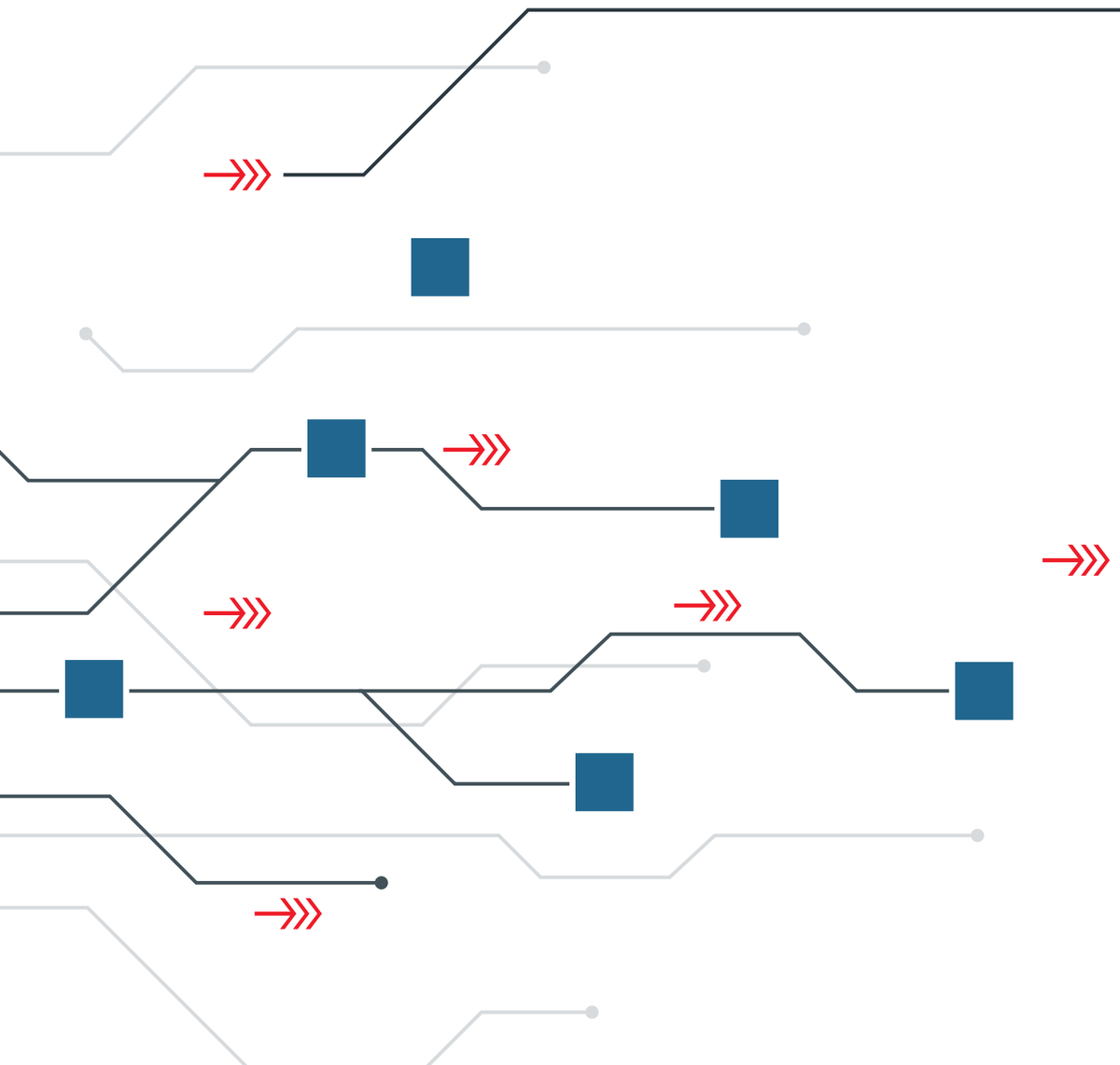
SEW EURODRIVE

MOVIKIT® software modules for automation

More drive for your automation solution.



