



DS-I/O BOX®

DS-I/O BOX<sup>®</sup>

DIGITAL

SCADA

I/O

BOX

# STRENGTHS COMPARED TO COMPETITOR

- ✓ Smaller form factor
- ✓ SCADA integration
- ✓ Multinstruments
- ✓ Innovative User Interface
- ✓ BIOPAT<sup>®</sup> MFCS Compatible

# Main Focus Point

## Modularity

The system is able to manage different kinds of probes, scales and other type of instruments

## Flexibility

HMI can manage up to 5 instruments for each type and user choose which one is in use. The system automatically adapts itself

## Easy to Use

This system has been designed for being Easy to Use from customer, and also from the Automation perspective

## Security

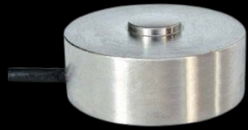
The system is **21 CFR part 11** compliance. Audit Trail log each operation made by specific user.

## Connectivity

The system can be used via Web Client. Data can be exported via **OPC UA** or in pdf format via shared folder

# Some type of probe and instruments

Modularity



Load Cells



Mixers



Peristaltic Pumps



Sartochek



Industrial Terminal



Different process probe

NO ADDITIONAL DISPLAY !!

Modularity



# NO ADDITIONAL DISPLAY !!

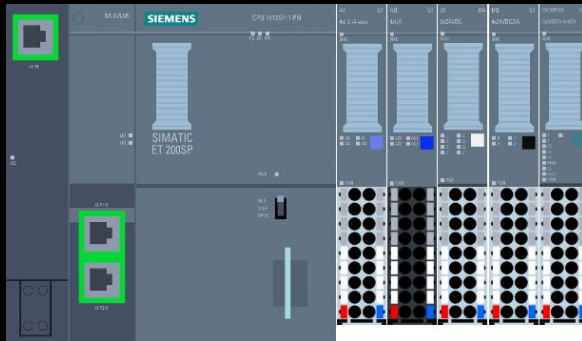
Modularity



Integrated amplifiers allow us to manage the calibration of conductivity and ph probes directly from the HMI

# SIEMENS ARCHITECTURE

Modularity



All the I/O modules are connected directly to the bus of the CPU for faster signal transmission



New generation of HMI panel for a modern UI, more storage capacity and better construction quality





# ADVANCED REVISION

Modularity



Industrial pc for further  
innovations without  
technological limits



Remote access will allow  
the user to connect to  
multiple I/O boxes at the  
same time

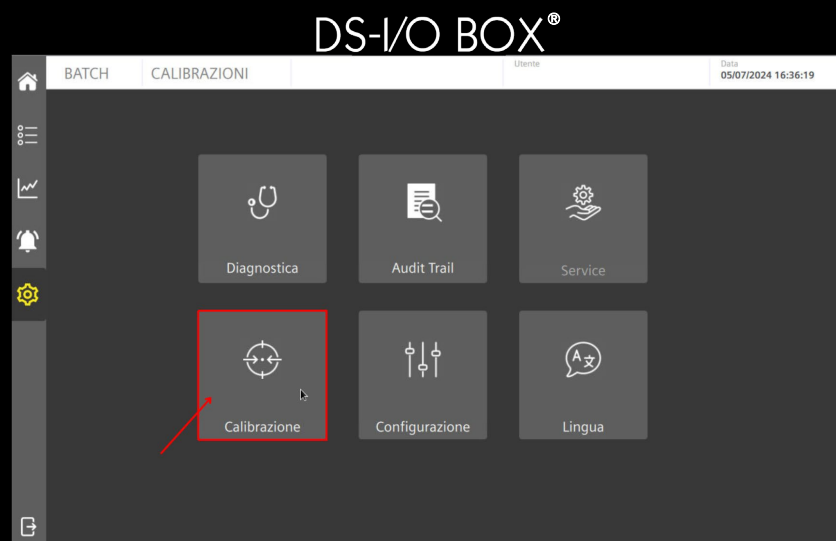


# MULTI INSTRUMENT

User can save up to 5 instruments for each type.

A **privileged** user can switch one instrument to another one by simply clicking on it.

