SIPROTEC Dashboard Package
Product Sheet

SIPROTEC Dashboard is a cloud-based application which enables power grid operators to monitor the operational status of their protection device fleet and optimize maintenance activities.

The SIPROTEC Dashboard Package consists of the MindSphere application SIPROTEC Dashboard and selected MindSphere Resources which are required to access the Platform and to utilize the application.

Prerequisites

Data sources	As of the date of release of this Product Sheet only those data sources can be used to supply data to SIPROTEC Dashboard application when they fulfill the prerequisites listed in the document 'Grid Diagnostic Suite Apps Prerequisites', that can be downloaded at: https://support.industry.siemens.com/cs/document/109765571/sicam-siprotec-iot-connectivity-?dti=0&lc=en-WW SIPROTEC 5 devices with any released firmware version. IEC 61850 on the integrated Ethernet port J or on an equipped Ethernet communication module, either in the base module (port E or port F) or for modular devices with communication extension module CB202 (port N or port P) can be used. • SIPROTEC 4 / Compact devices with minimum firmware version V4.60. IEC 61850 on the EN100 communication module can be used. All hardware versions of the EN100 module with support of IEC 61850 can be used. • Other IEC 61850 communication enabled devices that fulfill the prerequisites. In order to connect one of the compatible data sources listed above, SICAM GridEdge with a minimum version of V2.9 is required. Please note that one additional IEC 61850 client connection must be available in the protection relay. The configuration and onboarding of such SIPROTEC devices is not part of our services. It is your responsibility to select, procure, configure, onboard, and operate the SICAM GridEdge and SIPROTEC devices. In the SICAM GridEdge the "Siemens Grid Diagnostic Suite Profile" for IEC 61850 devices shall be used.
Software	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.

Web browser and operating systems	SIPROTEC Dashboard is a web-based application specifically optimized for use on Desktop PCs running Windows, mobile phones or tablets running Google Android or Apple iOS/iPadOS operating systems. The recommended screen resolution is 1920x1080px or higher. The application requires at least a recent version of Android or iOS/iPadOS 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 at least allow outgoing TCP-connections to ports 443 and 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.
Data access	To access and use the application, data stored in your existing Account (e.g., Base Environment or MindSphere Capability Package Account) may be accessed by the application.

Description of SIPROTEC Dashboard Application

General	The SIPROTEC Dashboard application allows you to monitor the operational status of your protection device fleet and optimize maintenance activities. The following views are provided as part of this application and are described in more detail below: • Map with alarm list • Faults • Measurements • Firmware • Station • Events • Device • Condition Monitoring
Map	Shows all stations in a map view with the corresponding station status indicated by accordingly colored station icon. Additionally, latest unacknowledged alarms are shown in a list.
Faults	Shows a filterable list of all fault records in the grid. The fault records can be visualized and downloaded.
Measurements	Shows the User selected measurement data of the connected SIPROTEC devices in a timeline diagram. Measurement data from different SIPROTEC devices can be displayed in the same diagram for comparison. The displayed time range can be selected.
Firmware	Shows a filterable list of firmware versions of a protection relay in the grid. The firmware version of the mainboard and the communication module(s) of a SIPROTEC device will be shown.
Station	Shows all protection relays of the selected station. Every device is shown in a colored card indicating the device health state.
Events	Shows a list of events for the selected station.
Device	Shows device related information of the categories: • Device status / information: shows the functions status with more details, the IEC 61850 / MindSphere communication status and device relevant information like manufacturer, device type, firmware versions, serial number, product code and hardware details. Additionally, all relevant information can be downloaded in one ZIP-file for customer support requests. This file includes depending on the availability the latest log files, fault records, setting changes and the device relevant information.