Content

Software modules for the automation kit

MOVIKIT® software modules for automation

MOVIKIT software modules are part of the modular automation system MOVI-C® from SEW-EURODRIVE and provide application-specific software functionalities for parameterizing and operating your drive technology.

Each MOVIKIT represents an application-specific functionality. In addition to movement profiles, standard communication solutions or visualizations of machine-relevant data can also be provided.

MOVIKIT software modules are integrated into the free MOVISUITE® engineering software and can be configured and programmed. Control-based MOVIKIT® software modules are used on a MOVI-C® Controller. An alternative are the inverter-based MOVIKIT® software modules, which only require an inverter such as MOVIDRIVE®.

You can find more information about the available MOVIKIT® here!

Your benefits

Your entry into the modular world of solutions from SEW-EURODRIVE:
Logical, clear, intuitive. With our constantly growing portfolio of software modules, you will always find the right building blocks for your automation task. Parameterization instead of programming - you can fully concentrate on your application-specific settings. The modern engineering software MOVISUITE® maps the structure of the automation environment and offers maximum flexibility. Adjustments and extensions are also modular.

Flexible

From simple drive functions to complex motion control functions

Economically

Parameterization instead of programming:
This saves costs and time during commissioning

Innovative

Promotion of innovative power through new functionalities and solutions

User-friendly

Hardware-independent operation with an intuitive interface

Palletizer challenge

Your project: A conveyor line with a palletizer.
Cartoned goods feeding and palletizing.

The central element is the multi-axis robot for transferring the packages onto the provided pallet. MOVIKIT® Robotics provides the central functions for controlling the axes. Additional MOVIKIT® Robotics add-ons ensure extended functionalities. The MOVIKIT® Robotics add-on MediumModels expands the controller with additional axes. With the add-ons TouchProbe, ConveyerTracking and CollisionDetection you control, regulate and monitor the loading of the pallet with boxes.

Based on your overall solution, in this case the conveyor line with palletizer, break it down into the individual applications with their functionalities. For example, the following functions are required to implement the individual application "robotic solution":

