

PQ Advisor Premium Package

Product Sheet and Specific Terms



PQ Advisor Premium is a cloud-based application which enables power grid operators to monitor and evaluate the power quality status of their grids using SICAM PQ recorders such as SIEMENS SICAM Q100 and SICAM Q200 to optimize the power quality and reduce Operational Expenditure (OPEX). The PQ Advisor Premium Package consists of the MindSphere application PQ Advisor Premium and selected MindSphere Resources which are required to access the Platform and to utilize the application.

Prerequisites	
Data sources	<p>As of the date of release of this Product Sheet and Specific Terms only the following data sources can be used to supply data to PQ Advisor Premium application:</p> <ul style="list-style-type: none"> • For SICAM Q100 the required minimum hardware revision is /DD and the required minimum firmware version is V2.30. • For SICAM Q200 all hardware revisions are supported and the required minimum firmware version is V2.50. <p>In order to connect one of the compatible data sources listed above, a SICAM GridEdge with a minimum firmware version V1.01.14 is required. In the SICAM GridEdge the "Siemens Grid Diagnostic Suite Profile" shall be used.</p> <p>Please note that one additional IEC 61850 client connection must be available in the SICAM PQ recorders. The averaging interval of the SICAM PQ recorders shall be set to 1 or 10 minutes.</p> <p>The configuration and onboarding of such SICAM PQ recorder devices is not part of our Services. It is your responsibility to select, procure, configure, onboard and operate the SICAM GridEdge and SICAM PQ recorders.</p>
Software	<p>The installation of a certificate manager application (e.g. SICAM GridPass Essential) is required on your machine to create, sign and renew certificates that are used for authentication and secure communication between the SICAM GridEdge and your Account. SICAM GridPass is available for download at www.siemens.com/sicam-gridpass at separate terms and conditions that shall apply when you install the software.</p>

Web browser and operating systems	PQ Advisor Premium is a web-based application specifically optimized for use on Desktop PCs running Windows 10 or tablets running Google Android or Apple iPadOS operating systems. The recommended screen resolution is 1920x1080px or higher. The application requires at least Android 7.0 or iPadOS 13.0 and a recent version of Google Chrome, Microsoft Edge or Apple Safari.
Internet connection	A secure, firewalled Internet connection between your process LAN and the MindSphere MQTT Broker is required. The firewall must allow outgoing TCP-connections to port 8883. If your Internet router does not act as a DNS proxy or a DNS server, additionally the firewall must allow outgoing UDP connections to port 53. The bandwidth of your Internet connection will determine your experience of the performance of the Services.

Description of PQ Advisor Premium application	
General	The PQ Advisor Premium application allows you to visualize and evaluate power quality data from your electrical grid. The following views are provided as part of this application and are described in more detail below: <ul style="list-style-type: none"> • Cockpit • PQ evaluation • Measurements • Energy monitoring • Zone configuration
Cockpit	Shows power quality data from SICAM PQ recorders. The cockpit is user configurable. The User can select which SICAM PQ recorder is shown in each widget. Additionally, value limits for each widget can be configured. These limits then trigger color code indicators that help focusing on the most relevant power quality issues. Trend indicators are shown in most widgets to signal possible problems to the User before they occur.
PQ evaluation	Shows the results of the grid code evaluation for a selected SICAM PQ recorder. The User can assign grid codes to each SICAM PQ recorder in the device configuration view. Power quality incidents for the selected time range are shown in a timeline diagram. The percentage of violated time for each power quality characteristic is shown in a widget. Color code indicators are used to help focusing on the devices / characteristics that show grid code violations in the User selected time range.
Measurements	Shows the User selected measurement data of the connected SICAM PQ recorders in a timeline diagram. Measurement data from different SICAM PQ recorders can be displayed in the same diagram for comparison. The displayed time range can be selected.
Power forecast	Shows the results of the apparent power forecast for all enabled SICAM PQ recorders. The User can assign apparent power warning and error limits to each SICAM PQ recorder. In addition, the forecast period can be set. The limits then trigger color code indicators that help focusing on the SICAM PQ recorders that show apparent power limit violations in the selected prediction period.
Energy monitoring	Shows the aggregated energy consumed within a configured zone. The consumed energy is shown as stacked bar charts. The displayed time range can be set as day or week.

