Saia PCD® Supervisor

Complete solution for managing buildings and infrastructures

Safety – Comfort – Efficiency

We at Saia Burgess Controls believe that building automation should never be an end in itself. First and foremost, it should ensure the safety and comfort that people expect in a building – whether the building in question is a school, an office, a hotel, a supermarket, a production facility or a warehouse.

A modern building management system is the key to reliable, flexible and efficient building-related systems. Not only should it allow further optimisation, it should help to reduce energy consumption and thus protect the environment and save money.

That is why we have developed the Saia PCD Supervisor.

API connection with JSON toolkit		FDA's 21 CFR Part 11
Alarm management		Trend logs
Report & data analysis	supervisor Saia PCD®	Dynamic dashboards
Mobile operation		Energy monitoring
Intuitive scheduler		User management
Communication protocols		Efficient engineering
Automatic project documentation		Simple creation of templates

Cyber security

Keep track of important information at all times

As a modern, scalable monitoring and management solution, the Saia PCD Supervisor bundles visualisation, interaction, monitoring and reporting in a user-friendly, high-performance software platform. Designed to offer compatibility regardless of brands, it allows the integration of all building systems across disciplines – even third-party systems. By bringing together all relevant data and displaying them in a way which is easy to understand, the Saia PCD Supervisor helps to optimise building systems and thus improve building efficiency significantly.
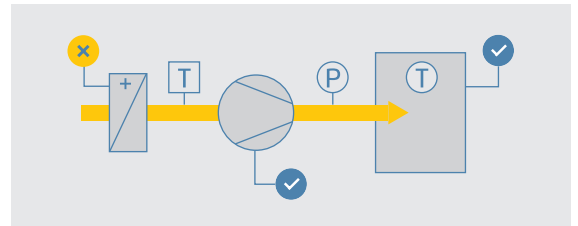
Visualisation

The Saia PCD Supervisor sets new standards in visualisation – whether it be on a desktop PC, tablet or smartphone. All that is needed is a modern web browser – thanks to HTML5 technology, no plug-ins whatsoever are needed. You can take advantage of the adjustable, predefined templates and responsive design.

System monitoring

The Saia PCD Supervisor conveniently presents system data in graphical system diagrams, as a trend diagram or in table form – all directly in a web browser, regardless of protocol, data point type, controller and operating system.

Energy monitoring

There is also an optional add-on that allows the user to record, display, analyse and optimise energy consumption across disciplines. This enables energy monitoring to support energy management in accordance with DIN ISO 50001.
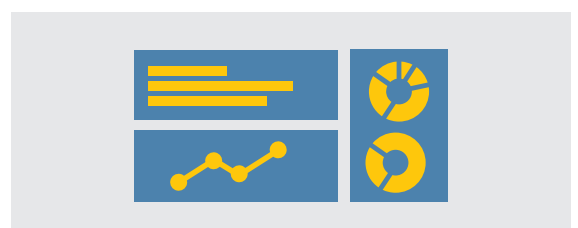
Reporting

Data can be exported as reports in CSV or PDF format at any time – this can also be done automatically. Thanks to the SQL or OPC interface, integration with other systems is easily possible.

Dashboards

The user can keep track of key performance indicators on dashboards at all times. Dashboards can be created and/or configured by the user, thus allowing the most important data to be displayed in an individual manner.

Open and flexible for planners

Planning building automation systems is no easy task. Given the wide variety of disciplines, brands and technologies, the complexity is extremely high. At the same time, the building management system plays a key role in any building. The Saia PCD Supervisor helps planners to make the right decisions.
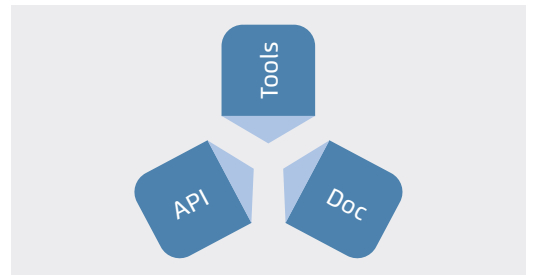
Flexible licence model

Individual buildings can be managed in the same way as larger building complexes and facilities spread across various sites. Extendible licence package are available for all applications – the smallest package offers 500 data points. And because users access the system via a web browser, there are no licence costs per operator station!