	• Log files: shows a filterable list of all available log files of the SIPROTEC 5 device with a minimum firmware version V7.90. The available log file types like fault, ground-fault, operational, setting-history, user, etc. are depending on the SIPROTEC 5 configuration and availability of the log file in the COMFEDE file via IEC 61850. • Setting changes: shows a list of settings changed during runtime of the SIPROTEC 5 device. Each entry includes all changed settings within a specific time frame with the old and the new value. The visibility of settings in IEC 61850 needs to be activated in the device via the Engineering tool DIGSI 5.
Condition Monitoring	• Circuit Breaker Statistics Shows the operation counter, the sum of breaking primary currents, and the inactivity of a circuit breaker in correlation with the configured values for the circuit breaker type and the warning and alarm levels. • Circuit Breaker Wear Monitoring Shows several wear monitoring values of a circuit breaker in correlation with the configured values for the circuit breaker type and the warning and alarm levels. • Switch Statistics Shows the operation counter and the inactivity of a switch in correlation with the configured values for the switch type and the warning and alarm levels. Circuit breaker and switch typicals can be created, updated, and assigned to primary assets.
Settings	Shows a set of changed settings monitored via IEC 61850 and in case of SIPROTEC 4 and Compact monitored via DIGSI 4.
E-mail notifications	The User can register an e-mail address for receiving e-mail notifications in case of an event. This e-mail includes: • The type of event, • The name of the station and the device, • The time stamp of the event, • A link to the station in Google the maps.
SMS notifications[1]	The User can register a phone number for receiving SMS notifications in case of an event. This SMS includes: • The type of event, • The name of the station and the device, • The time stamp of the event, • A link to the station in Google the maps.

[1] Please verify with your sales representative if SMS Notification Service is available for your region.

Description of MindSphere Resources

The following MindSphere resources ("MindSphere Resources") are included in the SIPROTEC Dashboard Package or its extensions. These have been selected to ensure proper operation of SIPROTEC Dashboard application.	
Base Environment	The Base Environment provides you with a dedicated Account (also referred to as "Environment") 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. The Base Environment includes 1 Admin User and provides you with the following administration tools available on the MindSphere Launchpad: • Usage Transparency: provides information regarding your consumption of MindSphere Resources. • Agent Diagnostic: allows you to activate and deactivate agent logfiles and to access them. • Settings: allow managing Users, permissions, rights, roles, groups, Collaborations, and environment provider information. For every User, an

	individual login is required. Access policies are available only upon request. MindSphere sales representative or MindSphere Support to be contacted to enable use of access policies.
	• Asset Manager: use Asset Manager to onboard & offboard agents to your Account; to configure assets, asset types and aspect types; to manage the Sharing of assets under a Collaboration between Accounts using Cross-Tenancy.
	• Upgrade: can be used to order available upgrades (incl. add-ons) to already Offerings; to get an overview of requested and completed upgrades; to manage pending upgrade requests (authorized Users only).
	The Base Environment provides you with the following connectivity "Connect your Things" capabilities as well:
	• To connect assets using own PC as a gateway with MindConnect Software Agent.
	• To connect individual hardware using MindConnect API services, MindConnect MQTT Services, MindConnect OPC UA PubSub Services and MindConnect Library.
	• To use MindConnect Hardware e.g., MindConnect Nano, MindConnect IoT2040, MindConnect IoT2050.
	• Zero touch onboarding using MindConnect OPC UA PubSub Services and MindConnect MQTT Services.
	• To maintain connected devices by using MindConnect Device Management Services.
	For more information regarding Connect your Things capabilities, please refer to the Product Sheet for MindSphere Capability Packages available at https://siemens.mindsphere.io/en/docs/Product-Descriptions-Overview/MindSphere-Product-Sheets.
Additional MindSphere Resources	In addition to the Base Environment, the following MindSphere Resources are included in the SIPROTEC Dashboard Package and its extensions:
	• Asset Attributes
	• Events
	• File Storage
	• Notifications SMS
	• Time Series Data Ingest Rate
	• Time Series Data Storage
	For general descriptions of the MindSphere Resources listed above, please refer to the MindSphere Glossary.

SIPROTEC Dashboard Package Overview	
Application subscription	SIPROTEC Dashboard Package Starter
Fee	See Order[1]
The MindSphere Resources included in the SIPROTEC Dashboard Package Starter are suitable to connect 1 SICAM GridEdge with 1 SIPROTEC device (including 1 current- and 1 voltage-measuring point) to the Platform with a maximum of 20 Data Points. With the purchase of the SIPROTEC Dashboard Package Starter, you are entitled to install and use one SICAM GridEdge software instance for one station.	
SIPROTEC Dashboard application	✔
Base Environment[2]	✔
Asset Attributes	125
Time Series Data Ingest Rate	0.02 kB/s
Time Series Data Storage	1 GB
File Storage	1 GB

Events	5 000
Extension (for MindSphere Resources) (optional)	**SIPROTEC Dashboard Package Station Extension**
	Usage-based
Fee	See usage-based list[3]
Billing cycle	Monthly in arrears

The SIPROTEC Dashboard Package Station Extension contains the following additional MindSphere Resources and is suitable to connect 1 additional station including SICAM GridEdge and 1 additional SIPROTEC device (including 1 current- and 1 voltage-measuring point) to the Platform with a maximum of 20 Data Points. This extension can only be activated within the SIPROTEC Dashboard application.
With each purchase of the SIPROTEC Dashboard Package Station Extension, you are entitled to install and use one SICAM GridEdge software instance for the corresponding additional station.

