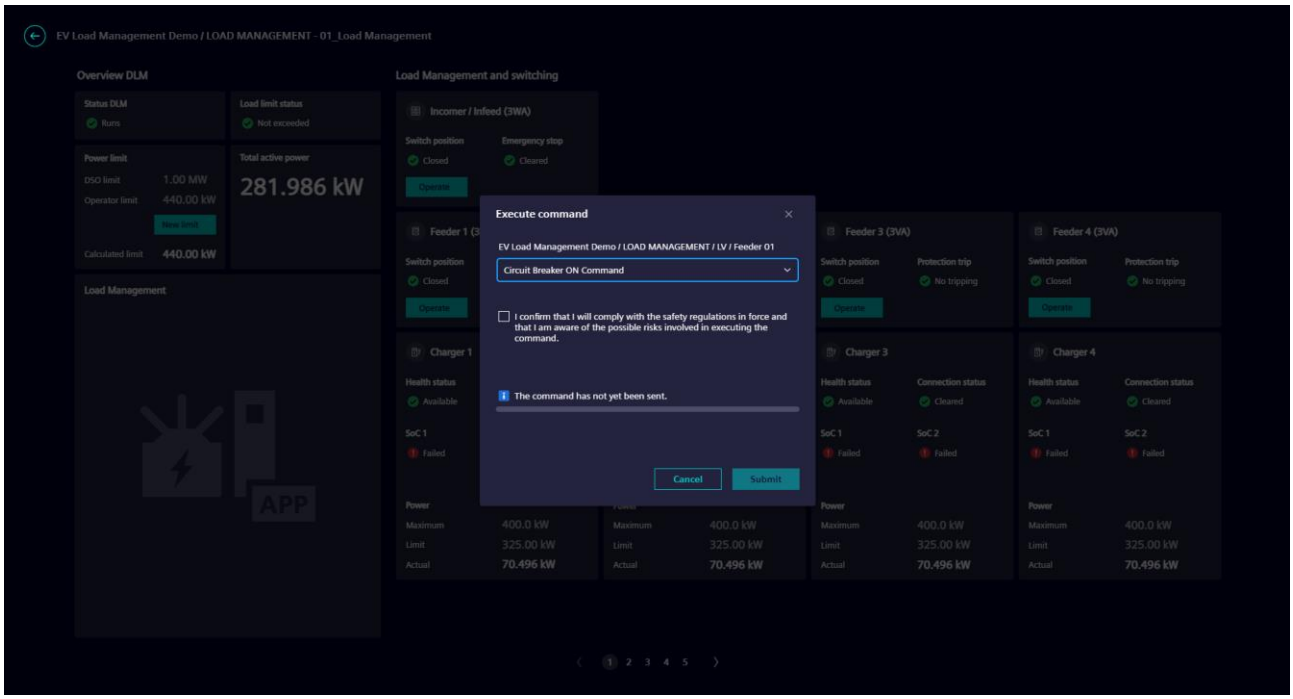
In case of charger malfunctions that lead to power limit violations, it automatically sends alarms to the operators and/or service crew.



Electrification X – Load Management: Remote power limit setting on PC screen

LV Feeder Remote Control feature

The LV Feeder Remote Control feature add-on must be activated once per station. It allows for the remote switching (open / close) of switches on low-voltage feeders, incomer and on the medium voltage switchgear, depending on the configuration in the onsite controller.



Electrification X – LV Feeder Remote Control: Switching commands from operations view

Subscription

Standard Subscription Plan	Electrification X Load Management
Functions	All
Subscription metric	Station & Charger Monitoring per station per month Load Management Setpoints per station per month LV Feeder Remote Control per station per month
Subscription term	Annually, auto-renewal
Billing term	Annually, payment in advance
Upscale	Effective immediately, pro-rated billing
Downscale/Cancellation	Effective with end of subscription term
Connected devices	To be purchased separately
Permitted Users	Unlimited, Extended Use

The Electrification X - Load Management feature set subscription plan is the regular, scalable offering for this cloud service. The subscription term is twelve (12) months with automatic renewal; the cloud service fee is paid in advance. The subscription plan can be upscaled at any time and cloud service fees for upscales are calculated on a pro-rated basis. The customer can also scale down the cloud service effectively with the end of the current subscription term. The subscription fee will be adjusted for the upcoming billing term. The cloud service can be cancelled at any time, effective at the end of the current subscription term.

The subscription plan can be purchased in packages per station. The subscription plan assumes a station is referring to one substation at a unique postal address or geo coordinates.

Extended Use entitles the customer to authorize its affiliates and third parties to access and use the cloud services in accordance with the rights set out in the Terms and Conditions.

Prerequisites

Electrification X Tenant	The Electrification X feature set is operated on an Electrification X tenant. Therefore, a tenant with an Electrification X Base Package is required. The Electrification X Base Package has a subscription term of 12 months and must be purchased together with the first Station & Charger Monitoring feature, if not otherwise already available and in operation. It is necessary to purchase a subscription for Station & Charger Monitoring feature to activate the Load Management setpoints feature or the LV Feeder Remote Control feature
Supported Connected Devices	The cloud service is currently compatible with commercially available connected devices from Siemens. A description of the available connected devices is provided below. A connected device must be purchased and installed on-premise at a site specified by the Customer as agreed between the Customer and Siemens to use the cloud service. Customer is responsible for installing the connected device at the site and any associated costs to perform cloud service in accordance with related documentation for the connected device. List of supported connected devices: **SICAM A8000 based SICAM GridEdge & Dynamic Load Management*.** For order information, Customer may contact its local sales representative
Web browser and viewing devices	Chrome is recommended to use the cloud service, but other standard browsers might also serve this function. Screen resolution of 1920x1080 pixels or higher is recommended for best user experience
Internet Connection	The bandwidth of Customer's internet connection influences the overall performance of the cloud service.