Faster, more efficient development

The open Niagara Framework on which the Saia PCD Supervisor is based allows developers to extend the framework and program their own unique applications, drivers, plug-ins, data displays and application logics for business applications. In addition to this, there is detailed documentation, a comprehensive, open API library and ready-made tools which provide support during development.

Open communication

All open communication protocols which are relevant in building automation nowadays are supported, e.g. KNX, LON, M-Bus, OPC, Modbus and BACnet – including B-OWS and B-AWS certification, as well as 3rd-party drivers.
Optionally, external systems can also be connected via SQL interface or a freely configurable API interface.

Certainty for the future

Digitalisation, cloud services, IoT and artificial intelligence are keywords in the technological revolution which has long been under way in the building automation sector too. With the Saia PCD Supervisor, planners are well prepared for the digital future. The integrated connectivity function gets relevant data into the cloud securely.

Open and flexible for planners

BACnet driver

The Saia PCD Supervisor is a BACnet-certified control centre which satisfies the BACnet profiles B-OWS (Operator Workstation) and B-AWS (Advanced Workstation). It is also certified in accordance with BTL "Revision 14". BACnet guarantees interoperability between devices from various manufacturers. A BIBB (BACnet Interoperability Building Block) defines which services and procedures need to be supported on the server and client side in order to achieve a specific system requirement. The PICS (Protocol Implementation Conformance Statement) document belonging to a device lists all supported BIBBs, object types, character sets and communication options. With the Saia PCD Supervisor, it is possible to scan for BACnet objects within the network or import them via EDE files.
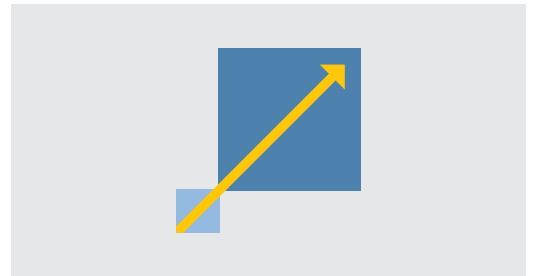
Universal design for system integrators

Management systems should offer compatibility regardless of brands. This is one of the main requirements – not only for system integrators but also for planners and operators. The Saia PCD Supervisor offers additional advantages to system integrators, such as certification as B-OWS/B-AWS to guarantee trouble-free collaboration during multi-vendor projects.
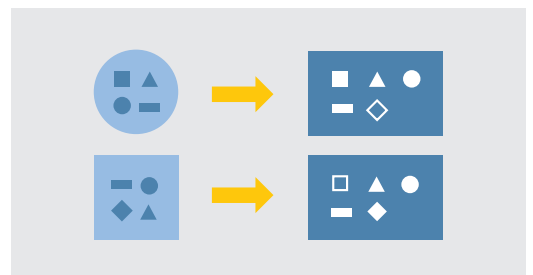
Modular and scalable

Individual buildings can be managed in the same way as larger building complexes and facilities spread across various sites. All important SCADA functions are already included in the basic packages. Thanks to data point extensions – even for open protocols – the system can be adapted to the particular project size at any time. The customer can therefore select any package as a basis and add various data points at any time in order to give the Supervisor system the capacity it needs for the points to be monitored and controlled. All Saia PCD Supervisor basic packages also include an 18-month maintenance package and with this warranty, a free up-grade of older versions. Continuous maintenance is necessary in order to keep the system up to date. This can be extended by purchasing maintenance upgrade options. Our partners also get an engineering licence (annual contract) which can be used to configure, test and demonstrate the Saia PCD Supervisor. With this annual contract, partners also receive support from SBC (training and technical assistance) in order to ensure that the Saia PCD Supervisor can be operated properly.
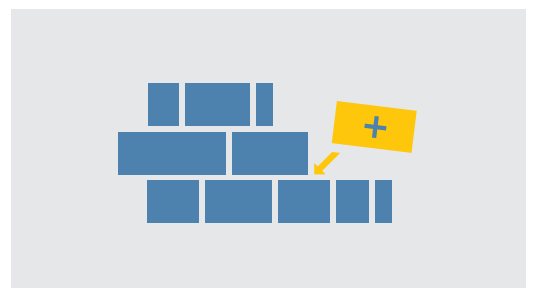
Normalised data points

The data of connected devices and networks are normalised in the Saia PCD Supervisor and are then available throughout the system. Normalised means that the data read by the driver are packaged in a standardised data structure and can be used in the same way in any function and visualisation. Each data point in the Saia PCD Supervisor can provide a priority array. S-Bus, M-Bus or BACnet data points are also supplemented with a priority array in the Saia PCD Supervisor. The priority array makes it possible to execute various operating states on the same data point with a different priority.