A **dedicated** page allows the calibration of some types of instruments such as pH meters, scales and conductivity meters.



Flexibility



# BATCH RECORD

DS-I/O BOX<sup>®</sup> can start a Batch and record all the data that are taken from the configured instruments.

DS-I/O BOX<sup>®</sup>

BATCH CALIBRATIONS User: Admin Date: 05/07/2024 12:09:18

Mixer 0 rpm

26.30 °C Temp

0.00 m/S Cond



7.3 pH Ph

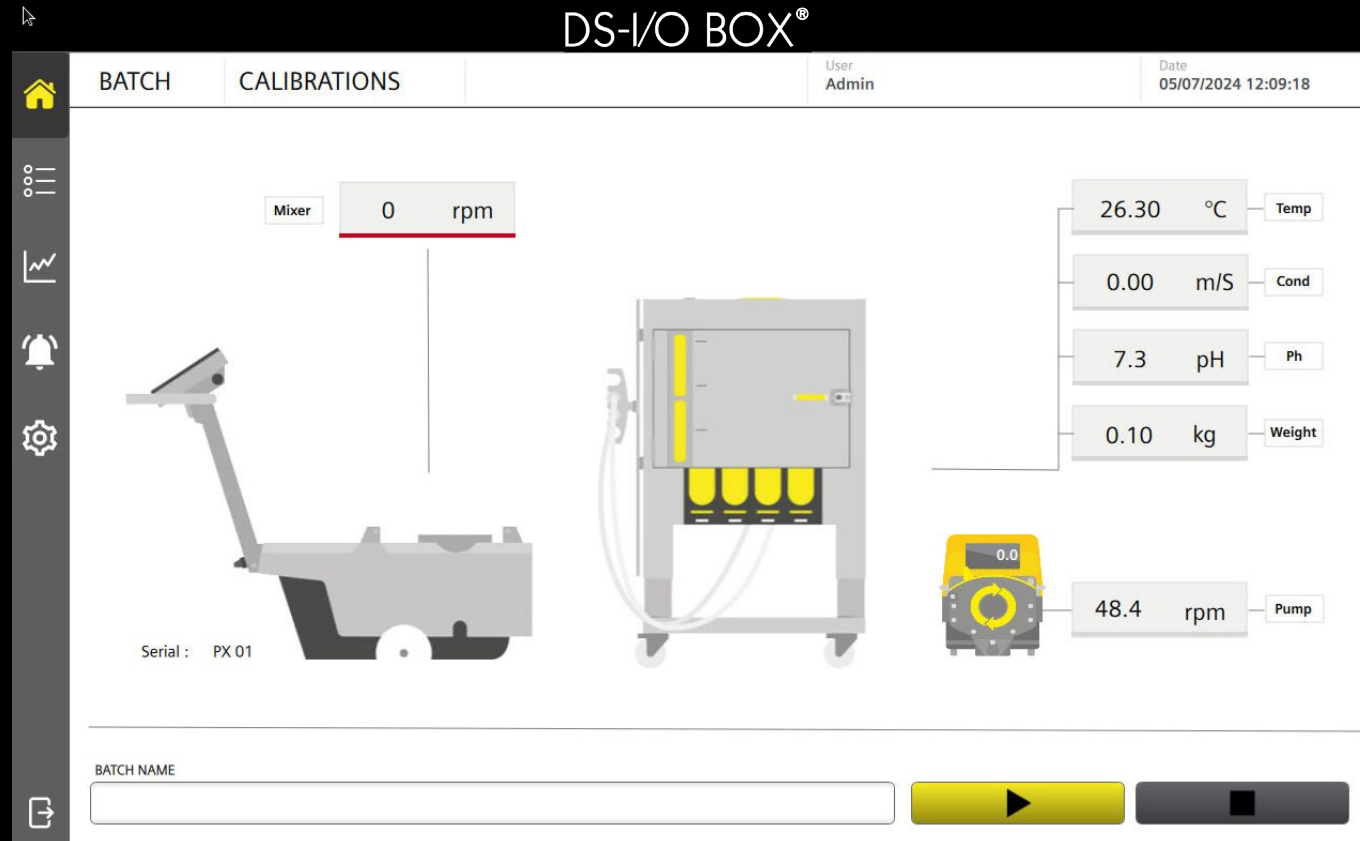
0.10 kg Weight

48.4 rpm Pump

Serial: PX 01

BATCH NAME



Easy to Use



# BATCH REPORT

The user is able to do reporting of a batch.

