



ATTEN2
Advanced Monitoring Technologies

ATTEN2

Atten2 UI – User manual

AUTHOR: ATTEN2

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Iñaki Goenaga, 5
20600 Eibar | Gipuzkoa
t. +34 943 206 744
info@atten2.com
www.atten2.com

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1 Software Installation

1.1 PC requirements

UI software has the following requirements:

- **Supported Operating System:** Windows 10, Windows 7, Windows 7 Service Pack 1, Windows 8, Windows 8.1, Windows Server 2008 R2, Windows Server 2008 R2 SP1, Windows Server 2012, Windows Server 2012 R2
- **Processor:** Intel-compatible processor with a minimum speed of 1 GHz or a faster processor
- **RAM:** Minimum 512 MB for SQL Server Express with Tools, and SQL Server Express with Advanced Services and 4 GB for Reporting Services that installs with SQL Server Express with Advanced Services
- **Hard Disk Space:** Higher than 5 GB of Disk Space, plus logging information storage.
- **Internet connection:** Installation requires Microsoft® software download.
- **Possibility to install SQL Server 2014 or subsequent.**

1.2 Installation steps

1.2.1 Installation of Microsoft® SQL Server Express 2017

Download installer from the Microsoft® official webpage (internet connection required, please continue for non-internet connection):

<https://www.microsoft.com/es-es/sql-server/sql-server-editions-express>

Please ensure to choose the correct operating system (x86 or x64) and the correct product (Basic). The option Download media can be used to download the installer for computers without connection.

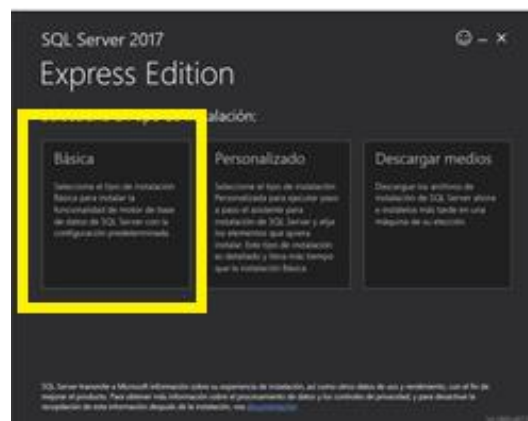


Figure 1. Microsoft® SQL Server Express 2017 initial screen.

Install the product with the default configuration. Please ensure that the SQL server instance name is SQLEXPRESS. Check that whole installation has been correctly done:

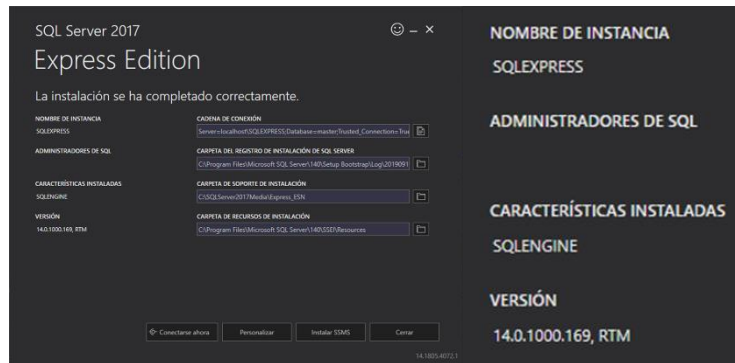


Figure 2. Microsoft® SQL Server Express 2017 installation end screen.

Please restart the computer to update the registry.

1.2.2 Installation of UI

Please execute Atten2.Sensors.UI.Setup.msi and install it with the default configuration.

After that, please execute software in admin mode. If there is an error, please restart the computer and start again, until you get to the login screen.

1.2.3 Installation of data logging service

Run the installer Atten2.Sensors.AcquisitionService.Setup.msi, and allow SmartScreen to install it if required.