Individually customisable

Because the Saia PCD Supervisor is based on the proven Niagara 4 Framework, the system can be extended almost limitlessly and customised to meet the individual needs of the integrator, planner or operator. A knowledge of programming and relevant training are all that is needed here. As a result, it is possible to react quickly to new requirements during a project.

Universal design for system integrators

Training and support

A four-day engineering course provides all the knowledge needed for successful project work. On the basis of an extensive demo project, participants are taught how to work with the Saia PCD Supervisor in a practical context. And if questions or problems arise later on, our technical support department would be happy to help!
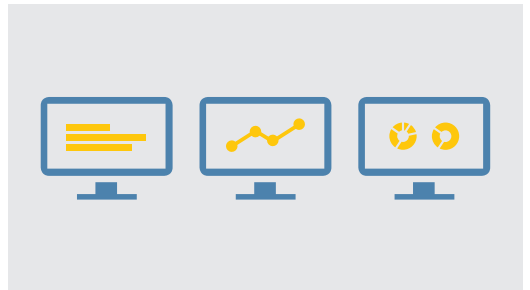

Tailored visualisation

Each user logged in to the system focuses on various individual tasks. The information in a system is therefore user-specific. With the Saia PCD Supervisor, each user sees exactly what is relevant to them: system technicians see the system diagrams and MSR technicians see additional control parameters. The facility manager can also change time plans while the security personnel receive security-related messages. Naturally, all of this can be set up in accordance with specific user require- ments. The status reports too can be personalised. The Saia PCD Supervisor offers sophisticated functions for filtering, processing, escalating and forwarding alarms. It is also possible to send alarms via e-mail.

Efficient for operators

Building operators have to cater for a wide range of demanding requirements. Users expect a high level of comfort even if the usage situation changes. All building-related systems must therefore work reliably and efficiently at all times. The Saia PCD Supervisor can support the operator here.

Integrated all-round solution

With just one application, you can keep track of important system data at all times. The Saia PCD Supervisor integrates all systems in a building because all relevant communication protocols are supported and normalised. The system is rounded off by optional modules: a notification and analysis tool as well as a database interface.
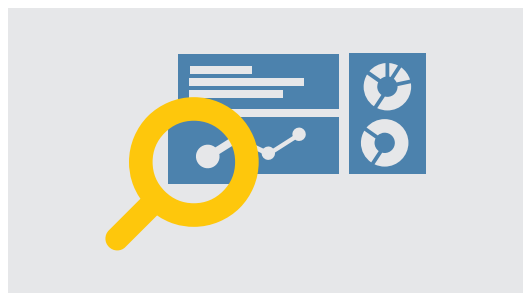
Role-specific, transparent visualisation

With the Saia PCD Supervisor, each user sees exactly what is relevant to them: system technicians see the system diagrams and MSR technicians see additional control parameters. In contrast, the facility manager can change time plans while the security personnel receive security-related messages. The forwarding of alarms via e-mail is also possible. Naturally, all of this can be set up and individualised in accordance with specific user requirements.

Benchmarking and optimisation

Individually configurable dashboards, diagrams and reports ensure maximum transparency as regards consumption data and help when optimising BA systems. It is also possible to compare buildings and systems. This makes it possible to detect deviations and helps to identify areas where improvements can be made.

Avoiding problems or rectifying them quickly

Thanks to the clear way in which system data are displayed – either in system diagrams or in list form – any problems and system faults can be identified quickly and rectified immediately. For example, it is possible to navigate from the alarm list straight to the system affected.

Technological standard

The Saia PCD Supervisor is based on the proven Niagara 4 Framework which is already used in over half a million applications around the world.

IT compatibility and security

When it comes to IT security, the Saia PCD Supervisor is state of the art.
Even in virtual environments, it runs under Windows 10 and Windows Server. There is no need to install software on the clients – an up-to-date web browser is enough. Plug-ins like Java, Flash, Silverlight etc. are not required. Thanks to LDAP integration, existing user profiles can easily be carried over.

