

FDS

FAGOR
DIGITAL
SUITE

Decision making made simple

FAGOR
AUTOMATION



Open
to your
world



FDS FAGOR DIGITAL SUITE

Decision making made simple

SEAMLESS DATA.

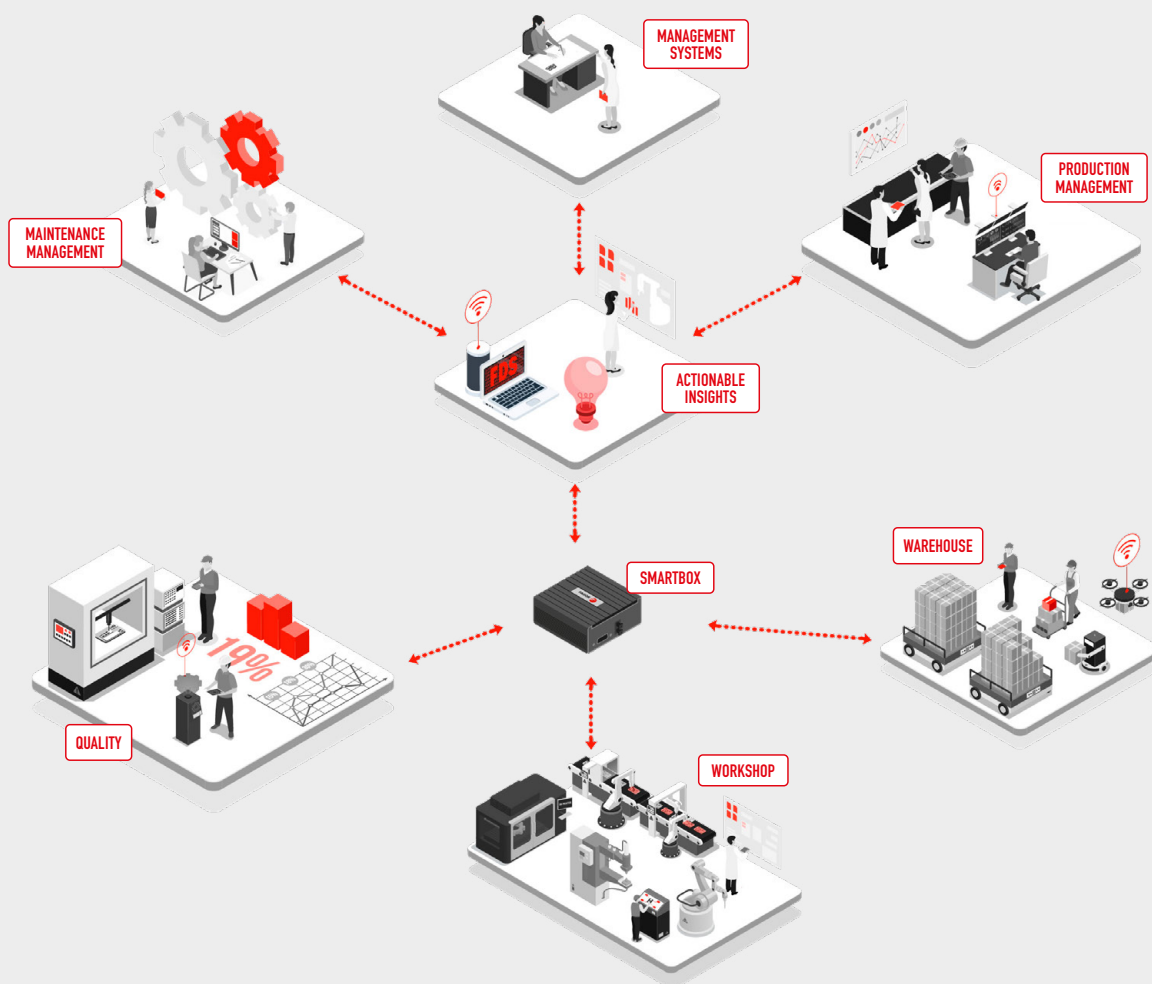
SMARTER DECISIONS.