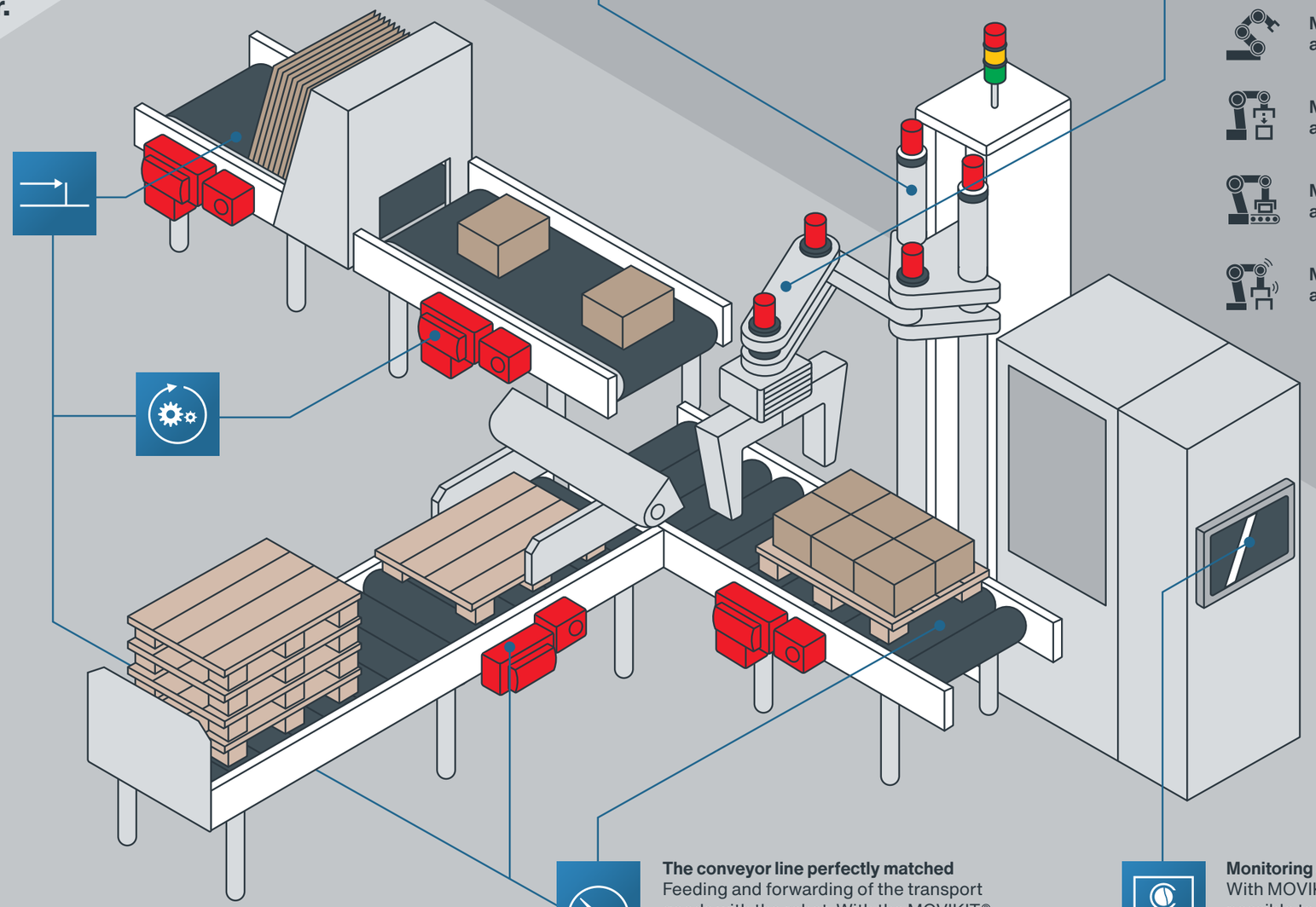
1. **Motion control of a SCARA robot**
2. **Detect and track package on conveyor**
3. **Preparing the position of the package for the gripper**
4. **Collision detection**

If the necessary functional requirements are met, the appropriate MOVIKIT® software modules can be selected for this. You have a selection of simple functions that can be implemented on the inverter or an almost unlimited selection of software modules that can be implemented on a MOVI-C® CONTROLLER from SEW-EURODRIVE.

There is hardly a function that cannot be implemented. If a function is not included in the SEW-EURODRIVE software portfolio, we will be happy to support you with customer-specific software modules.

Future proofing
Energy efficiency as an add-on with the MOVIKIT® PowerAndEnergySolution PowerMode is designed for applications with energy storage and provides the user with functionalities such as the acquisition of performance/energy data and the management of the DC link or the AC connection.

High-tech unique
Unique and patented software modules such as MOVIKIT® Robotics addon CollisionDetection are available to you, a highly sensitive and intelligent collision detection without any additional sensors. This is achieved through the interaction of hardware and software from a single source.