Asset Attributes	125 additional Asset Attributes
Time Series Data Ingest Rate	0.02 kB/s additional Time Series Data Ingest Rate
Time Series Data Storage	1 GB additional Time Series Data Storage
File Storage	1 GB additional File Storage
Events	5 000 additional Events
Extension (for MindSphere Resources) (optional)	**SIPROTEC Dashboard Package Device Extension**
	Usage-based
Fee	See usage-based list[3]
Billing cycle	Monthly in arrears

The SIPROTEC Dashboard Package Device Extension contains the following additional MindSphere Resources and is suitable to connect 1 additional SIPROTEC device (including 1 current- and 1 voltage-measuring point) to the Platform with a maximum of 20 Data Points. This extension can only be activated within the SIPROTEC Dashboard application.

Asset Attributes	100 additional Asset Attributes
Time Series Data Ingest Rate	0.02 kB/s additional Time Series Data Ingest Rate
Time Series Data Storage	1 GB additional Time Series Data Storage
File Storage	1 GB additional File Storage
Events	5 000 additional Events
Extension (for MindSphere Resources) (optional)	**SIPROTEC Dashboard Package 50 Devices Extension**
	Usage-based
Fee	See usage-based list[3]
Billing cycle	Monthly in arrears

The SIPROTEC Dashboard Package 50 Devices Extension contains the following additional MindSphere Resources and is suitable to connect 50 additional SIPROTEC devices (including 1 current- and 1 voltage-measuring point per device) to the Platform with a maximum of 20 Data Points for each device. This extension can only be activated within the SIPROTEC Dashboard application.

Asset Attributes	5 000 additional Asset Attributes
Time Series Data Ingest Rate	1.0 kB/s additional Time Series Data Ingest Rate
Time Series Data Storage	50 GB additional Time Series Data Storage
File Storage	25 GB additional File Storage
Events	250 000 additional Events

Extension (for MindSphere Resources) (optional)	SIPROTEC Dashboard Package 200 Devices Extension
	Usage-based
Fee	See usage-based list[3]
Billing cycle	Monthly in arrears

The SIPROTEC Dashboard Package 200 Devices Extension contains the following additional MindSphere Resources and is suitable to connect 200 additional SIPROTEC devices (including 1 current- and 1 voltage-measuring point per device) to the Platform with a maximum of 20 Data Points for each device. This extension can only be activated within the SIPROTEC Dashboard application.

Asset Attributes	20 000 additional Asset Attributes
Time Series Data Ingest Rate	4.0 kB/s additional Time Series Data Ingest Rate
Time Series Data Storage	200 GB additional Time Series Data Storage
File Storage	100 GB additional File Storage
Events	1 000 000 additional Events

Extension (for MindSphere Resources) (optional)	SIPROTEC Dashboard Package Data Points Extension
	Usage-based
Fee	See usage-based list[3]
Billing cycle	Monthly in arrears

The SIPROTEC Dashboard Package Data Points Extension contains the following additional MindSphere Resources and is suitable to send 50 additional Data Points for any SIPROTEC device to the Platform. This extension can only be activated within the SIPROTEC Dashboard application.

Asset Attributes	250 additional Asset Attributes
Time Series Data Ingest Rate	0.5 KB/s additional Time Series Data Ingest Rate
Time Series Data Storage	3 GB additional Time Series Data Storage

Extension (for MindSphere Resources) (optional)	SIPROTEC Dashboard Package Wear Monitoring Lite Extension
	Usage-based
Fee	See usage-based list[3]
Billing cycle	Monthly in arrears

The SIPROTEC Dashboard Package Wear Monitoring Lite Extension contains the following additional MindSphere Resources and is suitable to send 20 additional Data Points for any SIPROTEC device to the Platform. This extension supports the wear monitoring of one circuit breaker and switches installed at one feeder that is monitored by one SIPROTEC device. This extension can only be activated within the SIPROTEC Dashboard application.