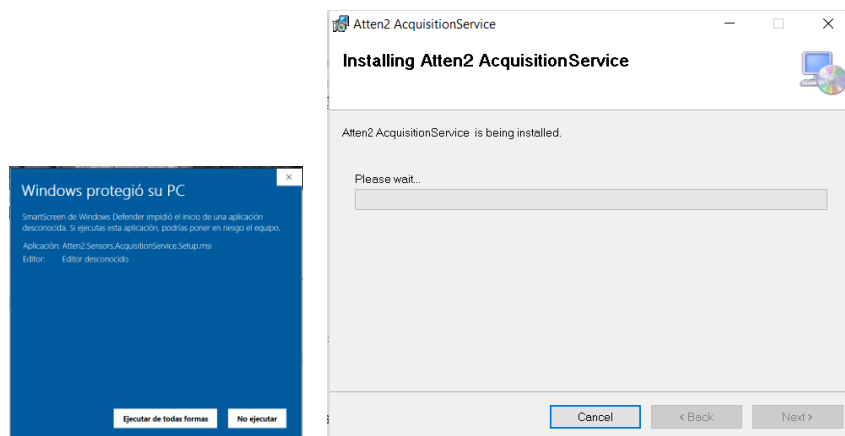


Figure 3. Installation of Atten2 Acquisition Service.

If an MS-DOS window appears, please press Enter until it finishes.

After that, go to start menu in Windows, Atten2 Sensor folder and click on “Install Service Atten2”.

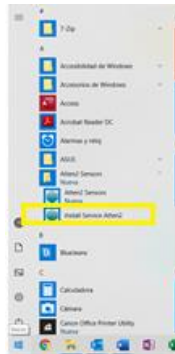
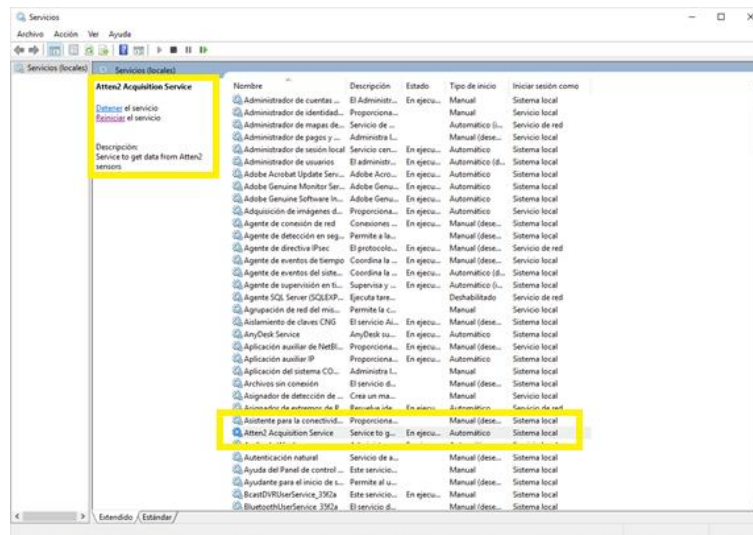


Figure 4. Install service Atten2 location in the Start Menu.

If an MS-DOS window appears, please press Enter until it finishes.

Please go to Windows® service application and check that service is installed and running. You can use the command "services.msc" in the execute section.



2 Software description

Please run the Atten2.Sensors.UI.exe in admin mode.

2.1 Login screen

A user and password are required to access the software. The default parameters are:

- **User:** admin
- **Password:** Atten2



User Name

admin

Password

Log In

Figure 5. Login screen.

2.2 Main screen

In the main screen, information about sensors connected to the device is shown, together with sensor last results, alarms for condition and connection status.

