

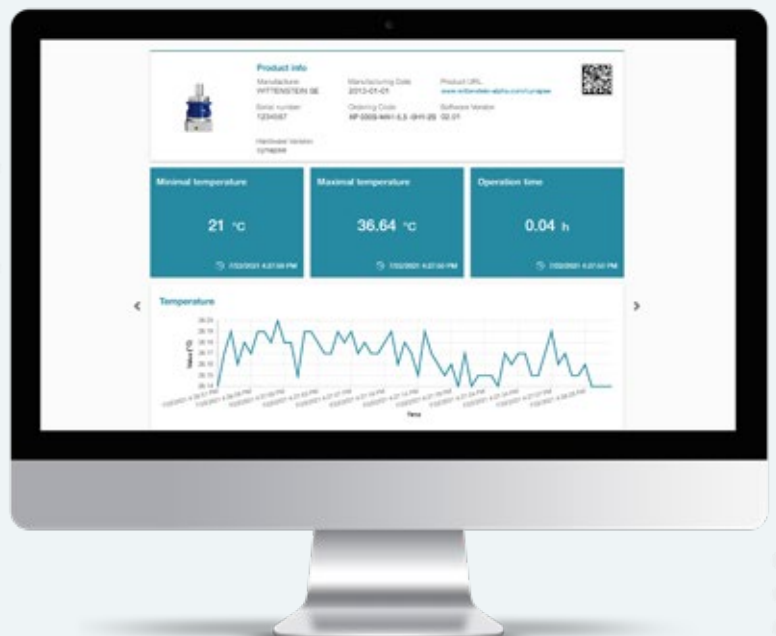
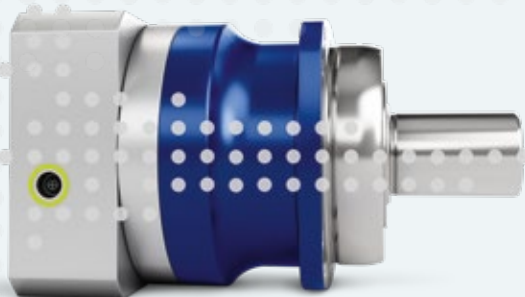


WITTENSTEIN

alpha

## cynapse<sup>®</sup> with Smart Services Collect. Analyze. Visualize.

It's new.  
It's connective.  
The smart gearbox.





# Unlimited connectivity: your access to the digital world.

## Welcome to the IIoT!

The Industrial Internet of Things (IIoT) is the global IT infrastructure of the future in industrial applications: by linking physical and virtual objects, you enable them to communicate interactively for you 24/7 and map process-relevant information.

Using the virtual pool of knowledge which is created in this way, you can optimize processes effectively, reduce your manufacturing costs and make your operations generally more efficient. Play IIoT – cynapse® is your connection to the digital world:

In combination with our Smart Services, it creates maximum transparency within the machine and the Smart Factory. Smart Services from WITTENSTEIN analyze your gearbox and process data and actively enhance the quality of machines and processes.

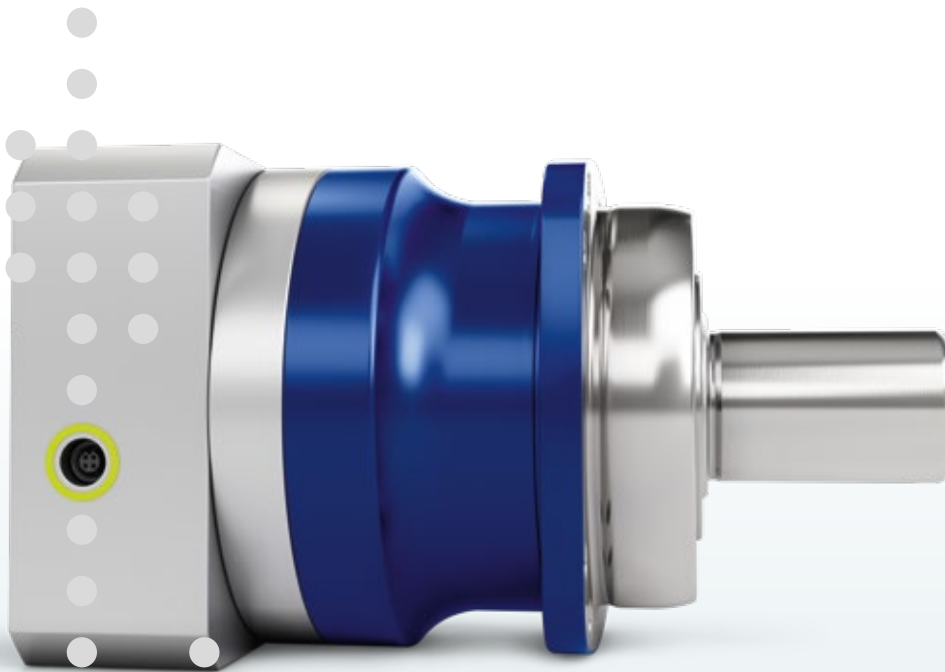


More information about cynapse®  
and our Smart Services: simply scan  
the QR code using your smartphone.  
[www.wittenstein-alpha.com/cynapse](http://www.wittenstein-alpha.com/cynapse)

# Smart, simple, fast: cynapse® really works!

## cynapse® – How it works

cynapse® ensures the gearbox can be easily integrated into the digital world in future. The cynapse® feature is integrated in the existing installation space for this, and is connected via an IO-Link interface. As a result, measured data such as **temperature, vibration, operating time, acceleration and product-specific information** can be accessed.