SCALABLE SOLUTIONS.

Fagor Digital Suite is born from who we are.

A digital solution that reflects the values that define Fagor Automation:

- The expertise and know-how of those who truly understand the industry.
- Solutions that maximize your machinery investment.
- Flexibility and modularity designed to adapt to any environment.
- Genuine proximity, with an international network always close by.



**Empower your team through
full-factory interconnection
and real-time insights**

Digitalization solution designed to integrate machines with production and management systems. This platform gathers essential data and converts it into strategic information, empowering more efficient decision-making.

Transition to Industry 5.0

FDS supports companies not only in transforming industry, but also the economy and society, promoting a more sustainable, fair, and digital future.

An industry where technology does not replace people, but empowers them.

Where the future is measured not only in productivity, but in resilience, well-being, and sustainability.

FDS is your roadmap



Connect

Connectivity and traceability as a foundation.

Optimize

Intelligence and operational efficiency as a driving force.

Humanize

A human, resilient, and sustainable approach as a purpose.



FDS: the digital foundation of a human-centered industry

FDS provides the digital infrastructure that makes this leap possible:



Human-centric: empower people with useful information and interfaces tailored to each environment. From management to the workshop.

Resilient: open and connected systems, ready for change and the unexpected. All information centralized to respond quickly and adapt flexibly.

Sustainable: energy analysis, efficiency, and reduction of your factory's environmental impact.

Smartbox

The system incorporates a Smartbox device, which, in addition to extensive connectivity, offers the following advantages:

- It complies with the most demanding cybersecurity certifications, isolating the machine.
- It is the basis from which software updates (Windows, platform, etc.) can be made.
- It has the capacity to connect with other production systems, sensors, PLC, the cloud, etc.
- Allows a non-intrusive installation or deployment on the machine.
- It acts as a buffer in case the connection to the network is lost.
- Enables the conversion of data to different protocols.
- Models with / without Wifi, with CPUs up to i9.



Cybersecurity

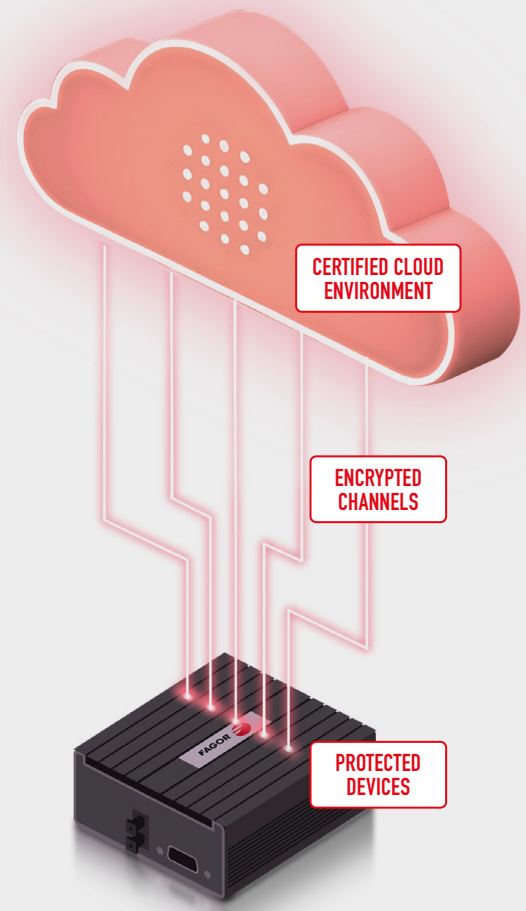
AT FDS, CYBERSECURITY IS INTEGRATED INTO EVERY LAYER OF THE SYSTEM, FROM THE DEVICES INSTALLED ON SITE TO THE CLOUD ENVIRONMENTS WHERE DATA IS PROCESSED AND MANAGED

We design our solutions to meet the most demanding international security standards and adapt to the needs of highly regulated sectors.

Our security approach includes:

- Comprehensive protection of data and systems throughout their entire lifecycle.
- Architecture designed to minimize risks from the outset.
- Continuous monitoring, regular updates, and enhanced controls.
- Compliance with globally recognized standards.