MOVIKIT® Robotics addon MediumModels

MOVIKIT® Robotics addon TouchProbe

MOVIKIT® Robotics addon ConveyorTracking

MOVIKIT® Robotics addon CollisionDetection

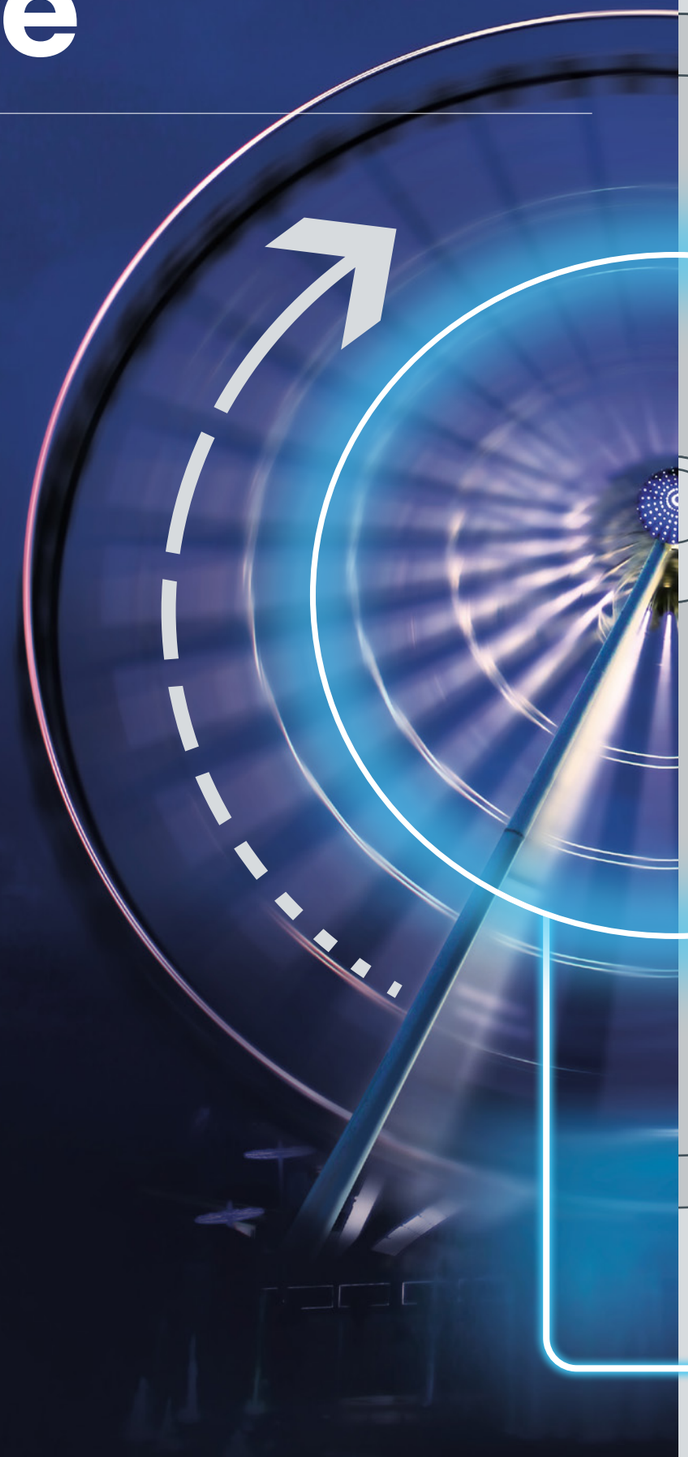
The conveyor line perfectly matched
Feeding and forwarding of the transport goods with the robot. With the MOVIKIT® RapidCreepPositioning Drive, -Velocity, -Gearing and -Positioning as the perfectly coordinated software solution for the entire drive train from SEW-EURODRIVE, dynamic, efficient, and energy-saving handling is possible.

Monitoring and graphical interfaces
With MOVIKIT® Visualization it is possible to create a graphical user interface. The ModelBasedMonitoring software module compares wear data using a mathematical model of the application and the actual values evaluated by sensors and records or reports deviations and changes.

Efficient and innovative

Using MOVIKIT® for upgrades and machine expansion:

Machine automation upgrades, expansions and motion changes can often be solved simply by using MOVIKIT software modules. Machines can be optimized through new motion sequences and profiles, and can be designed to be economical, future-proofed.



Example: More efficiency for your Ferris wheel

An example of this is the application of an amusement ride manufacturer who was able to innovatively redesign the drive of its Ferris wheel by using modern software and hardware despite the traditional concept. In addition to the use of other MOVIKIT®, a monetarily measurable and at the same time innovative improvement of the existing solution could be achieved especially through "PowerAndEnergySolutions" and "MultiAxisController".

