SITRANS Smart Condition Monitoring IQ Package
Product Sheet

The SITRANS Smart Condition Monitor (SCM) IQ Package in combination with the Siemens Measurement Intelligence devices (SITRANS MS200 and the SITRANS CC220) and Other Devices connected to Insights Hub offers an online solution to monitor the condition of your equipment.

This assists in the optimization of maintenance tasks by reducing unplanned downtimes. SITRANS SCM IQ Package provides proper structuring, notification, visualization functionality and modelling capabilities with pre-defined machine learning algorithms.

The SITRANS SCM IQ Package consists of Insights Hub applications SITRANS SCM IQ and SITRANS Anomaly IQ as well as selected resources which are required to access the Platform and to utilize these applications.

Prerequisites	
Connectivity	To use the SITRANS SCM IQ application, your Siemens Measurement Intelligence devices (formerly known as Siemens Process Instrumentation devices) and Other Devices must be connected to the Internet. The Siemens Process Instrumentation devices are using TLS (Transport Layer Security) encrypted data transfer over MQTT (Message Queuing Telemetry Transport). Other Devices need to be properly connected to the Platform. Connectivity is not part of our Services. It is your responsibility to provide, enable and maintain connectivity.
Web browser	An HTML 5 capable Internet browser with a screen resolution of 1920x1080 or higher is required (e.g. Google Chrome or Microsoft Edge). Google Chrome is recommended. Mobile devices are supported as well by using HTML5 capable Internet browsers.
Siemens Measurement Intelligence devices	The applications SITRANS SCM IQ and SITRANS Anomaly IQ support the following Siemens Measurement Intelligence devices: the Industrial Internet of Things (IIoT) multisensor SITRANS MS200 and the Bluetooth® data collector SITRANS CC220. Both devices must be in place to properly use the application. The SITRANS MS200 data will be processed and down sampled. The peak-to-peak values of the vibration measurements will be available as time series data in your tenant. You are solely responsible for the selection, configuration, and onboarding of your Siemens Measurement Intelligence devices to the Platform.
Other Devices	If the use of Other Devices is intended in SITRANS SCM IQ you need to connect them to your Tenant, make the data available as time series data and map the data to an asset. You are solely responsible for the selection, configuration, and onboarding of Other Devices to your Tenant.

Data access	To access and use the application, data stored in your existing Account (e.g. Base Environment or Insights Hub Capability Package Account) may be accessed by the application.

Description of SITRANS SCM IQ and SITRANS Anomaly IQ Applications

SITRANS SCM IQ application	The major functionalities of the SITRANS SCM IQ application included in the SITRANS SCM IQ Package Base are:
	• Automatic creation of asset type SITRANS MS and agent SITRANS MS Connector to be used with Siemens Measurement Intelligence devices.
	• Automatic creation of the aspect type generic_scmiq_anomalydetection to be used with assets of Other Devices.
	• Establishing connection to SITRANS MS200 and SITRANS CC220 devices.
	• Add or delete STRANS MS200 and SITRANS CC220 devices.
	• Mapping of SITRANS MS200 devices to assets.
	• Configuration of Users and User groups which will receive e-mail notifications.
	• View the SITRANS MS200 data connected to the Platform:
	  ▪ Temperature
	  ▪ X, Y, Z vibration data as peak-to-peak values
	  ▪ ON/Off state KPI
	  ▪ Working hour counter KPI
	  ▪ BLE Signal Strength
	  ▪ FFT spectra for frequency analytics
	• Training of Prediction Models which will then be available for activation.
	• Activate and manage the Prediction Models to detect anomalies of the equipment monitored by SITRANS MS200 or Other Devices (regarding reliability of the Prediction Models, see "Prediction Models" below).
	• Trigger notifications when anomalies are detected by the Prediction Models.
	
	The major functionalities of the SITRANS SCM IQ application included in the SITRANS SCM IQ Upgrade Packages are:
	• Enable above stated functionalities for additional quantity of Siemens Measurement Intelligence devices and/or Other Devices according to the package size of the Upgrade Package.

SITRANS Anomaly IQ application	The SITRANS Anomaly IQ application can be properly used only when Prediction Models are activated. The major functionalities of the SITRANS Anomaly IQ application are: • View detected anomalies and assign them to specific Users, if needed. • Enter information for documentation of the detected anomalies which describe the incidence and the solution of the incidence. • Label the anomalies to take advantage of continuous classification of the detected anomalies. • • Add labels for classification and approve them by an assigned reviewer.

Description of Insights Hub Resources

The following Insights Hub resources ("Insights Hub Resources") are included in the SITRANS SCM IQ Package or its extensions. These have been selected to ensure proper operation of SITRANS SCM IQ and SITRANS Anomaly IQ applications.

Base Environment	The Base Environment provides you with a dedicated Account ("Environment") on Insights Hub. It enables you to login to your Account via the respective URL provided by us and is required for use of the application and Insights Hub Resources. The Base Environment includes 1 Admin User and provides you with the following administration tools available on the Insights Hub Launchpad:

	• Usage Transparency: provides information regarding your consumption of Insights Hub 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. Insights Hub sales representative or Insights Hub 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 Insights Hub Capability Packages available at https://siemens.mindsphere.io/en/docs/Product-Descriptions-Overview/MindSphere-Product-Sheets.
Additional Resources	In addition to the Base Environment, the following Insights Hub Resources are included in the SITRANS Smart Condition Monitoring IQ Package and its extensions: • Asset Attributes • File Storage • Time Series Data Ingest Rate • Time Series Data Storage For general descriptions of the Insights Hub Resources listed above, please refer to the Glossary.