*unless agreed otherwise in contract

Ordering

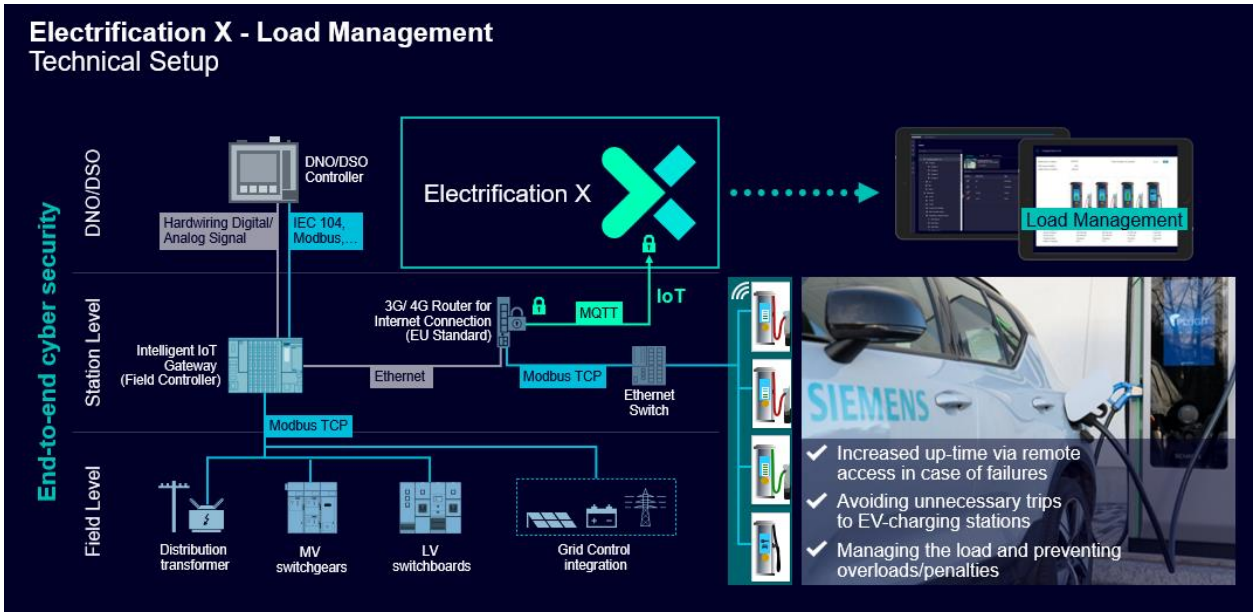
Ordering Process for the Subscription	To order the cloud service for the first time, Customer must request a quote from its Siemens sales representative. Depending on the offering either with services, then customer will receive a link to his tenant, or without services, then the Customer will receive a link to the shopping cart. In this case Customer needs to (i) choose the payment options and (ii) accept the Terms and Conditions to start using the cloud service. The “Terms and Conditions” consist of the “Electrification X Supplemental Terms”, the Siemens Universal Customer Agreement, the Acceptable Use Policy, the Siemens Data Processing Terms, this Product and Service Data Sheet and any other Supplemental Terms which may be referenced in either of the mentioned documents. Customer may upgrade, downgrade, and cancel the cloud services directly in the Subscription Manager store https://subscribe.siemens.com
Ordering connected devices	To order connected devices the Customer may request a quote from its Siemens sales representative
Connected device	**SIEMENS:** **SICAM A8000** **SICAM 8 based SICAM GridEdge & Dynamic Load Management**
Ordering	For order information, Customer may contact its local sales representative

Product Documentation

Technical Documents	Document ID German	Document ID English
Electrification X – General Package User Manual	E50417-H7500-C200-A1	E50417-H7540-C200-A1
Electrification X – Load Management User Manual	E50417-H7500-C201-A1	E50417-H7540-C201-A1
Electrification X – Engineering Guide	E50417-H7500-C203-A1	E50417-H7540-C203-A1
Electrification X – Security Manual	E50417-H7500-C204-A1	E50417-H7540-C204-A1
Electrification X – Protocols Manual	E50417-L7500-C200-A1	E50417-L7540-C200-A1

Technical Documents can be downloaded here:
https://support.industry.siemens.com/

Topology



Data communication between the connected devices on-premise and the Cloud service requires internet connectivity (to be provided by the Customer).

Specific Terms

Third Party Terms for Use of the Cloud service	Software may contain third-party software, technology, and other materials, including open-source software, licensed by third parties under separate terms (“Third Party Terms”) which are specified in the “read me” files, header files, notice files, or similar files. Third Party Terms shall prevail with respect to the respective technology. If and to the extent required by Third Party Terms, Siemens will provide the source code for the respective technology upon written requests and payment of any shipping charges by Customer.
Customer Support	Siemens offers helpdesk support. Customer may contact its local Siemens representative for support requests.

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