Zone configuration	Allows the User to create the hierarchy of zones for the energy monitoring feature. The zone hierarchy can be individually created. One or more onboarded SICAM PQ recorders can be assigned to a zone.
Device configuration	Allows the User to apply the nominal values for frequency and rated voltage to each onboarded SICAM PQ recorder. Additionally, the network type can be set per SICAM PQ recorder. The grid code is automatically derived from the entered values or can be set manually.
Application permissions	<p>PQ Advisor Premium application is operated in data centers in the Area European Union and processes the following data:</p> <ul style="list-style-type: none"> • Time series data which includes the variables received from an asset within defined continuous time cycles. • Asset configuration data which describes the asset (e.g. asset name, location). • Event data which includes the variables received from an asset. • File data which includes the files (COMTRADE and PQDIF) received from an asset. <p>The application performs the following activities which modifies or amends Your Content in your Account on your behalf:</p> <ul style="list-style-type: none"> • Evaluate and process information presented in different views within this application and store the results as time series or event data. • Update asset configuration data in order to use the functionalities of this application. • Store file data containing application settings changed by the User.

Description of MindSphere Resources

The following MindSphere resources (“MindSphere Resources”) are included in the PQ Advisor Premium Package.

Base Tenant	<p>The Base Tenant provides you with a dedicated Account (also referred to as “Tenant”) on MindSphere. It enables you to login to your Account via the respective URL provided by us and is required for use of the application and MindSphere Resources.</p> <p>Base Tenant includes 1 Admin User and provides you with the following administration tools available on the MindSphere Launchpad:</p> <ul style="list-style-type: none"> • Usage Transparency: provides information regarding your consumption of MindSphere Resources. • Settings: allow managing Users, permissions, rights, roles, groups, Collaborations, subtenants¹ and tenant provider information. For every User, an individual login is required. Users are also permitted to access and utilize the user management for the purpose of receiving a service from you. However, a user that receives a service from you shall not be granted with administration rights, except for administration rights that are offered by the user management of a subtenant¹. • Asset Manager: use Asset Manager to onboard & offboard agents to your Account; configure assets, asset types and aspect types; manage the Sharing of assets under a Collaboration between Accounts using Cross-Tenancy. The User that is entitled to administrate the Asset Manager may permit users of a subtenant¹ who receive a service from you to directly access the Asset Manager in relation to the respective subtenant¹. • Upgrade: use Upgrade to order available upgrades to your subscribed and additionally available MindSphere Resources (e.g. increase Users or agents); get an overview of your requested and completed upgrades; manage pending upgrade requests (authorized Users only).
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User	It allows a defined number of Users to access your Account and use the application.
Agent	An agent is a software as part of a hardware device (e.g. SICAM GridEdge and SICAM PQ recorder) or in the form of an application provided by Siemens or a Third Party which you connect to your Account and which can ingest data into your Account and send data to one or more asset instances.
Asset Type	Asset type describes the type of an asset (e.g. even harmonic voltages measured by a SICAM PQ recorder) including one or several attributes. An asset type is a template that describes the attributes of a homogenous group of physical or logical assets, which is used for asset modeling. An asset type is a grouping of assets with common characteristics that distinguish those assets as a group or class.
Asset Instance	Asset instance reflects a physical and/or logical device within your Account, e.g. a specific silo within a plant would be an asset instance. Each instance belongs to an asset type (e.g. even harmonic voltages measured by a SICAM PQ recorder).
Time Series Data Ingest Rate	Time series data ingest rate represents the rate at which the sensor data is ingested into the Platform (e.g. measured values from a SICAM PQ Recorder). Data ingest is based on number of assets, number of variables per asset, size per variable including overhead, read cycle interval and sending frequency. This depends on the size of the requests containing time series sent from the customer to the Platform. Time series data ingest rate is restricted to a maximum of 100 KB/s per asset.
Time Series Data Storage	Time series data storage represents the total volume of time series data (e.g. measured values from a SICAM PQ Recorder) ingested and stored in the Platform for an Account.
IoT File Storage	IoT file storage represents the total volume of files (e.g. COMTRADE and PQDIF files) uploaded and stored in the Platform for an Account.
Event	An event documents the occurrence of a defined situation (e.g. voltage dip or voltage swell events).

¹⁾ Please note that subtenants are not part of the PQ Advisor Premium Package and are currently not supported by the application. Subtenants can be ordered separately for additional fees and can be used for OEM Services as described in the Specific Terms for MindAccess IoT Value Plan available on www.mindsphere.io/terms. If you provide your customers with OEM Services, the Specific Terms for MindAccess IoT Value Plan available on www.mindsphere.io/terms shall apply accordingly as if you had subscribed to a MindAccess IoT Value Plan.

