The highlights of proALPHA CA-Link:

- Your CAD software and ERP system become one.
- Business processes are accelerated and the risk of errors is reduced: employees from various departments have direct access to engineering data and all related documents.
- Engineers have room for creativity: since they need to deal with fewer inquiries from other departments, they can focus on more important tasks.
- A consistent data pool for the entire company: information on product data management (PDM) and product lifecycle management (PLM) is stored at a central location in proALPHA.
- Intuitive 3D models support numerous departments in their daily work.
- Virtually all common CAD systems can be integrated.
- The integrated proALPHA WorkflowManagement automates information flows.
Numerous manufacturing companies face the challenge of turning a great idea into a product they can market as soon as possible. The first steps towards a new product are typically taken by the engineering department. Even at this early stage, it is crucial to establish reliable information and data flows to other departments. CA-Link is the perfect tool to connect CAD software with proALPHA ERP.

Engineers not only define a product’s design and properties, they also have a major influence on its cost. However, they are usually unable to access cost-relevant information such as part prices and procurement times from their CAD system because these data are typically stored in the ERP system.

CAD data provide the basis for many other business processes in purchasing and routing, for example. The separation of the CAD system, product data management (PDM) and ERP software often leads to inquiries and extra work. One day the sales department might request detailed information on a component, and the next day the service department. It takes engineers a lot of time to answer all of these questions.

Moreover, the more data are transferred back and forth, the higher the risk of error, such as when changes are made on short notice in routing. This leads to longer cycle times and negative effects on delivery reliability.

Interacting systems

Reducing costs, generating added value
By connecting engineering with proALPHA ERP, CA-Link generates real added value: costs are reduced because neither a separate PDM system nor a corresponding interface is needed. At the same time, less maintenance work is required.

Deep integration
CAD models, technical drawings and bills of materials can be automatically managed in CA-Link. All engineering data complete with interactive 3D models are readily available and can be accessed by any department responsible for follow-up tasks.

As a result, business processes are streamlined and accelerated. Redundant data and high-maintenance interfaces are avoided.

Engineers only have to deal with a small number of inquiries and can complete important tasks faster.

Key Benefits at a Glance
- Unique connection of CAD and ERP
- Consistent processes in all departments, from engineering and purchasing to production, sales, and service
Boosting Productivity with 3D

Engineering data are the heart of a manufacturing company. However, only few employees have access to CAD data and 3D models.

As a matter of fact, simplified 3D models are of great help to employees in purchasing, sales, marketing, assembly, and service. They only have to be readily available and easy to understand.

**Interactive three-dimensional models**
The integrated proALPHA Viewer enables engineers to share their 3D CAD models with colleagues and business partners, even if the latter do not have a CAD workstation.

In the viewer, users can conveniently switch between bills of materials and 3D models. They can hide and show components, select a different perspective and check dimensions with just a few clicks.

**A valuable asset for all departments**
By working with interactive graphics, departments can greatly accelerate and streamline their processes.

Assemblers see at a glance how parts have to be mounted. Employees in purchasing can answer any questions from suppliers in no time. Service technicians know exactly which spare part they have to install in an older machine. 3D models provide employees of all departments with a quick overview of relevant data.

**Key Benefits at a Glance**
- Up-to-date 3D data are available at a central location
- Interactive models provide any information required
- Versatile uses in various departments
Consistent Product Lifecycle Management

proALPHA CA-Link is more than just an interface between CAD and ERP. It merges the two systems into a perfect whole. The ERP software completes all tasks of a PDM/PLM system, including access control, engineering change management, and release management. Geometric modeling is done in the CAD system.

**Direct connection between ERP and CAD**
There is no need for engineers to leave their CAD environment. They have all important ERP functions at their fingertips thanks to the integrated proALPHA menu. Since they can access ERP data via the proALPHA menu, it takes engineers just a few clicks to search for part numbers, for example. Other data are also readily available, such as suppliers, stock, and the prices of purchased parts. But CA-Link has even more to offer.

**Integrated PDM features**
The deep integration of CAD and ERP allows a seamless data flow between the two systems. When a product is engineered, all related PDM/PLM data are automatically created in proALPHA ERP.

Master files, bills of materials and other documents are stored at a central location. proALPHA also assumes the tasks of a PDM system. Consequently, redundant data and complex interfaces to separate PDM systems are avoided. Additional capacities and expert knowledge of applications are no longer required.