## Get more out of your gearbox:

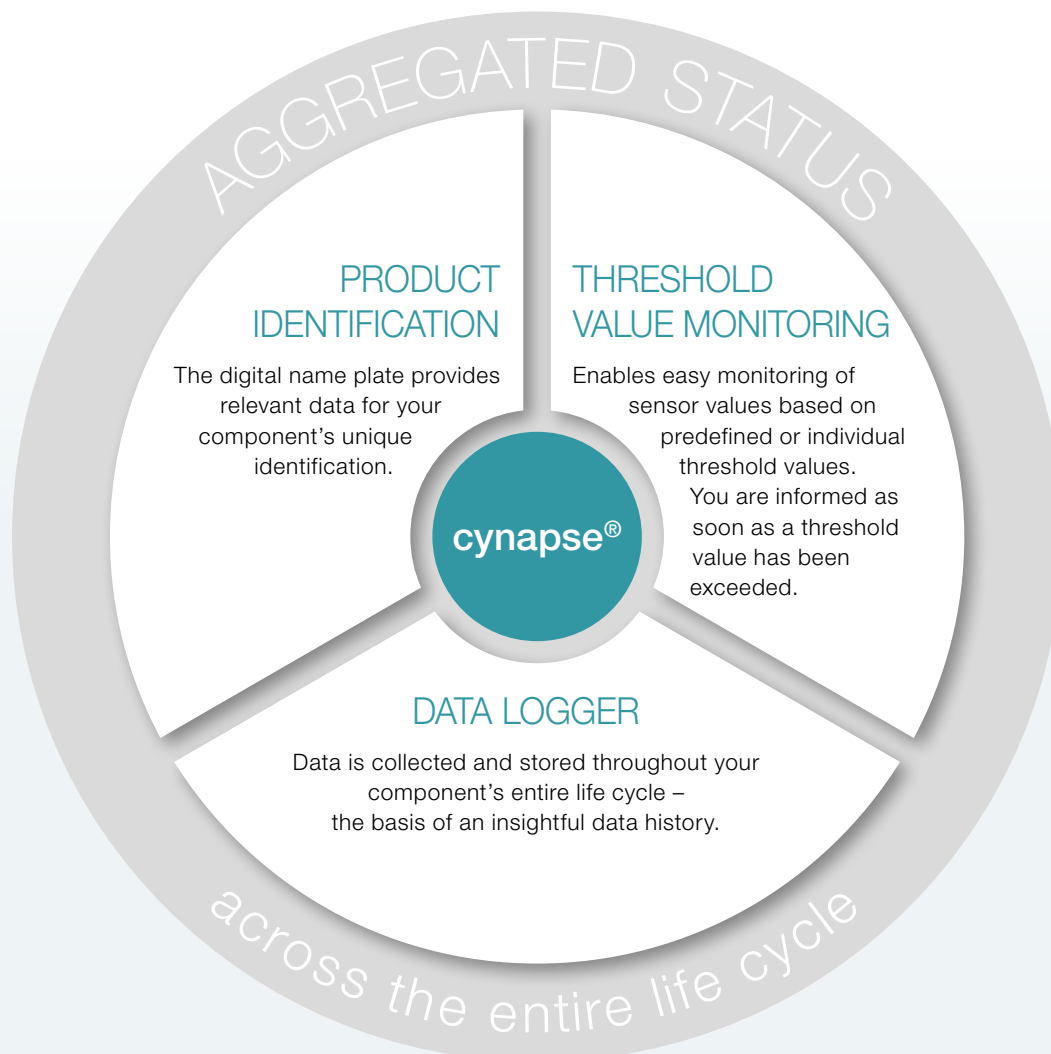
- ● Use more functions in the same installation space.
- ● Know everything relevant about the condition of your gearbox.
- ● Get essential information without attaching additional sensors to your gearbox.

# Get connected!

## Just always know what's happening!

Smart gearboxes with cynapse® measure temperatures and report overheating, they detect vibrations and count operating hours. They store and document all events related to their operation – you systematically receive, for example, all relevant data for preventive maintenance of the gearboxes, minimization of gearbox damage, and prevention of machine downtimes.

cynapse® therefore makes a really crucial contribution to the optimal availability and productivity of your machines.