SITRANS SCM IQ Package Overview

Application subscription	SITRANS SCM IQ Base Package
Fee	See Order[1]
Billing cycle	Full amount in advance

The application subscription allows access to the functionalities of the SITRANS SCM IQ application and the SITRANS Anomaly IQ application (if activated) as described above. The Insights Hub Resources included in the SITRANS SCM IQ Base Package are suitable to establish maximum 12 connections between the SITRANS MS200 device and the Platform, to start 12 Prediction Models and to use 3 months of Training Time for Prediction Models.

	SITRANS SCM IQ Package Base
SITRANS SCM IQ application (incl. connectivity of 12 MS200 and 12 Prediction Models)	✔
SITRANS Anomaly IQ application	✔
Base Environment[2]	✔
Asset Attributes	240
Time Series Data Ingest Rate	0.15 KB/s
Time Series Data Storage	17 GB
File Storage	1 GB

Application subscription	SITRANS SCM IQ Upgrade Packages
Fee	See Order[1]
Billing cycle	Full amount in advance

The subscription to the upgrade packages allows you to use the functionality of the SITRANS SCM IQ and SITRANS Anomaly IQ applications as described above for additional quantities of SITRANS MS200 devices and Prediction Models.

Upgrade package size	S	M	L
Quantity of additional MS200 and Prediction Models	12	50	200
Asset Attributes	240	1000	4000
Time Series Data Ingest Rate	0.15 KB/s	0.60 KB/s	2.40 KB/s
Time Series Data Storage	17 GB	70 GB	280 GB

[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 SITRANS SCM IQ Package Base subscription or if the SITRANS SCM IQ Package Base (without a Base Environment) shall be added to an existing Account (Base Environment or Insights Hub 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 Insights Hub Resources included in the various Packages will be combined under one Account; it is your responsibility to allocate the Insights Hub Resources to the various Packages according to your needs. The combination of Insights Hub 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.

General

Subscription Term	The standard Subscription Term for the application is 12 or 36 months. The Subscription Term shall automatically renew if stated in the Order. Upon expiration of the Subscription Term for SITRANS SCM IQ Base Package without renewal, any extensions described herein will also be deactivated and cannot be used any longer.
Co-term (renewal and termination)	The Subscription Term for extensions can be co-termed with the Subscription Term of the application and therefore can be shorter than the standard Subscription Term. If an application subscription is terminated, the associated extensions will also be terminated at the same time.
Payment terms	The fee for SITRANS SCM IQ subscription packages (base and upgrade) is charged yearly over the Subscription period unless otherwise expressly provided in an Order.
Trial	SITRANS SCM IQ Base Package is available as a "Trial" version. The Trial term and conditions are defined in the Insights Hub Supplemental Terms available on www.siemens.com/sw-terms/supplements.
Service Level Agreement	The Monthly Availability for the SITRANS SCM IQ and SITRANS Anomaly IQ applications is at least 98%. 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 for SITRANS SCM IQ and SITRANS Anomaly IQ applications are made available via the following web links: https://siemens.mindsphere.io/en/docs/Product-Descriptions-Overview/Third-Party-Terms.
Support	Support is available in German and English via https://support.industry.siemens.com/. Hours of operation are Monday through Friday, 8:00 am to 5:00 pm CET – excluding national and local holidays.

Export Control Regulations

Applicable for SITRANS SCM IQ and SITRANS Anomaly IQ applications and Insights Hub 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.
Communication encryption standards	- SITRANS MS200 IIoT multisensor – data collector SITRANS CC220: Secured and transportation encrypted communication via Bluetooth Low Energy BLE (AES128) - Data collector SITRANS CC220 – Insights Hub cloud environment: Secured and encrypted communication via MQTT (TLS 1.2, RSA4096, SHA256)
Cloud application / environment (Certificate overview)	- Identity management and access control with optional multifactor authentication - Tenant and environment separation - Cyber security standard ISO 27001/IEC 62443 - Secure development life-cycle: IEC 62443-4-1
Siemens Measurement Intelligence devices - Hardware security	SITRANS MS200 IIOT multisensor: - PIN secured access, Random generated default PIN - PIN policy forces initial PIN change - Change protected firmware SITRANS CC220 data collector: - Gateway with headless design (only accessible via SITRANS SCM IQ app) - Secure SCM IQ onboarding procedure

Definitions

Prediction Models	The Prediction Models are machine learning models applied to the raw data of the SITRANS MS200 or Other Devices. The machine learning model will predict anomalies of a specific asset while continuously monitoring the data of the SITRANS MS200 device. Even if the algorithms for the machine learning model are carefully selected, false positive and false negative anomalies can be detected, resulting in less reliable anomaly detection and notification. The result is also influenced by the input to the model that the User defines when applying data to train a machine learning model.
Siemens Measurement Intelligence devices	The Siemens Measurement Intelligence devices allow you to generate values as vibration in the x, y, and z axes, and temperature. The values are delivered from the IIoT multisensor SITRANS MS200 and are transferred to the Platform with the Bluetooth® data collector SITRANS CC220.
Other Devices	Other Devices are any device connected to the Platform where data is mapped to an Insights Hub asset. Other Devices mapped to Insights Hub

	assets are compatible with SITRANS SCM IQ within the following specifications:
		Min. sampling period for prediction and training	1 second
		Min. period between consecutive predictions	1 minute
		Max. number of aspect variables per model	20
		Supported datatypes for aspect variables used in anomaly detection	Boolean, int, long, double
Training Time for Prediction Model	The Training Time for Prediction Models is to select the data input for the machine learning model which usually represents an asset in its normal operation condition. The time selection is made in the SITRANS SCM IQ application but is limited to the available Training Time as per your subscription.
General	Unless otherwise indicated, capitalized terms used in this document shall have the meaning given to them in this Product Sheet or elsewhere in the Agreement. You may also want to check our Glossary.

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