**PLM: seamless traceability**
So-called product files map the entire life cycle of a product in proALPHA. They do not just record the change state, drawings, BOMs and production processes with which an order was generated. They also document subsequent changes, wear parts maintained by field service, and other modifications. Product files provide service employees and technicians with up-to-date information about current and original configurations, installed parts, and the services defined in maintenance agreements.

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**Key Benefits at a Glance**
- CAD and ERP are merged
- PDM/PLM data are managed at a central location
- Products can be traced from their development to disposal

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**CAD Integration Options Compared**

**CAD Linked to ERP by PDM**
- CAD
- PDM
- Interfaces
- DMS
- ERP

**CAD Integrated into proALPHA by CA-Link**
- proALPHA
- CA-Link
- DMS
- CAD
Efficient Engineering

When designing products, engineers have to check whether the parts they need have been used before. To do so, they need to draw on data from the ERP system. These data provide information about the technical properties of parts, which can be individually defined by means of classification systems in proALPHA.

**Convenient search options**

Engineers can search this data pool for similar and identical parts. proALPHA displays the search results as a list of 3D graphics. They can be inserted in the respective model with drag and drop.

**Finding the perfect part**

When choosing a specific part, engineers not only have to take its technical properties into consideration, but also operational factors. This information is provided by CA-Link. As a result, replenishment times, stock on hand and consumption can be included in the early engineering phase.

**Saving time with templates**

If there is no appropriate part, it has to be designed. However, engineers do not have to start from scratch every time. proALPHA offers a copy function with which a new engineering design can be conveniently created based on the models of similar parts. It also allows for adopting entire assembly structures along with all required new references to CAD components.

Derivations of drawings can also be copied. Engineers only have to take care of modifications to the geometric design, for example, and enter additional information. The new part master files are then automatically created in proALPHA.

**Parametric designs**

Besides direct 2D and 3D modeling, it might be useful to be able to derive the geometric design of a part from formulas, graphs, related designs, and external calculations. These are called parametric designs.

They are of great advantage to engineers working with families of similar components and assembly series in various designs and sizes. Depending on the CAD system, these groups can only be combined in one parametric model, which serves as a kind of framework. In an ERP system, by contrast, a unique description is required for each single part. Individual part numbers, bills of materials and drawings should therefore be used for these designs in ERP.

proALPHA CA-Link creates individual master files referring to an overall, parametric CAD model. Any modification of this model is adopted for all parts and configurations belonging to one family.

**Effortless product configuration**

The proALPHA Product Configurator is an even more powerful tool. Employees and customers can use it to design the desired product with just a few clicks. If geometric data can be derived from this process, proALPHA sends commands to the CAD system in the background, thereby automatically creating the corresponding 3D CAD model.

**Key Benefits at a Glance**

- Advanced options to search for technical properties
- Less effort required for engineering thanks to templates
- Families/configurations supported in the CAD models
- Automatic creation of drawings by means of the product configurator
Fostering Creativity and Teamwork

Although engineers have to respect detailed specifications when designing a part or modification, creativity is still an indispensable part of their work.

proALPHA makes room for creativity in various ways. Since other departments are provided with interactive 3D graphics, they will have fewer questions to ask about products. Engineers can spend more time on important tasks.

Moreover, proALPHA enables engineers to test numerous scenarios to put an idea into practice. The best solutions result from a sequence of choices made between various alternatives. A final decision can only be made if all of these alternatives have been simulated in parallel to a certain level of detail.

Melting pot
Local workspaces in proALPHA foster creativity. They also give engineers full control of their data, such as when deciding which data are to be made available to other departments, and when.

Pooling ideas
Local workspaces are of great benefit when results gained from concurrent engineering have to be consolidated. They are also useful if engineering tasks have to be assigned to external service providers. Engineers provide all required data and import their team’s results into their local workspaces.

Key Benefits at a Glance
- Room for creativity
- Full control of the data and when they are to be provided
- Convenient concurrent engineering
BOMs as Linking Elements

Bills of materials mark the end of any engineering process. Not only do they document all required components, they are also used by many other departments, such as purchasing, routing, and production. However, bills of materials often have to be entered and revised multiple times.

**Automatic creation**
Thanks to integration with proALPHA CA-Link, bills of materials can be derived directly from the CAD model and adjusted at any stage of production. The engineering department always has full control of the elements sent to proALPHA and when they are transferred.