PQ Advisor Premium Package Overview

Base subscription	PQ Advisor Premium Package Starter
The MindSphere Resources included in the PQ Advisor Premium Package Starter are suitable to connect 1 SICAM GridEdge with 1 SICAM PQ recorder to the Platform with a maximum of 65 Data Points.	
PQ Advisor Premium application	✓
Base Tenant ¹	✓
Users	5
Agents	2
Asset Types	5
Asset Instances	70
Time Series Data Ingest Rate	0.46 kB/s

Time Series Data Storage	28.0 GB
IoT File Storage	1.0 GB
Events	20 000
MindSphere Resources upgrade (optional)	PQ Advisor Premium Package Site Upgrade
Fee	25 € ² /month
The PQ Advisor Premium Package Site Upgrade contains the following additional MindSphere Resources and is suitable to connect 1 additional SICAM GridEdge and 1 additional SICAM PQ recorder to the Platform with a maximum of 65 Data Points. This upgrade can only be activated within the PQ Advisor Premium application.	
Agents	2 additional Agents
Asset Instances	70 additional Asset Instances
Time Series Data Ingest Rate	0.46 kB/s additional Time Series Data Ingest Rate
Time Series Data Storage	28.0 GB additional Time Series Data Storage
IoT File Storage	1.0 GB additional IoT File Storage
Events	20 000 additional Events
MindSphere Resources upgrade (optional)	PQ Advisor Premium Package Device Upgrade
Fee	19 € ² /month
The PQ Advisor Premium Package Device Upgrade contains the following additional MindSphere Resources and is suitable to connect 1 additional SICAM PQ recorder to the Platform with a maximum of 65 Data Points. This upgrade can only be activated within the PQ Advisor Premium application.	
Agents	1 additional Agent
Asset Instances	70 additional Asset Instances
Time Series Data Ingest Rate	0.46 kB/s additional Time Series Data Ingest Rate
Time Series Data Storage	28.0 GB additional Time Series Data Storage
IoT File Storage	1.0 GB additional IoT File Storage
Events	20 000 additional Events
MindSphere Resources upgrade (optional)	PQ Advisor Premium Package Data Points Upgrade
Fee	9 € ² /month
The PQ Advisor Premium Package Data Points Upgrade contains the following additional MindSphere Resources and is suitable to send 50 additional Data Points for any SICAM PQ recorder to the Platform. This upgrade can only be activated within the PQ Advisor Premium application.	
Asset Instances	55 additional Asset Instances
Time Series Data Ingest Rate	0.17 kB/s additional Time Series Data Ingest Rate
Time Series Data Storage	12.0 GB additional Time Series Data Storage
¹⁾ You can decide if a Base Tenant shall be created and provisioned to you as part of your PQ Advisor Premium Package Starter or if the PQ Advisor Premium Package Starter (without a Base Tenant) shall be added to an existing Account (Base Tenant or MindAccess IoT Value Plan Account). A Package can only be added to an existing Account if the Account and Package are hosted in the same data center location. If you decide to add various Packages to one existing Account, please note the following: The MindSphere Resources included in the various Packages will be combined under one Account; it is your responsibility to allocate the MindSphere Resources to the various Packages according to your needs. The combination of MindSphere Resources under one Account may lead to technical limitations in their accessibility and should therefore not exceed the limits set out under https://sie.ag/MindSphere_TechnicalLimitationsforUsageofMindSphereServices ; ²⁾ If a fee is displayed in a different currency on the product detail page for PQ Advisor Premium Package Starter on http://www.mindsphere.io/store in your country of residence at the date of activating any of the upgrades described herein, such displayed fee will be charged.	