Cyber security

The Saia PCD Supervisor is secure as standard and uses the "Defence in Depth" approach for the security architecture on the Internet of Things which is based on the security concept of the Niagara Framework. For authentication, users must select secure login information. In addition, both transmission data and data on network drives must be encrypted. The Saia PCD Supervisor also uses role-based access authorisations. As a result, user authorisations can be configured easily and are less susceptible to errors. The user concept is based on categories, roles and users. This setup allows a very detailed description of the rights of a user within a system up to individual data point features. Each user is assigned a role which defines their access rights and locations. If a user is given a new role in the system, the rights needed for this are added immediately. Each user can also be assigned an individual start page and an individual language. The Saia PCD Supervisor can also be integrated into existing systems for identification and access management such as LDAP or Kerberos. All user activities and security-relevant events are recorded in the Niagara Audit Log and can be traced.

HTML 5

The Saia PCD Supervisor features an intuitive user interface for comprehensive building management. It uses the HTML5 standard in order to provide numerous reliable functions and thus combines maximum control with the very highest data security
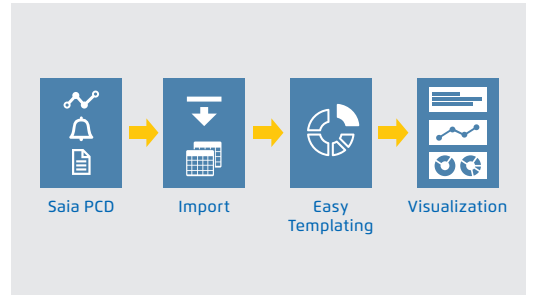
SBC-specific benefits

Efficient engineering

A wizard simplifies migration (Ether-S-Bus, S-Bus-Gateway) of all PCD controllers incl. backwards compatibility. An adjustable mapping table defines features and enhancements to data points. Users' own templates can be created independently of protocol and individually visualised via library for S-Bus and BACnet (compatible with PG5 templates). Users can generate their own HTML5 structure for web visualisation with a project template.
The Database Manager extension allows an overview of the existing / used licence data points at any time. In addition, it allows you to automatically delete all unused data points from the project.
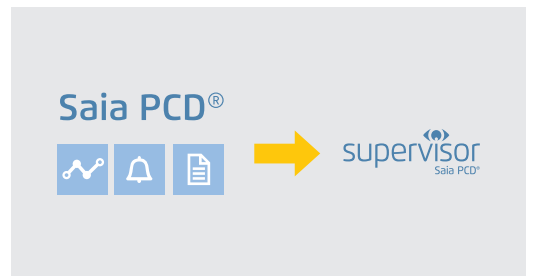With the additional JSON toolkit, it is possible to integrate any application / device via freely definable API interfaces.

Saia PCD   Import   Easy Templating   Visualization
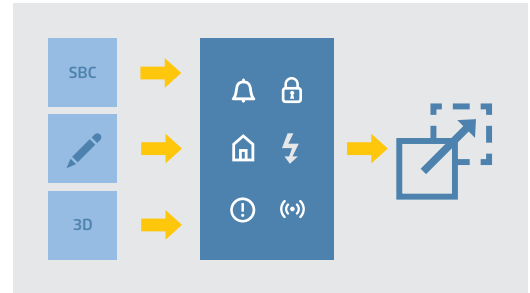
Saia PG5® Import Wizard

The Import Wizard extends the Saia PCD Supervisor with an efficient and fault-free data import of the existing PG5 data point structure with the help of a pre-defined and adjustable mapping table. This can be modified for every FBox and enhanced with the features of all Saia PCD Supervisor components. For instance, in the DDC-Suite 2.7 FBoxes, all features and enhancements are therefore added to the data points directly during the import.
Via the Saia PG5® Import Wizard, symbols and alarm lists with alarm texts from a Web Editor 8 project as well as HDLog lists previously defined in PG5 projects can be imported into the Saia PCD Supervisor quickly and easily. The filter functions can be used if only selected symbols are to be imported. During the import process, the Ether-S-Bus driver is created and configured. All CPUs in a PG5 project where data points were selected are automatically created under the driver as a device and configured for communication. From this moment, data point communication begins automatically when the PCD is available in the network and the device configuration is correct.