The platform operates on certified infrastructures and verified components, guaranteeing the confidentiality, integrity, and availability of information at all times.



FDS deployment

We offer two deployment options: in the Cloud or On-premises, to adapt to the technical, regulatory, or strategic requirements of each customer.

	Cloud	On-premises
Core infrastructure	Cloud certified, operated, and maintained by Fagor	Local server (Smartbox i9) provided and validated by Fagor
Security updates	Automatic, without customer intervention	Executed by Fagor technicians in a planned manner
Encryption and secure communications	Guaranteed security	Certified security
On-site devices (Smartbox)	Guaranteed security in firmware and communications	Guaranteed security in firmware and communications
Security backups	Automated and managed in the cloud	Customer's responsibility; Fagor offers support and technical solutions
Compliance certifications	Based on certified cloud infrastructure (ISO, ENS, etc.)	Hybrid environment: Fagor certifies the hardware/software; the customer adapts the environment to their regulations
Global operational responsibility	Data center with TIER III availability	Greater autonomy: shared security and adaptable to internal policies

Features



Multibrand

Compatible with the main CNCs in the market.



Modular

Customizable and scalable for every customer.



Cybersecurity

Aligned with the sector's most exacting standards.



Fast implementation

Scalable in terms of equipment and functionality, with minimal intrusion.



Dashboards

Standard or customized.



Multi-protocol

OPCUA, UMATI, MTConnect, MQTT, etc.



Alerts and maintenance

Customize alerts and preventive maintenance for maximum reliability.



Interoperability

Without limits with all your management systems.

Solutions

FDS OFFERS A SET OF INNOVATIVE SOLUTIONS DESIGNED TO TRANSFORM THE MANUFACTURING INDUSTRY, OPTIMIZING PRODUCTION AND IMPROVING OPERATIONAL EFFICIENCY:

1. Manufacturing Intelligence

Enables you to connect and visualize your machines, providing real-time and historical insight into their behaviour from anywhere.

2. Production Management

Enables you to plan, execute, and analyze workshop workload, with interfaces and tools tailored to each stage of the process.

3. OEM Platform

Allows you to monitor your customers' machines, offer proactive services, and generate new revenue, all under your brand name. Fagor technology, with added value for your business.

4. Teleservice

Allows manufacturers and distributors to access and intervene in their remote equipment easily and securely.

1. Manufacturing Intelligence

TURN RAW DATA INTO VALUABLE INFO, CUTTING DOWNTIME, BOOSTING EFFICIENCY, AND OPTIMIZING PERFORMANCE

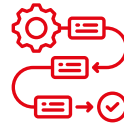


OEE

MAXIMIZE THE PERFORMANCE OF YOUR EQUIPMENT

With our OEE module, you will have a clear overview of the Availability, Efficiency, and Quality of your machines, allowing you to make informed decisions to optimize production and reduce costs.

- **Availability.** *Accurately detects downtime and its causes.*
- **Efficiency.** *Compares theoretical capacity with actual capacity.*
- **Quality.** *Measures the percentage of valid parts.*



Processes

OPTIMIZE PRODUCTION MONITORING AND CONTROL

With the Processes module, you can analyze and optimize the performance of your production programs in detail. Track execution times, deviations, and parts produced to enhance the efficiency of each operation.

- **Time analysis**
- **Deviations**
- **Parts produced**
- **Consumption per program**
- **Efficiency per program**
- **Downtimes per program**



Consumption

ANALYZE AND OPTIMIZE ELECTRICAL RESOURCE USAGE IN PRODUCTION

The module provides a detailed analysis of electricity consumption focused on daily operations. Its objective is to improve sustainability and resource efficiency, enabling decisions based on clear and measurable data.

- **Consumption per tool**
- **Consumption based on time**
- **More efficient production**
- **Identification of inefficiencies**
- **Sustainability**



Electrical Data

ENERGY UNDER CONTROL

This module enables a detailed assessment of energy performance, focusing on system efficiency and stability. Its objective is to reduce costs, avoid penalties for low power factor, and anticipate failures through phase analysis.