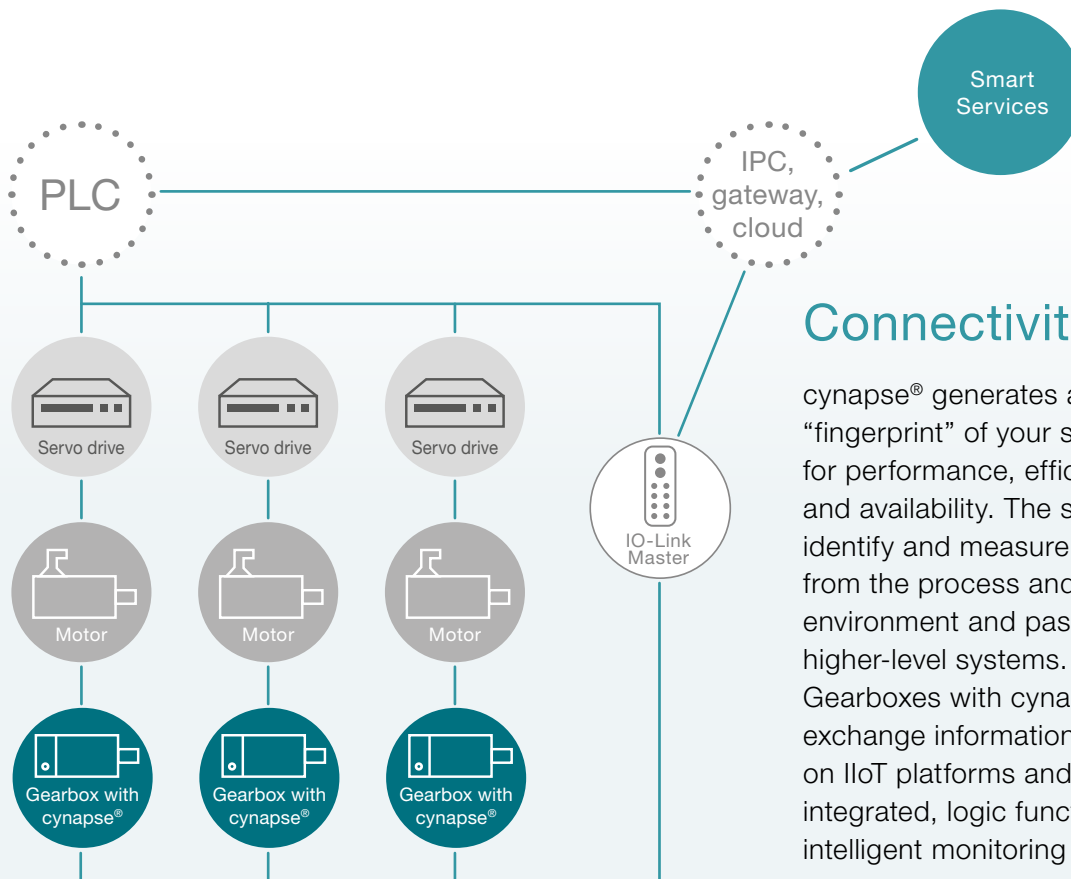


# cynapse® “talks” to all common systems

## Integration without limits

Gearboxes with the cynapse® feature and IO-Link interface can be directly integrated into your system landscape. You can decide here whether the generated data is only kept in the cynapse®’s internal memory or whether you integrate it into higher-level systems, such as a PLC or gateway / IPC / cloud.

By integrating the data into higher-level systems, you lay the foundation to use our Smart Services.



## Connectivity 4.0

cynapse® generates a kind of electronic “fingerprint” of your specific requirements for performance, efficiency, transparency, and availability. The smart gearbox can identify and measure parameters directly from the process and the application environment and pass them on to higher-level systems.

Gearboxes with cynapse® can also exchange information with the applications on IIoT platforms and, thanks to its integrated, logic functions, can perform intelligent monitoring tasks independently.

# Smart Services – the perfect complement



## **cynapse® Monitor as control terminal**

The cynapse® Monitor service visualizes the data collected with cynapse® in the form of a control terminal. In addition to the live sensor data, histograms and histories saved on the sensor, and events are also displayed. The cynapse® monitor therefore provides an overview about the operating behavior of the drive axes and saves you the development of stand-alone visualization solutions.



## **Data Gateway as data interface**

The Data Gateway service is the core service for integrating and processing cynapse® data (process values, parameter and data logger information) for use in condition monitoring. The collected sensor data is made available by the data gateway in a structured data format, which can be continuously integrated into several target systems (databases, cloud systems, etc.) simultaneously and in parallel. This significantly reduces the amount of integration work for your machine infrastructure.



## **cynapse® Teach-In to determine threshold values**

The cynapse® Teach-In service helps you parameterize cynapse® for your individual machine process by automatically determining threshold values. Process-specific threshold values allow unusual events to be detected and made visible.



## **Anomaly-Check**

With the Anomaly-Check service, nonconformity in the process or the component behavior can be detected at an early stage in order to prevent cost-intensive machine downtimes. By monitoring multiple sensors simultaneously and using machine learning methods, a wide variety of applications can be learned and monitored for anomalies.



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**WITTENSTEIN alpha – Intelligent drive systems**

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