Report can be saved and exported to external USB memory, into a shared network folder or downloaded from Web Client.

DS-I/O BOX®

User: Admin Date: 05/07/2024 11:35:25

Reports | Report jobs | Job parameters | Global settings

Name	Job name	Creation time	Files	Status
<input type="checkbox"/> _2407051108	ReportBatch	7/5/2024, 11:08:04 AM	<input type="checkbox"/> 177 KB <input type="checkbox"/> 48 KB	
<input type="checkbox"/> Test demobatch_2406061105	ReportBatch	6/6/2024, 11:05:27 AM	<input type="checkbox"/> 197 KB <input type="checkbox"/> 78 KB	
<input type="checkbox"/> _2406061046	ReportBatch	6/6/2024, 10:46:35 AM	<input type="checkbox"/> 177 KB <input type="checkbox"/> 49 KB	
<input type="checkbox"/> _2406061042	ReportBatch	6/6/2024, 10:42:30 AM	<input type="checkbox"/> 181 KB <input type="checkbox"/> 53 KB	
<input type="checkbox"/> _2406061027	ReportBatch	6/6/2024, 10:27:20 AM	<input type="checkbox"/> 181 KB <input type="checkbox"/> 53 KB	
<input type="checkbox"/> _2406061010	ReportBatch	6/6/2024, 10:10:13 AM	<input type="checkbox"/> 181 KB <input type="checkbox"/> 53 KB	
<input type="checkbox"/> _2406061001	ReportBatch	6/6/2024, 10:01:03 AM	<input type="checkbox"/> 181 KB <input type="checkbox"/> 53 KB	
<input type="checkbox"/> _2406060954	ReportBatch	6/6/2024, 9:54:22 AM	<input type="checkbox"/> 181 KB <input type="checkbox"/> 53 KB	
<input type="checkbox"/> _2406060850	ReportBatch	6/6/2024, 8:50:39 AM	<input type="checkbox"/> 181 KB <input type="checkbox"/> 53 KB	
<input type="checkbox"/> _2406060829	ReportBatch	6/6/2024, 8:29:32 AM	<input type="checkbox"/> 181 KB <input type="checkbox"/> 54 KB	
<input type="checkbox"/> _2406011345	ReportBatch	6/1/2024, 1:45:13 PM	<input type="checkbox"/> 181 KB <input type="checkbox"/> 53 KB	
<input type="checkbox"/> _2406011335	ReportBatch	6/1/2024, 1:35:46 PM	<input type="checkbox"/> 181 KB <input type="checkbox"/> 54 KB	
<input type="checkbox"/> Test_2406011228	ReportBatch	6/1/2024, 12:28:07 PM	<input type="checkbox"/> 179 KB <input type="checkbox"/> 51 KB	
<input type="checkbox"/> _2406011226	ReportBatch	6/1/2024, 12:26:52 PM	<input type="checkbox"/> 177 KB <input type="checkbox"/> 50 KB	
<input type="checkbox"/> _2406011040	ReportBatch	6/1/2024, 10:40:50 AM	<input type="checkbox"/> 180 KB <input type="checkbox"/> 52 KB	