Asset Attributes	100 additional Asset Attributes
Time Series Data Ingest Rate	0.02 KB/s additional Time Series Data Ingest Rate
Time Series Data Storage	1 GB additional Time Series Data Storage
Events	2 000 additional Events

Extension (for MindSphere Resources) (optional)	SIPROTEC Dashboard Package Notifications Extension
	Usage-based
Fee	See usage-based list[3]
Billing cycle	Monthly in arrears

The SIPROTEC Dashboard Package Notifications Extension contains the following MindSphere Resources and is suitable to send 25 SMS Notifications. This extension can only be activated within the SIPROTEC Dashboard application.

Notifications per month	25 SMS notifications

¹⁾ Subscription-based pricing is set forth in the Order; ²⁾ You can decide if a Base Environment shall be created and provisioned to you as part of your SIPROTEC Dashboard Package Starter or if the SIPROTEC Dashboard Package Starter (without a Base Environment) shall be added to an existing Account (Base Environment or MindSphere Capability Package 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://siemens.mindsphere.io/en/docs/Product-Descriptions-Overview/technical-limitations; ³⁾ Usage-based fees are set forth in the Price List for Offerings with Usage-based Fees available at https://siemens.mindsphere.io/en/docs/Product-Descriptions-Overview/usage-based.

General

Subscription Term for application	The standard Subscription Term for SIPROTEC Dashboard Package Starter is 12 or 36 months. The Subscription Term shall automatically renew if stated in the Order. Upon expiration of the Subscription Term for SIPROTEC Dashboard Package Starter without renewal, any upgraded MindSphere Resources will also be deactivated and cannot be used any longer.
Subscription Term for SICAM GridEdge	With the purchase of the SIPROTEC Dashboard Package Starter, you are entitled to install and use one SICAM GridEdge software instance for one station. With each purchase of the SIPROTEC Dashboard Package Station Extension, you are entitled to install and use one SICAM GridEdge software instance for the corresponding additional station. You are granted the installation and usage rights by agreeing to the software terms and conditions of the SICAM GridEdge. For agreeing to the terms & conditions and downloading the SICAM GridEdge software, please visit: https://support.industry.siemens.com/cs/document/109780559/sicam-gridedge-software-paket-?dti=0&lc=de-WW
MindSphere Resources extension, activation, and deactivation	Any of the extension described herein may be activated or deactivated within the application at any time during a valid Subscription Term for SIPROTEC Dashboard Package Starter.
Extensions (usage-based)	Upon activation and until deactivation of an extension described herein, the fee for the relevant extension is charged on a daily basis monthly in arrears. For further details about calculation of usage-based fees please refer to Usage-based Calculation Methods for MindSphere Applications available at https://siemens.mindsphere.io/en/docs/Product-Descriptions-Overview/app-usage-based-calculation.
Payment terms	The subscription fee for SIPROTEC Dashboard Package Starter is fully charged in advance for the entire Subscription Term unless otherwise expressly provided in an Order. The fee for usage-based extensions is charged monthly in arrears, if the cumulated fee exceeds the threshold of EUR 200 equivalent. If the cumulated fee for the usage-based extension does not exceed the threshold of EUR 200 equivalent, the fee will not be charged.
Service Level Agreement	The Monthly Availability for the SIPROTEC Dashboard Package is 95%. Monthly Availability is defined in the Cloud Services Support and Service Level Framework available on https://www.siemens.com/sw-terms/sla.
Third-Party Terms	The Third-Party Terms are made available via the following web link: https://siemens.mindsphere.io/en/docs/Product-Descriptions-Overview/Third-Party-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 2155 4466 For more information, refer to https://new.siemens.com/global/en/products/energy/contact.html.

Export Control Regulations

Applicable for SIPROTEC Dashboard 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 SIPROTEC device sent to the Platform via SICAM GridEdge.
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).
General	Unless otherwise indicated, capitalized terms used in this document shall have the meaning given to them in this document or elsewhere in the Agreement. You may also want to check our Glossary.

https://siemens.mindsphere.io/en/docs/Product-Descriptions-Overview