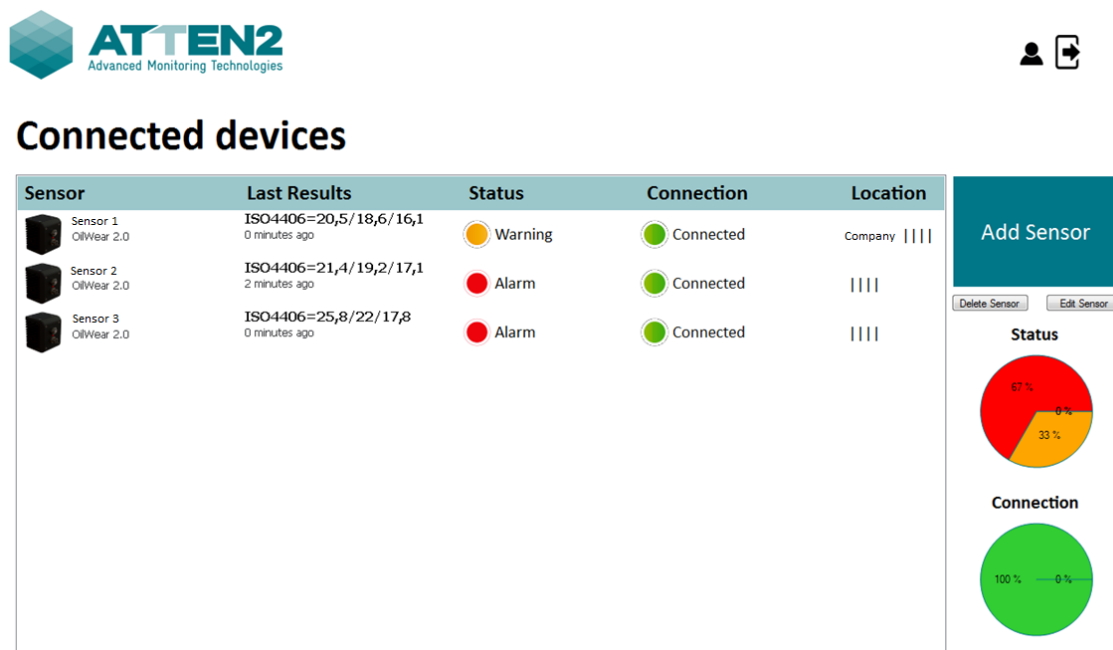
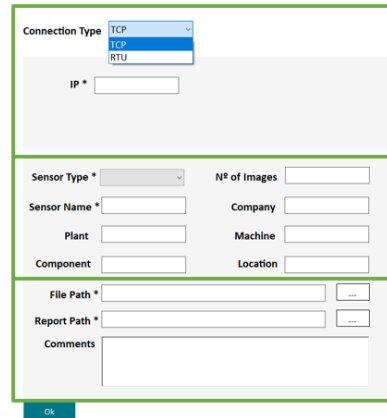


Figure 6. Main screen

2.3 Sensor register

The add sensor button opens the sensor register window.



The form is divided into three main sections:

- Communications section:** Includes a dropdown for 'Connection Type' (with options TCP, RTU) and an 'IP *' text field.
- Sensor identification:** Includes a dropdown for 'Sensor Type *', a text field for 'Sensor Name *', and several other fields for 'Nº of Images', 'Company', 'Plant', 'Machine', 'Component', and 'Location'.
- Data logging parameters:** Includes text fields for 'File Path *', 'Report Path *', and a 'Comments' text area.

An 'OK' button is located at the bottom left of the form.

Communications section

Sensor identification

Data logging parameters

Figure 7. Sensor register screen.

First of all, the communications mode with the sensor is required. Depending on TCP or RTU communication mode, the information required will be displayed.

The "Nº of images" parameter determines the number of tests taken to save an image. If the value 0 is selected, images of this sensor are not stored.

After that, sensor identification parameters are required.

Data logging parameters specify the path for raw data storing and report storing.