- **Power factor optimization**
- **Prevention of penalties**
- **Reduction of operating costs**
- **Phase analysis**
- **Detection of faults and imbalances**
- **Increased stability of the electrical system**



Alerts & notifications

FEWER FAILURES, MORE PRODUCTION

80% of problems stem from 20% of causes. Our alarm system not only alerts you in real time but also analyzes fault patterns and frequency to identify their root causes. With this insight, you can act where it truly matters, reducing downtime and optimizing production.



Maintenance

OPTIMIZE THE PERFORMANCE OF YOUR EQUIPMENT

With our intelligent maintenance module, you can ensure operational continuity and reduce unexpected downtime with preventive maintenance.

- Spare parts management and replacement planning
- Scheduled maintenance to prevent failures
- Incident logging and root cause analysis
- Full traceability of problems and solutions

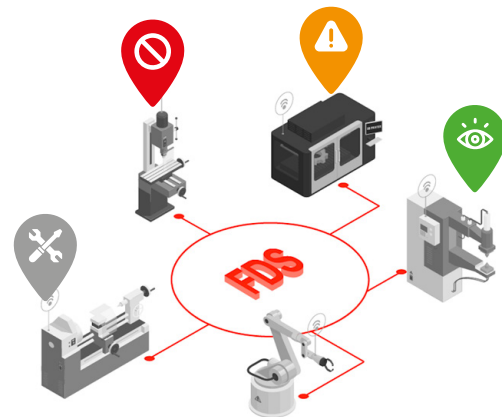


RAM

ENHANCE THE RELIABILITY OF YOUR OPERATIONS: ANTICIPATE FAILURES AND MINIMIZE DOWNTIME

With the RAM module, you can analyze and improve the Reliability, Availability, and Maintainability of your equipment, ensuring continuous and efficient operation.

- **Reliability.** Identify recurring failures and their root causes to reduce interruptions and enhance equipment reliability.
- **Availability.** Analyze machine uptime and operational performance to maximize effective production.
- **Maintainability.** Plan and optimize preventive and corrective maintenance based on historical and real-time data.



Customization

YOUR DATA, YOUR WAY

We provide the information and help you visualize it according to your specific needs.

2. Production Management

ORGANIZE YOUR PRODUCTION WITH PRECISION AND FLEXIBILITY.
THE PLANNER IS THE KEY TOOL FOR MANAGING PRODUCTION
EFFICIENTLY AND ADAPTIVELY

Plan

MANAGE PLANNING BY COMBINING
AGILITY, PRECISION, AND
INTELLIGENT ASSISTANCE

Smart planning

Plan more quickly and intelligently with the help of AI,
optimizing resources and anticipating needs.

Real-time visibility

Get a clear, real-time view of workloads across your
plant to make informed decisions.

Total connection with the workshop

Connect directly with your workshop and manage all
processes remotely, with access at any time.

Flexible production

Quickly adapt production to demand, achieving greater
flexibility and agility in your operations.

Execute

ENSURE EFFICIENT AND
ACCURATE PRODUCTION
EXECUTION

Reduce manual data entry

Automate the collection and updating of information,
eliminating human error and allowing operators to
focus on tasks with greater added value.