20 - 30%

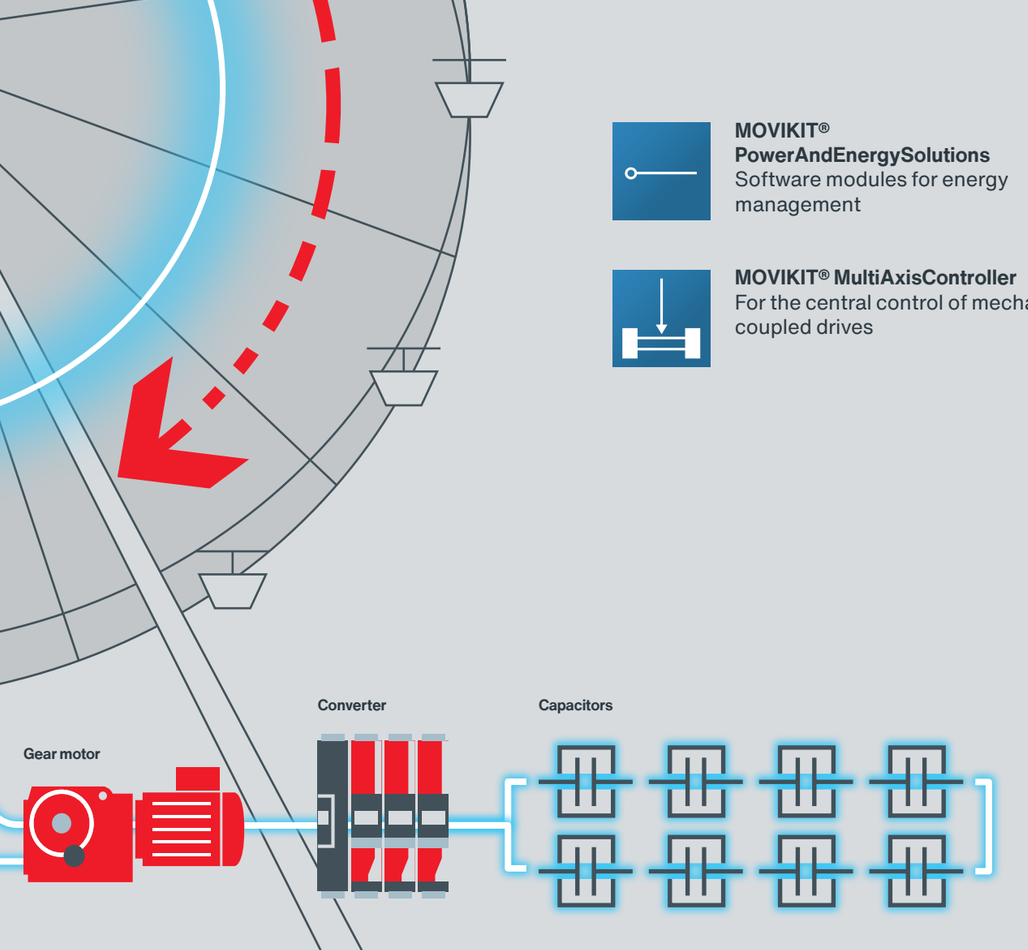
energy saving

Whereas in the past the braking energy of Ferris wheels was converted to heat, it is now temporarily stored and retrieved when needed: Eight double-layer capacitor modules absorb the energy that is released and thus reduce the Ferris wheel's energy costs by 20 to 30 percent. The MOVIKIT® PowerAndEnergySolutions is a key component here. This takes over the coordination and control within a MOVI-C® CONTROLLER up to the hardware and thus forms the core.

By using MOVIKIT® MultiAxisController, a new drive technology could be used using several smaller, energy-efficient helical geared motors. The software module enables the implementation of mechanically coupled drives (loose or rigid coupling), correction of an inclined position (skewing) and compensation of the torque (torque) of drives. Additional functions could be implemented in combination with other MOVIKIT®.