Saia PCD®

supervisor
Saia PCD®

SBC Icon Gallery

The Saia PCD Supervisor supports all common image formats such as PNG, SVG, GIF and JPG. In addition to 3D graphics, the graphics in the SBC Icon Gallery on the basis of SVG files are available as usual. Graphics and system diagrams are created in the Saia PCD Supervisor graphics editor. Systems are often made up of the same system parts. These can be created in the Saia PCD Supervisor on a one-off basis and reused. In order to reuse a created object, it is dragged to a page using drag and drop. In the process, data points are automatically connected with the correct system. Changes to an object are made immediately to all usage instances. This is possible both with individual objects and with complete views.

S-Bus driver

Complete solution for integrating a Saia PCD controller via the proprietary S-Bus: the SBC S-Bus-over-IP driver is ideal for connection to PCD1, PCD2, PCD3, PCD7 and gateways.
Supported functions:
- Reading and writing all Saia PCD media
- Reading the Saia PCD status and the firmware version
- Reading out the HDLog data
- Receiving and acknowledging alarms from the PCD system

It is possible to use a number of PCD controllers under an SBC IP network driver. A number of SBC IP network drivers can also be managed in one system. The systems can thus be separated or optimised.
It is also possible to place PCD sub-stations under PCD devices which cannot be connected directly via an Ethernet interface (S-Bus gateway).

Training and technical assistance

A four-day engineering training course provides all the knowledge needed for successful project work.
On the basis of an extensive demo project, participants are taught how to work with the Saia PCD Supervisor in a practical context. And if questions or problems arise later on, our technical support department would be happy to help!

System requirements

▸ *The Saia PCD Supervisor supports the following operating systems:*
 ▸ *Windows 10 (64 bit)*
 ▸ *Windows Server 2016*
 ▸ *Windows Server 2019 (64 bit)*
▸ *In addition to the operating system requirements for the Saia PCD Supervisor, the following requirements must also be met:*
 ▸ *Processor: Intel® Xeon® CPU E5-2640 x64 (or more powerful), compatible with dual and quad core processors*
 ▸ *Memory: at least 6 GB; for larger systems, 8 GB or more recommended*
 ▸ *Free hard disk space: at least 4 GB; 10 GB recommended for any supervisor; more may be required depending on the archiving requirements*
 ▸ *Display: Video card and monitor capable of displaying 1024 × 768 pixel resolution, minimum of 1920 × 1080 recommended*
 ▸ *Supported networks: Ethernet adapter (10/100 MB with RJ-45 connection)*
 ▸ *Connectivity: permanent ISP high-speed connection for remote site access recommended (e.g. T1, ADSL, cable modem)*
▸ *If data archiving is necessary on a company level (optional), one of the following compatible database applications must be instal-led: MS SQL*
 ▸ *Server 2012, 2016, 2017 and 2019,*
 ▸ *MySQL Server 5.7 and MySQL Server 8.0*
 ▸ *Oracle Express 11g, Oracle 12c, 18c, 19c.*

Main properties of the Saia PCD Supervisor

Complete solution: controlling, monitoring, reporting and visualising with just one centralised software platform

Compatibility: allows integration of all Saia PCD controllers, third-party devices and smart devices via IT protocols and numerous drivers

Flexibility: can easily be adapted to individual customer requirements

Technology standard: based on robust Tridium N4 technology with HTML5 and Cyber security

SBC: brand-specific additional services (S-Bus driver, Import Wizard and Icon Gallery) +
     ready-made S-Bus and BACnet DDC suite templates and intuitive HTML5 project visualisation templates

Products and licences

The licensing scheme for the Saia PCD Supervisor is geared to the number of points. A point is an individual information element which is stored in the Saia PCD Supervisor database. With Saia PCD controllers, these are flags, registers, inputs, outputs etc. which can be read or written by the Saia PCD Supervisor via S-Bus. There are also open points, e.g. BACnet IP, EIB/KNX IP, LON IP, Modbus IP, M-Bus IP, OPC and SNMP.

S-Bus points
These are points controlled by SBC manufactured controllers (PCD1, PCD2, PCD3 and PCD7) and accessed using the S-Bus Protocol. For this category of device the license is sized on the points you want to monitor. Point discovery is an embedded feature available through the Saia PG5® Import Wizard embedded in the S-Bus driver. SBC devices and networks are not counted for licensing purposes.