Bills of materials may also include lines which are not modeled in the CAD system, such as materials like oils and paint.

**Seamless workflows**
CA-Link makes bills of materials available even before they are released for follow-up processes. Automatically forwarded bills of materials are especially useful for components with long procurement times for raw material and sophisticated processes in production planning. Tight deadlines are easy to meet.

Bills of materials can be displayed as tables and as interactive 3D models. Other departments can access these models in a viewer. Employees in purchasing, for example, can rotate the 3D model on the screen, check its dimensions, and hide and show its components.

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**Key Benefits at a Glance**
- Duplicates are avoided because data are synchronized with the CAD model
- Purchasing processes can start earlier, thereby accelerating the workflow
- Engineers have full control of their data
Full Control of Modifications

Up to speed with the Document Management System
If modifications are transferred from CAD to proALPHA, all related documents are updated in the integrated Document Management System (DMS), such as bills of materials, records of the production process, and assembly instructions. This not only saves time, it also ensures that documents are always up-to-date without any extra work.

Since all modifications are archived, even past statuses of a product can be retrieved at any time. Employees can effortlessly manufacture spare parts for older products and check maintenance instructions for replacing spare parts.

Everything at one place
Supplementary documents can also be stored in the DMS, such as correspondence with customers during the development process, calculations concerning the product, lists of spare parts, and data sheets. With all relevant documents stored at a central location and grouped into product files, required information can be found in no time.

Comprehensive engineering change management
Besides data management, proALPHA CA-Link also controls access privileges. This ensures that only one engineer at a time may change a model. proALPHA offers a wide range of functions for engineering change management.

Not only are change histories created for individual documents. Any information on modifications is stored with a superordinate change reason and a list of all components affected. All changes to CAD documents, bills of materials and production processes can be traced at any time.

Reliable information flows
All releases and modifications can be controlled and documented in proALPHA. The integrated WorkflowManagement automatically triggers the required processes. The routing department can be notified of changes to documents relevant to production, for example. Release documents can also be created automatically, such as PDF files and other neutral formats.

proALPHA WorkflowManagement is a reliable tool to control and streamline business processes. It enhances the information flow between the engineering department and other divisions. At the same time, cycle times and the risk of errors are significantly reduced.

Key Benefits at a Glance
- All engineering documents are stored in product files
- Documents are automatically updated; past statuses can be traced at any time
- Revision and engineering change management across departments
- Process control with the integrated proALPHA WorkflowManagement
proALPHA ERP – the Integrated ERP Solution for Mid-Sized Enterprises

Be it purchasing, production, sales, financial accounting or service: proALPHA software is designed to suit the needs of small and mid-sized enterprises and provides optimum support for all of their processes. Users in all departments have all the functions they need at their fingertips. proALPHA promotes the integration of customers, suppliers and field service in all business processes, be it on site or around the world.

The ERP system can be used as on-premises software or cloud solution and is available in numerous country and language versions. proALPHA offers powerful software and professional services from a single source: consulting, customizations, introduction to the software, support, maintenance, and comprehensive training. With its efficient service structure, project management expertise and in-depth knowledge of a variety of industries, proALPHA makes ERP projects a success and protects investments.

The proALPHA group is the third largest provider of Enterprise Resource Planning (ERP) solutions for small and mid-sized enterprises in the manufacturing industry and trade in Germany, Austria, and Switzerland. 1,800 customers in 50 countries and a range of different industries currently rely on proALPHA ERP. More than a hundred software developers are expanding and improving the solution on an ongoing basis, often in cooperation with partners.

proALPHA was founded in 1992 and has more than 900 employees at 25 locations worldwide. The company has experienced continuous growth for eleven years, generating sales of more than EUR 100 million in 2015.

1,800 customers from 50 countries and a range of different industries currently rely on proALPHA ERP.
proALPHA ERP

proALPHA is a comprehensive solution covering all relevant business processes. The software combines an integrated approach with cutting-edge technology. It enables companies to map, control and optimize their entire value-added chain.

### Core Modules
- Sales
- Purchasing
- Materials Management
- Production
- Service
- Financial Accounting
- Cost Accounting
- Fixed Asset Management

### Special Modules
- Business Intelligence
- Customer Relationship Management
- Document Management System
- Human Resources
- Product Configurator
- Project Management
- Web Portal
- Workflow Management

### Connectivity
- CAD Integration
- Integration Workbench