MOVIKIT® PowerAndEnergySolutions
Software modules for energy management

MOVIKIT® MultiAxisController
For the central control of mechanically coupled drives



MOVIKIT® software modules

Each MOVIKIT® software module is designed to quickly add functionality and flexibility to a specific motion control task

MOVIKIT® AutomationFramework
Includes a standardized state and mode manager with Pack-ML (Packaging Machine Language) compatibility. In addition to a basic program, various sub-applications are made available to you.

MOVIKIT® Communication
Software modules that provide various communication and fieldbus interfaces. These allow data to be exchanged between the components of the MOVI-C® modular automation system and third-party components.

MOVIKIT® Drive
Software modules that are operated directly on the frequency inverters of the MOVI-C® modular automation system. These contain different positioning and movement functions to put simple applications into operation.

MOVIKIT® DriveRadar
Software modules for condition monitoring and maintenance forecasting in the form of encapsulated libraries.

MOVIKIT® Motion
Software modules that provide special motion control functions. The category also includes additional functions that can also be used for software modules in other categories.

MOVIKIT® MultiMotion
Realization of universal motion control functions for interpolating axes. Motion profiles can be activated and e.g. be superimposed.

MOVIKIT® MultiAxisController
Software modules for the central control of mechanically coupled drives. Depending on the license, for example, inclined positions can be corrected or different torques of two drives can be compensated.

MOVIKIT® PowerAndEnergySolutions
Software modules for energy management. Energy consumption for applications can be optimized and energy storage can be controlled.

MOVIKIT® Robotics
Software modules for robot control. Basic functions as well as additional functions enable the realization of simple to complex robot applications. A Robot Language (SRL) developed by SEW-EURODRIVE is available for this.

MOVIKIT® StackerCrane
Software modules to implement storage and retrieval machines. The software modules can be combined and expanded with other software modules from other categories.

MOVIKIT® SingleAxis
Includes all software modules whose functionality can be parameterized, and which have a standardized process data interface. In contrast to the "MultiMotion" category, no programming knowledge is required for commissioning and diagnostics.

MOVIKIT® Visualization
Solutions for graphical and clear representation of MOVI-C® CONTROLLER data. Depending on requirements, this can be implemented either via the controller, a separate Windows device, or web based.

MOVIKIT® Bundle
A MOVIKIT® bundle contains several MOVIKIT® software modules. These are specially matched to each other for the programming implementation of machine-typical functions.

You can find more information about the available MOVIKIT® here!

MOVIKIT®

MOVIRUN® software platform

The basis for efficient automation. MOVIRUN® is the software platform for MOVI-C® CONTROLLER and the basis for using the MOVIKIT® software modules. The software platform defines how the MOVIKIT® software modules can be used: either as purely parameterizable functions with a fieldbus interface or with a programming interface, for example according to the PLCopen standard.

Today, MOVIRUN® flexible offers the platform for purely parameterizable use of the MOVIKIT® software modules. A large number of motion control functions are available via a fieldbus interface without further programming of the MOVI-C® CONTROLLER. Customer-specific additions and extensions can be easily added using a modern programming system based on IEC 61131-3. With MOVIRUN® open, the portfolio has been expanded to include an open automation platform for MOVI-C® and third-party components. MOVIRUN® open offers full flexibility when managing the MOVIKIT® software modules and programming the customer application in a programming tool based on IEC 61131-3 and PLCopen.