S-Bus extensions
In case more points are needed to meet system requirements, the desired Saia PCD® Supervisor database size can be reached with any combination of Starter Kit and Point Extensions.

Open points
These are points from open protocol equipped devices or subsystems that you wish to integrate straight into Saia PCD® Supervisor. The Saia PCD® Supervisor open driver packs include a selection of standard drivers that you can select to be used to perform head end integration.
Standard drivers are: BACnet IP, EIB/KNX IP, LON IP, Modbus IP master and slave, M-Bus IP, SNMP and OPC client.

Please note that open protocol license management is delivered in a way that as soon as you reach the limit for point count customers need to request license upgrade accordingly.

Maintenance upgrade options
Saia PCD® Supervisor basic packages include an 18 months maintenance and free upgrade package. This can be extended by purchasing maintenance upgrade options.

Extended connectivity options
Upgrade connectivity for communication from Saia PCD® Supervisor to another.

Extended support options
These options extend the Supervisor's ability to communicate with Excel, My SQL Server, SQL Server, Oracle Server, JSON Toolkit for Supervisor (Valid SMA Required) and Micros Fidelio IP Driver.

Video integration options
Device drivers for various camera types for up to 128 connected cameras.

Energy Management options
Comprehensive solution for energy monitoring in the Saia PCD® Supervisor. Monitor and optimize the energy consumption of your entire building.

Security options
Provides interface to integrate the Niagara Enterprise Security Supervisor database to active Directory/LDAP.

Cloud connection options
Allows Supervisor to access the Niagara Cloud Honeywell Sentience Driver.

Partner license agreements
Partner license agreements can be signed and renewed annually, for single or multiple engineers. Maximum felxibility is provided by the license for one month limited to one engineer (workstation).

Licence model and order codes for end users

Basic S-Bus packages

PCD8.SUP-500	Saia PCD® Supervisor basic package including SBC S-Bus driver and 500 points database size
PCD8.SUP-2500	Saia PCD® Supervisor basic package including SBC S-Bus driver and 2,500 points database size
PCD8.SUP-10000	Saia PCD® Supervisor basic package including SBC S-Bus driver and 10,000 points database size
PCD8.SUP-25000	Saia PCD® Supervisor basic package including SBC S-Bus driver and 25,000 points database size
PCD8.SUP-50000	Saia PCD® Supervisor basic package including SBC S-Bus driver and 50,000 points database size
PCD8.SUP-100000	Saia PCD® Supervisor basic package including SBC S-Bus driver and 100,000 points database size.

S-Bus extensions

PCD8.SUP-100EXT	Saia PCD® Supervisor additional 100 SBC database points
PCD8.SUP-2500EXT	Saia PCD® Supervisor additional 2,500 SBC database points
PCD8.SUP-5000EXT	Saia PCD® Supervisor additional 5,000 SBC database points
PCD8.SUP-15000EXT	Saia PCD® Supervisor additional 15,000 SBC database points
PCD8.SUP-50000EXT	Saia PCD® Supervisor additional 50,000 SBC database points.

Extensions with open protocols

PCD8.SUP-500OPEN	Extend base license with additional 500 open protocols points
PCD8.SUP-2500OPEN	Extend base license with additional 2,500 open protocols points
PCD8.SUP-5000OPEN	Extend base license with additional 5,000 open protocols points
PCD8.SUP-10000OPEN	Extend base license with additional 10,000 open protocols points
PCD8.SUP-25000OPEN	Extend base license with additional 25,000 open protocols points
PCD8.SUP-50000OPEN	Extend base license with additional 50,000 open protocols points.

Maintenance upgrade options

PCD8.SUP-MNT1	Saia PCD® Supervisor maintenance upgrade - additional 1 year
PCD8.SUP-MNT3	Saia PCD® Supervisor maintenance upgrade - additional 3 years
PCD8.SUP-MNT5	Saia PCD® Supervisor maintenance upgrade - additional 5 years.

Extended connectivity options

PCD8.SUP-1N-UP	Upgrade connectivity for communication from Supervisor to another one by 1
PCD8.SUP-10N-UP	Upgrade connectivity for communication from Supervisor to another one by 10.