Operational visibility for the entire team

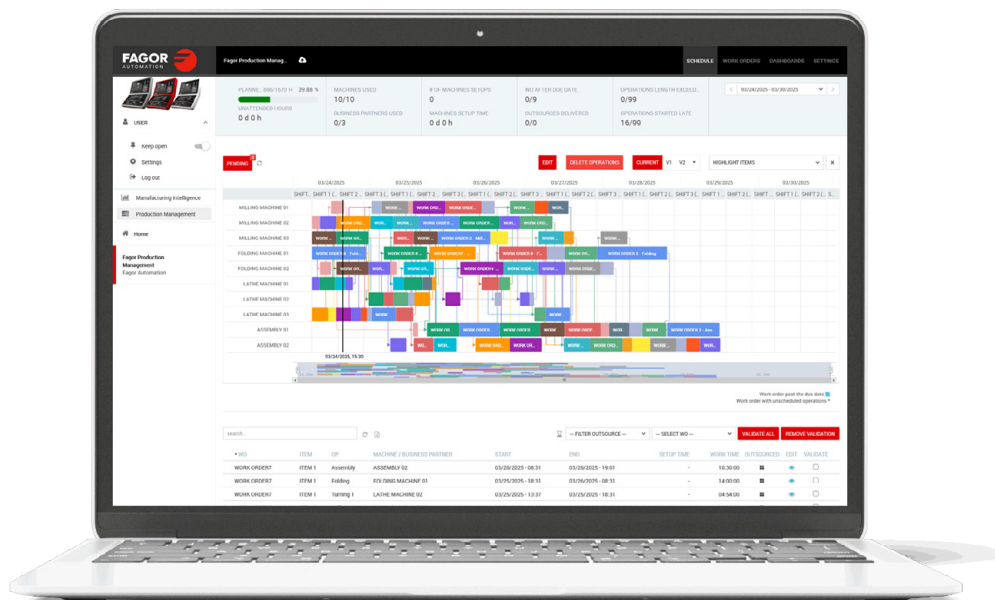
Provide operators and supervisors real-time
information and intelligent tools to track and achieve
their goals, facilitating preparation and transition
between jobs.

Anticipating problems

Detect incidents as they occur, allowing immediate
intervention and avoiding the loss of resources in
reactive solutions.

Report downtime and stoppages

Allow operators to report machine stoppages and
downtime in real time.



Analyze and Decide

SMARTER DECISIONS
WITH DATA

Workshop overview

Your shop floor under control.

View the status of machines, open incidents, work orders, and operators all in one place. See who is doing what and how much time is left to complete each task.

Workload

Optimize your shop's capacity.

Analyze total and per-machine workload. Identify bottlenecks, underuse, and opportunities to take on new jobs.

Scheduler status

Monitor progress in detail.

See which jobs are being executed and how they are progressing. Detect effective working times and real-time stoppages.

Process analysis

Find opportunities to improve.

Compare estimated vs. actual times and detect deviations. Optimize processes based on historical data.



Incidents

Solve problems faster.

Manage machine and process incidents, identify root causes, and design preventive maintenance strategies to improve production quality.

Operator bonuses

Recognize and reward effort.

Evaluate operator performance with clear data.

Discover completed jobs, time worked, and managed incidents.

Production Management Lite

START WITH THE ESSENTIALS AND
GROW AS NEEDED

Production Management Lite is the ideal solution if you're looking for a simple way to start managing your production efficiently. While it doesn't include the full scheduler, it offers essential features that improve visibility and control over your workshop.

It's also fully scalable, meaning you can add advanced features, like full scheduling, whenever you need them.

3. OEM Platform

ADD VALUE TO YOUR MACHINES AND REVOLUTIONIZE YOUR SERVICES WITH OUR DIGITALIZATION AND MANAGEMENT PLATFORM DESIGNED SPECIFICALLY FOR MACHINE TOOL MANUFACTURERS

A platform packed with the latest technology to help you offer new services to your customers



Connect. Monitor. Transform

Turn your machines into smart data sources. Monitor in real time the performance, usage, and condition of your equipment.