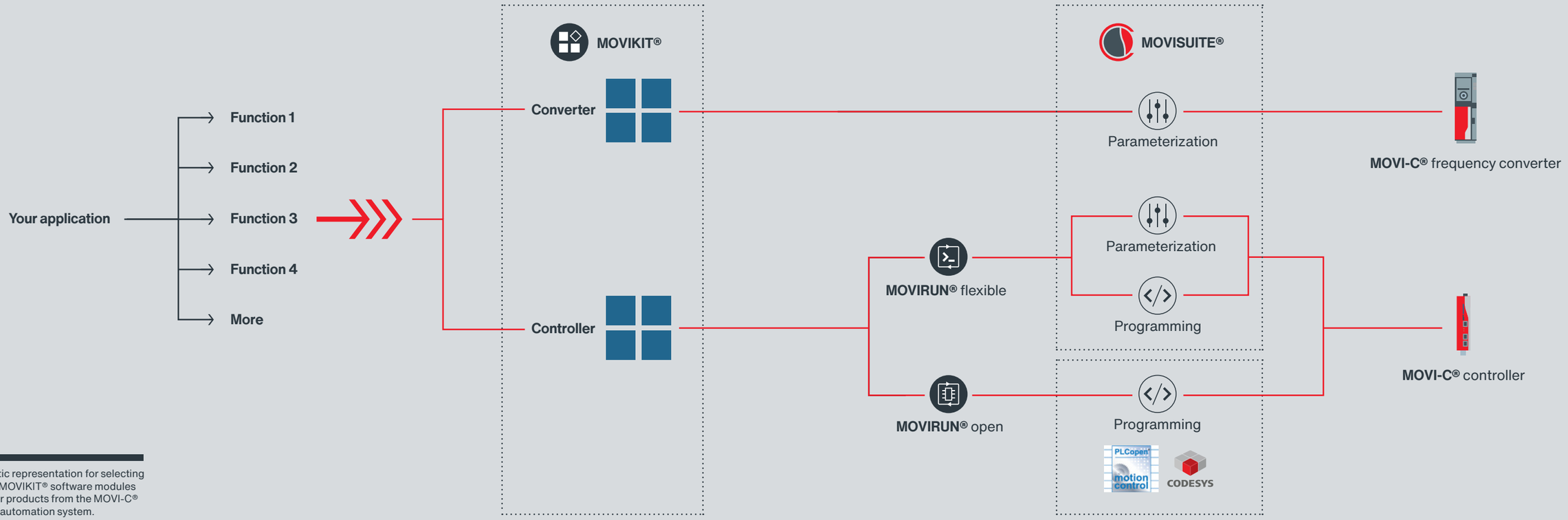
MOVISUITE® engineering tool

With MOVI-C®, SEW-EURODRIVE has introduced a consistent, user-friendly software concept.

The basis for solving the motion and drive tasks is a large number of available software modules, which are combined in the MOVI-C® modular automation system under MOVIKIT®.

It is operated on the MOVI-C® CONTROLLER or inverters from the MOVI-C® modular automation system. The MOVIRUN® software platform ensures that the MOVIKIT® software modules run smoothly on the MOVI-C® CONTROLLER. For quick and easy commissioning of all the MOVISUITE® engineering software is used for the components of the MOVI-C® modular automation system.

With its unique operating philosophy, MOVISUITE® focuses on consistently reducing the startup time. At the same time, it covers the entire engineering process from planning to diagnosis.



Schematic representation for selecting suitable MOVIKIT® software modules and other products from the MOVI-C® modular automation system.

MOVI-C® modular automation system

Modular, consistent, scalable.

The MOVI-C® automation kit is your one-stop shop for all automation tasks. One manufacturer – one end-to-end solution. With services, hardware and software from planning and commissioning to operation and service. What does it offer you? Maximum relief, future security and the good feeling of always having a point of contact you can rely on.

With the MOVI-C® modular automation system, everything comes from a single source. Hardware and software are a well-established team. The software takes over the engineering and the planning of your application.
With the use of hardware, the complexity and the installation space, and the costs decrease: you simply have to connect our components - they even connect to each other simply by plug and play. With configurable devices and consistent control technology, we reduce the device variants without sacrificing the functionality: from safety to robotics, these are integrated, so the variety of movements that can be implemented is retained.

Simplicity in the sense of user-friendliness is the central product promise of the MOVI-C® modular automation system: easy to design complex, powerful automation and drive technology so that you can install it easily, operate it intuitively and monitor it without any problems.

You can find more information about the MOVI-C® modular automation system here!

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