Extended support options

PCD8.SUP-DB-CSV	Extend the capability for the supervisor to interact with Microsoft Excel
PCD8.SUP-DB-MYSQL	Extend the capability for the supervisor to communicate with MySQL Server
PCD8.SUP-DB-ORCL	Extend the capability for the supervisor to communicate with Oracle Server
PCD8.SUP-DB-SQL	Extend the capability for the supervisor to communicate SQL server
PCD8.SUP-JSON	Extend the capability for the supervisor to enable JSON Toolkit for Supervisor (Valid SMA Required)
PCD8.SUP-FID	Extend the capability for the supervisor to interact with Micros Fidelio IP Driver.

Video integration options

PCD8.SUP-MLS-16	Milestone Driver to connect 16 Camera Devices
PCD8.SUP-MLS-64	Milestone Driver to connect 64 Camera Devices
PCD8.SUP-MAXP-16	Maxpro Driver to connect 16 Camera Devices
PCD8.SUP-MAXP-64	Maxpro Driver to connect 64 Camera Devices
PCD8.SUP-MAXP-128	Maxpro Driver to connect 128 Camera Devices
PCD8.SUP-AXIS-16	Axis camera driver included HTML5 video streaming and alarming for 16 videos
PCD8.SUP-AXIS-64	Axis camera driver included HTML5 video streaming and alarming for 64 videos.

Energy Management options

PCD8.SUP-EM25	Saia PCD® Supervisor EM base license for Saia PCD Supervisor with max. 25 meter points
PCD8.SUP-EM50EXT	Saia PCD® Supervisor EM license for additional 50 meter points
PCD8.SUP-EM100EXT	Saia PCD® Supervisor EM license for additional 100 meter points
PCD8.SUP-EM500EXT	Saia PCD® Supervisor EM license for additional 500 meter points
PCD8.SUP-EM1KEXT	Saia PCD® Supervisor EM license for additional 1000 meter points
PCD8.SUP-NA-250	Niagara Analytics Framework license for 250 analytic points
PCD8.SUP-NA-1000	Niagara Analytics Framework license for 1000 analytic points
PCD8.SUP-NA-10000	Niagara Analytics Framework license for 10000 analytic points.

Security options

PCD8.SUP-LDAP	Provides interface to integrate the Niagara Enterprise Security Supervisor database to active Directory/LDAP
PCD8.SUP-ESIG-1000	E-Signature Application with 1'000 secured points
PCD8.SUP-ESIG-UNL	E-Signature Application with unlimited secured points
PCD8.SUP-ESIG-UP1K	E-Signature Application upgrade to add 1'000 additional secured points.

Cloud connection options

PCD8.SUP-CLO-500	Niagara Cloud Honeywell Sentience Driver 500 points
PCD8.SUP-CLO-2500	Niagara Cloud Honeywell Sentience Driver 2500 points
PCD8.SUP-CLO-10000	Niagara Cloud Honeywell Sentience Driver 10000 points.

Partner license agreements

PCD8.SUP-NAA-MON	Saia PCD® Supervisor Starter kit, monthly agreement for 1 engineer*
PCD8.SUP-NAA-STK1	Saia PCD® Supervisor Starter kit, annual agreement for 1 engineer
PCD8.SUP-NAA-STK5	Saia PCD® Supervisor Starter kit, annual agreement for 5 engineers
PCD8.SUP-NAA-REN	Saia PCD® Supervisor annual agreement renewal
PCD8.SUP-NAA-ENG	Saia PCD® Supervisor one additional engineering license.

* PCD8.SUP-NAA-MON licenses can only be purchased by new partners. From purchase's month until renewal.
You must always purchase as many monthly licenses as you need for the period until November 30th.
After November 30th, they will be renewed for 1 year with the normal PCD8.SUP-NAA-REN.

We would be happy to advise you and put together a suitable licence model for you.

Supported PCD devices

Saia PCD devices are connected directly to the Saia PCD Supervisor via an Ethernet interface.

Devices with an RS-485 interface can communicate with the management system via a gateway station which is connected to the Saia PCD Supervisor via Ethernet.

The following devices are supported:

▶ *PCD with RS-485 interface for connection to a gateway station which is connected to Saia PCD Supervisor via Ethernet:*
  PCD1.G/F/Wxxx-xx5 with RS-485 (as slave of a gateway station).

▶ *PCD1.M0160E0*

▶ *PCD1.M2xx0*

▶ *PCD2.M4x60*

▶ *PCD2.M5xx0*

▶ *PCD3.Mxxx0*

▶ *PCD7.D4xxxT5x*

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