2.4 Dashboard

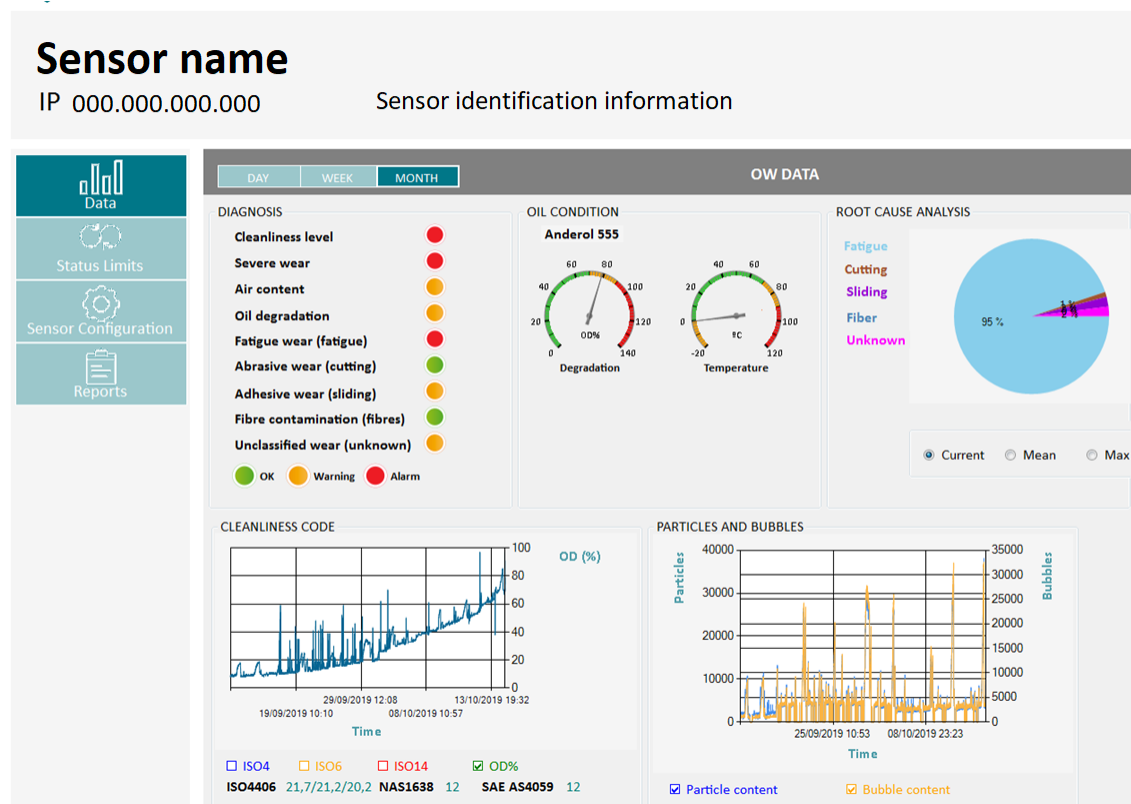


Figure 8. Dashboard screen.

After double-clicking the sensor, this is the results main screen, where several parts are shown. Sensor information is shown in the upper part of the dashboard. These results can be seen in a daily, weekly or monthly mode.

- **Diagnosis:** these traffic light indicators give information about the different equipment issues related to atten2 monitoring technology based on the user-defined alarm levels.
- **Oil condition:** current measurement of oil condition (if included) and sensor temperature (correlated with oil temperature).
- **Root cause analysis (if included):** Total particle counts of shape-recognition particles, with maximum, minimum and mean in the selected period.
- **Cleanliness code:** Trend graph of ISO4406 code together with oil degradation measurement during the selected period.
- **Particles and bubbles:** Trend graph of total particles and bubbles detected during the selected period.

2.5 Status limits

The screenshot shows the 'Status Limits' screen with a sidebar on the left containing icons for Data, Status Limits, Sensor Configuration, and Reports. The main area is divided into two sections: 'Alarm' and 'Warning'. Each section contains a grid of input fields for various parameters.

Alarm		
ISO4 >	OD >	
24	80	
ISO6 >	Big Particles >	
22	100	
ISO14 >	Big Bubbles >	Fiber >
19	200	30
Particles >	Cutting >	Sliding >
150000	50	30
Bubbles >	Fatigue >	Unknown >
10000	150	40

Warning		
ISO4 >	OD >	
22	60	
ISO6 >	Big Particles >	
20	50	
ISO14 >	Big Bubbles >	Fiber >
17	100	10
Particles >	Cutting >	Sliding >
15000	25	10
Bubbles >	Fatigue >	Unknown >
1000	100	20

Figure 9. Status limits screen.

This screen allows the customer to modify the limits for the diagnostics indicator part. Please contact Atten2 to assure correct changes.

2.6 Sensor configuration

The screenshot shows the 'Sensor Configuration' screen with a sidebar on the left containing icons for Data, Status Limits, Sensor Configuration, and Reports. The main area is divided into three sections: 'Communications Parameters', 'Measure Parameters', and 'Select Oil'.

Communications Parameters	
Port Name	IP
/dev/ttymc1	10.1.23.63
Slave Address	Mask
10	255.255.255.0
Server Type	
TCP	
Baud Rate	
57600	
Data Bits	
8	
Stop Bits	
1	
Parity	
2	

Measure Parameters
Measurement interval (min)
2,066667

Select Oil
Oil Selected

Buttons: Read, Write, RESET

Figure 10. Sensor configuration screen.

This screen allows modifying internal parameters of the sensor: communication parameters, reference oil used (if available). Please contact Atten2 before using this screen.

2.7 Reports

This software allows the generation of automatic reports.

Report Path

From 2019/08/01 14:05

To 2019/09/01 14:05

GENERATE REPORT

Figure 11. Report generation screen.

To obtain a report, please introduce the destination path, together with the dates required for the report. After that, the report will be generated in the defined path.



Figure 12. Report example.