1 2 3

Show information

Easy to Use

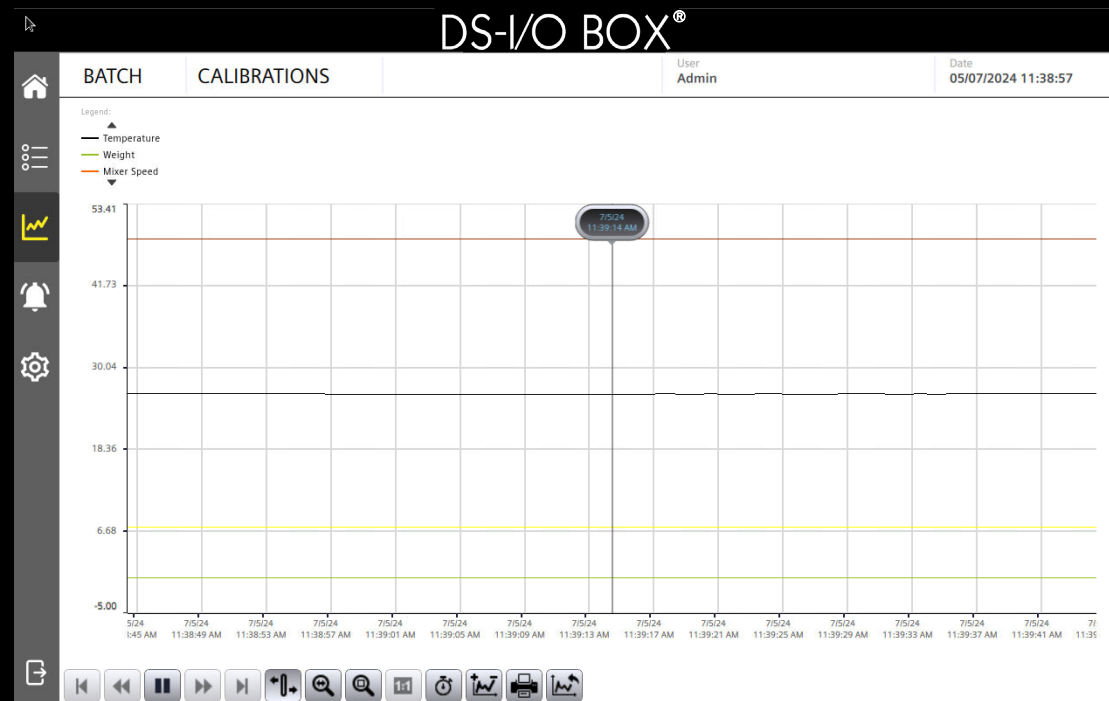


# BATCH VIEW AND TREND

The user will always have a batch and trend view with all its details, also if the batch is still in running.

The user can also put some filters to let him visualize some specific data.

When a batch is running the DS-I/O BOX<sup>®</sup> can visualize the recorded trend in real time.



Easy to Use



# BATCH ALLARM

The Alarms section is designed to monitor and manage the system alerts generated by the device.

This section provides a comprehensive overview of all active and historical alarms, allowing for quick identification and resolution of problems.

DS-I/O BOX®

Utente: Admin Data: 05/07/2024 15:23:52

	BATCH	CALIBRAZIONI					
	Alarm class	Origin	Area	Alarm text	Modification time	Raise time	Status text
1	Acknowledgeme		HMI_RT_1:Alarm	Sistema bloccato	04/07/24 18:12:06	04/07/24 18:12:06	Incoming/Outgoing
2	SystemAlarmWit				05/07/24 10:22:49	05/07/24 10:22:49	Incoming
3	SystemAlarmWit		System/HMI/Run		05/07/24 15:18:03	05/07/24 15:18:03	Incoming
4	Alarm		HMI_RT_1:Alarm	Temperatura Alta	05/07/24 15:18:06	05/07/24 15:18:06	Incoming
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Easy to Use



# USER MANAGEMENT

DS-I/O BOX<sup>®</sup> integrates a **User Management Module** that allows to control the access to the system and permit only the authorized users to use that. By default, the following users are set up:

Admin

Supervisor

Operator

Guest



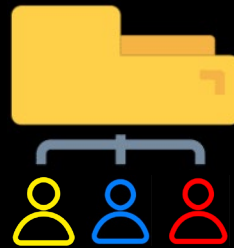
Security



# ACTIVE DIRECTORY MODULE

Customer can use their own Microsoft Active directory to let the DS-I/O BOX<sup>®</sup> use their users and groups to let users login with their own company credentials.

The Administrator can also manage the groups inside the HMI.