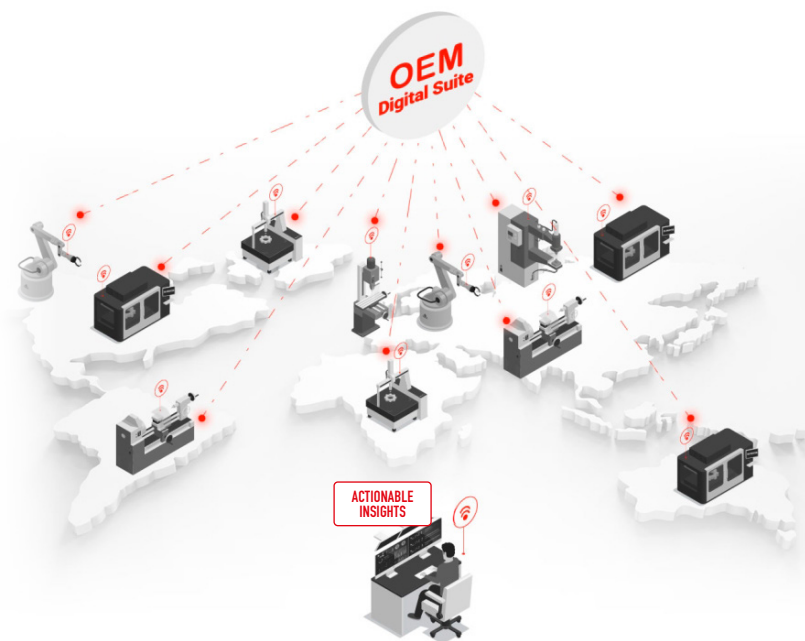
Teleservice

Remote service for your customers anywhere in the world, with full cybersecurity.



Monitor key components to prevent failures

Turn your machines into smart data sources. Monitor in real time the performance, usage, and condition of your equipment.



Benefits



Easily organize customers, users, and permissions

Centralized access and permission management. Set user levels and protect each customer's information.



Boost your market competitiveness

Stand out with innovative solutions. Increase customer trust and strengthen your industry leadership.



Manage your entire machine fleet from one place

Transform your machines into smart data sources. Monitor in real time the performance, usage, and condition of your equipment.



Analyze errors and improve manufacturing quality

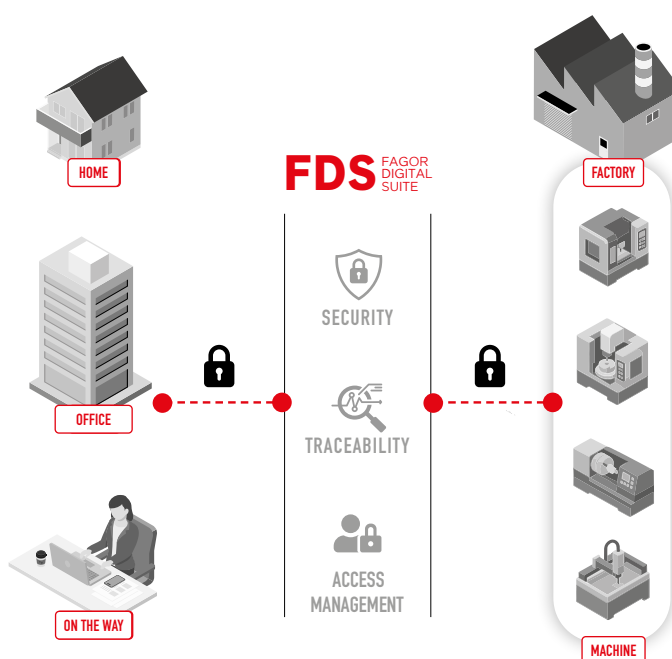
Identify areas for improvement in design and production. Build more reliable and durable machines using real data.

4. Teleservice

AIMED AT MANUFACTURERS AND DISTRIBUTORS WHO NEED TO ACCESS AND INTERVENE IN THEIR REMOTE EQUIPMENT IN AN EASY AND SECURE WAY

Remote support solution

- Safe and simple remote support for machines.
- Remote update of programmes, PLCs, software versions.
- Real-time machine information.
- Reduction in diagnosis and stoppage times.
- Enables optimization of stocks of critical spare parts.
- Savings on travel costs.
- Improved management of technical resources.
- Support for a larger number of customers.
- Management of access permissions.



Multibrand connectivity

- Compatible with most remote connection systems.



- Use of standard communication protocols.

Secure solution

- Triple cybersecurity certification: ISO/IEC 15408, ISO/IEC 18045, and CommonCriteria3.1 r5.
- Encrypted communications.
- Authentication and authorization procedures.
- Firewall.
- Proactive defence mechanisms.

Other languages are available in the Downloads section from Fagor Automation's website.

Fagor Automation shall not be held responsible for any possible printing or transcription errors in this catalog.



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Fagor Automation holds the ISO 9001 Quality System Certificate and the **CE** Certificate for all products manufactured.



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