

ORBIS Distributed Shopfloor Processing (DSP)

for decentralized process and machine integration



Interoperability: Independent communication during process and machine integration

To successfully connect all **relevant process participants** (e.g. producing facilities, logistic systems, platform services etc.) as a company, it is essential that information is transferred without any problems and as automated as possible. The key concept here is **interoperability**. Interoperability is the ability to have devices or services **communicate with each other independently** without being dependent on another player in the process.

ORBIS DSP as a new solution for implementing interoperable processes

With ORBIS DSP, ORBIS has developed a new solution whose key function is process modeling and seamless communication of different systems and partners. Communication between devices and services is not dependent on any other player or system (e.g. SAP or Microsoft).

This means the **independence of specialized systems is preserved** so that their potential can be fully utilized in the entire process – keyword **“best of breed”**.

ORBIS DSP offers these advantages



Management Cockpit – SaaS solution

Central process modeling and cloud administration



Process acceleration

through a targeted as well as process-oriented and object-oriented exchange of information



Cost savings

through the consistency and acceleration of company processes



Exchange of relevant data

The exchange between the cloud and Edge only contains the process-relevant information

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4

PROCESS
ADAPTION

3

DECENTRALIZED
PROCESSING

2

DIGITAL TWIN

1

CONNECTIVITY

The scope of functions of the ORBIS Distributed Shopfloor Processing (ORBIS DSP)

1 - Connectivity

The exchange of process-relevant data between all involved process partners (e.g. machines, systems, people, etc.) is an indispensable prerequisite for existing and future industrial processes. Connectivity – i.e. the direct, process-targeted, bi-directional communication with your assets – this is the basic prerequisite.

Establishing connectivity is a basic building block within ORBIS DSP. You map your local factory in the **Management Cockpit** here. The **ORBIS-SaaS solution** allows for the complete management of your assets. The native, bi-directional communication occurs through **ORBIS Edge** as a local component in your factory.

2 - Digital Twin

With ORBIS DSP, you define the process-relevant assets so that these can be used to create a **digital twin** later. ORBIS DSP offers you the ability to combine information from different systems to create a comprehensive **digital map of your machines, systems and processes**.

3 - Decentralized process choreography - Modeling of process objects

The focus of defining industrial processes is achieving advantages, such as **flexibility, scalability and robustness**. ORBIS DSP uses modeling of individual process objects to enable **decentralized process choreography**. This includes the coordination and control of processes in a decentralized environment in which different autonomous and independent players and systems communicate and interact with each other. The goal is to have **resilient, independent processes that run independently** of each other.

4 - Process adaptation

The acquired real-time data and information is used to continuously adjust, optimize and improve production and manufacturing processes. ORBIS DSP makes it possible to collect and store this information on your IIoT platform in a process-oriented manner. A **combination of data analysis** and **Artificial Intelligence** can be used to identify patterns, create forecasts and make data-driven decisions.

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