Security



# FDA 21 CFR PART 11

21 CFR Part 11

Every action made inside the HMI is recorded, in compliance with the 21 CFR Part 11. Within the Audit Trail view an authorized user can see every action performed within the HMI by each user. The Audit Trail can also be exported for auditing purposes.

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BATCH CALIBRATIONS User: Admin Date: 05/07/2024 11:54:28

Audit Trail Audit File Audit queries Global Settings

<input type="checkbox"/>	Time stamp	Audit provider	Type	Object reference	Object name	User	Operator station	Operation	Old Value	New Value	Language
<input type="checkbox"/>	7/5/2024, 11:35:36.868	User Management	User management			Admin	Controlroom Client	Updated		Admin	1033
<input type="checkbox"/>	7/5/2024, 11:25:43.807	User Management	User management				Controlroom Client	Updated	Admin		1033
<input type="checkbox"/>	7/5/2024, 11:08:21.590	User Management	User management			Admin	Controlroom Client	Updated		Admin	1033
<input type="checkbox"/>	7/5/2024, 10:48:55.305	User Management	User management				Controlroom Client	Updated	Admin		1033
<input type="checkbox"/>	7/5/2024, 10:25:52.578	User Management	User management			Admin	Controlroom Client	Updated		Admin	1040
<input type="checkbox"/>	7/5/2024, 10:25:23.545	User Management	User management				Controlroom Client	Updated	Service		1040
<input type="checkbox"/>	7/5/2024, 10:23:51.520	User Management	User management			Service	Controlroom Client	Updated	Admin	Service	1040
<input type="checkbox"/>	7/5/2024, 10:23:36.303	User Management	User management			Admin	Controlroom Client	Updated		Admin	1040
<input type="checkbox"/>	7/4/2024, 16:18:25.458	User Management	User management				Controlroom Client	Updated	Admin		1040
<input type="checkbox"/>	7/4/2024, 15:49:24.858	User Management	User management			Admin	Controlroom Client	Updated		Admin	1040

1 2 3 4 5 6 7 8 9 10 >> <<

Show information



Security

# OPC UA CONNECTION

The DS-I/O BOX<sup>®</sup> either supports SCADA Systems, variables and alarms can be seen externally via OPC UA, with all the OPC UA Encryptions supported.

The DS-I/O BOX<sup>®</sup> System is compatible with:

- ✓ OSI PI (via OPC UA connector)
- ✓ MFCS 4 or higher
- ✓ DeltaV

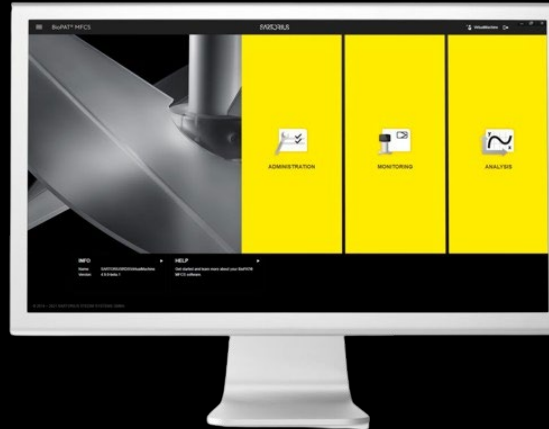
## REMOTE CONTROL

It is also possible to connect remotely to the HMI, with a PC or tablet. The DS-I/O BOX<sup>®</sup> utilizes the VNC protocol, that let the customers to control the DS-I/O BOX<sup>®</sup> even when they are not physically there. Also, the DS-I/O BOX<sup>®</sup> can be controlled remotely in GMP areas, since no internet connection is required.



# BIOPAT® MFCS COMPATIBILITY

As mentioned before, this system can also be configured with BioPAT® MFCS 4 to read data from the DS-I/O BOX® unit or add the DS-I/O BOX® variables inside of an existing configuration.



DS-I/O BOX®

Connectivity

# DS-I/O BOX<sup>®</sup>



This is an example of Palletank<sup>®</sup> connectivity to an IP 65 industrial PC/tablet to our DS-I/O BOX<sup>®</sup>.



# DS-I/O BOX<sup>®</sup>

A new concept for connecting multiple instruments for pharmaceutical customers