Specific Terms

Subscription Term for base subscription, termination	<p>The initial Subscription Term for PQ Advisor Premium Package Starter is 12 months. Following expiration of the preceding Subscription Term, the subscription automatically renews with a Subscription Term of 12 months at the then-current terms made available under www.mindsphere.io/terms, unless either Party notifies the other Party at least 60 days prior to the then-current expiration date that it has elected not to renew.</p> <p>Upon expiration of the Subscription Term for PQ Advisor Premium Package Starter without renewal, any upgraded MindSphere Resources will also be deactivated and cannot be used any longer.</p>
MindSphere Resources upgrade, activation and deactivation	<p>Any of the upgrades described herein may be activated or deactivated within the application at any time during a valid Subscription Term for PQ Advisor Premium Package Starter.</p>
Payment terms	<p>The subscription fee for PQ Advisor Premium Package Starter is charged yearly in advance. Upon activation and until deactivation of an upgrade described herein, the fee for the relevant upgrade is charged on a daily basis monthly in arrears.</p>
Data center location	<p>Your Content processed by the MindSphere Resources is stored at rest in the Area European Union as set out in the MindSphere Supplemental Terms available on www.mindsphere.io/terms.</p>
Adaptation of fees	<p>During the Subscription Term, we may change or add new fees (collectively referred to as "Fee Change") due to and to the extent required to reflect: (i) changes in the quality or functionalities of the Service; (ii) material changes in market conditions; (iii) general increases in wages or other employment costs; and/or (iv) changes in procurement costs due to price changes made by our suppliers, in each case to the extent that the changes affect our provision of the agreed Service. We will notify you of any Fee Change at least 60 days in advance of the effective date of the Fee Change.</p> <p>The fees during any renewed Subscription Term will be the same as during the immediately prior Subscription Term, unless we notify you of a Fee Change at least 90 days prior to the end of the then-current Subscription Term, in which case the communicated Fee Change will be effective upon subscription renewal.</p>
Service Level Agreement	<p>The Monthly Uptime Percentage for the PQ Advisor Premium Package is 90%. Monthly Uptime Percentage is defined in the MindSphere Supplemental Terms available on www.mindsphere.io/terms.</p>
Data use rights	<p>During and after the Subscription Term, Siemens and its business partners may use Collected Data for Siemens' internal purposes, e.g. development and improvement of products and services. Use of Collected Data in accordance with this Section will be at Siemens' risk. Should Siemens divest substantially all of its assets of a business or should an Affiliate cease to be an Affiliate of Siemens AG, the purchaser of the divested business or the former Affiliate, respectively, may use the Collected Data received by such business or Affiliate before divestment, only as permitted in this Product Sheet and Specific Terms.</p> <p>"Collected Data" means the following data collected by this application:</p> <ul style="list-style-type: none"> • Asset configuration data (asset name, location). • Time series data relating to device operation and configuration. • Event data relating to device operation. • File data relating to device operation and configuration. • Processed data (KPIs, histograms, events, comments, plans). • Logs without personal data (app log, system log).

	You acknowledge that Collected Data may include copies made by the application from certain parts of Your Content for use in accordance with this Product Sheet & Specific Terms.
Third Party Terms	The application contains Third Party services, including open source software, or software-related managed services, which are subject to additional or different terms, license rights, or require certain notices by their licensor, which we are obliged to pass on to you as your licensor and to which you agree to abide ("Third Party Terms"). The Third Party Terms are made available via the following web link: https://sie.ag/MindSphere-ThirdParty_PQAdvisorPremium .
Changes to the Product Sheet and Specific Terms	We may update this document from time to time during a Subscription Term in order to reflect any changes agreed with or imposing by our subcontractors (including changes in open software license terms) or when we introduce new MindSphere Resources, features, supplements, enhancements or capabilities (e.g. that were not previously included with the subscription, but added for no additional fee). Changes shall become binding upon release of a new version for this document on www.mindsphere.io/terms .
Support	Support is available 24 hours a day in English and German. Support requests can be addressed to the Customer Support Center (CSC) of Siemens: Phone: +49 911 433 - 7878 E-Mail: support.energy@siemens.com For more information, refer to http://www.siemens.com/csc .

Export Control Regulations

Applicable for PQ Advisor Premium application and MindSphere Resources.

AL	N
ECCN	N

Security Information

General	In order to protect plants, systems, machines and networks against cyber threats, it is necessary that you implement - and continuously maintain - a holistic, state-of-the-art industrial security concept.
Access credentials	Authentication and authorization on User level based on username and password.

Definitions

Data Point	Each measurand or counter value of SICAM PQ recorder sent to the Platform via SICAM GridEdge.
MindSphere Launchpad	After the login into your Account, the Launchpad appears. Similar to a desktop on any common operating system (OS), the MindSphere Launchpad facilitates starting various assigned applications. If you provide services to your customers, you must replace the Siemens service and support information provided in the MindSphere Launchpad with your companies' service and support information.

SICAM GridEdge	SICAM GridEdge acts as an IoT gateway for IEC 61850 enabled protection relays. It communicates to MindSphere via OPC UA PubSub protocol (MQTT). Through the usage of IEC 61850 in the process LAN no firmware, configuration and hardware changes are required in protection relays.
General	Unless otherwise indicated, capitalized terms used in this document shall have the meaning given to them in this Product Sheet and Specific Terms or elsewhere in the MindSphere Agreement.