

## Remote access and telemetry system



FL-noriNet-EN\_V02.00 - 10/2025 - Subject to changes and errors

### Access, review and store your ship's system data cloud-based

noriNet is based on the latest maritime digital infrastructure and provides two applications:

1. Remote access to onboard systems
2. Data collection and cloud storage

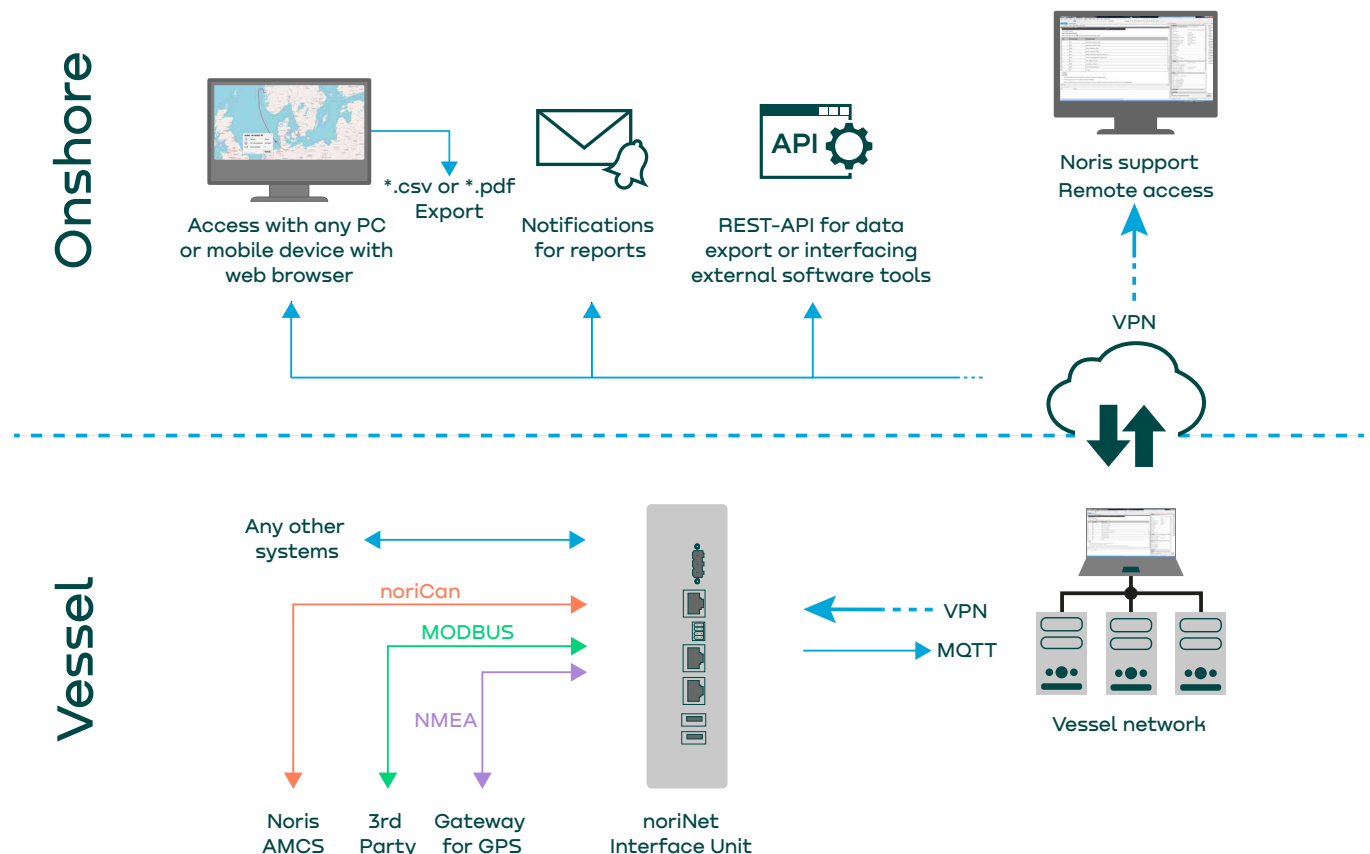
The interface unit is installed on the vessel and connected to the local network with access to the internet. noriNet can be connected to various interfaces and receives any digital and analogue signals. It works as data collector, processor and gateway.



### Your benefits at a glance

- Fast, reliable and secure data transfer via MQTT protocol
- Easy access via real-time cloud monitoring
- Indication of engine data, current alarms and up-to-date navigational information
- Valuable input for scheduling of preventive and/or predictive maintenance
- Automated report generation for comparing the vessels in your fleet
- Noris REST-API for external data requests

## noriNet system architecture and data distribution



## noriNet applications

### Data collection and cloud storage

Data from the alarm, monitoring and control system (AMCS) and bridge navigation is stored in an internal buffer and transferred via ship internet to an onshore server into the noriNet cloud.

This data can be accessed via internet with multiple clients (PC, tablet or smartphone with a standard web browser). Therefore, norinet provides tabular and graphical information:

- Dashboard with an overview of all ships and the most important ship information
- Alarm and monitoring system (Alarm List, Fadeout List, Event History)
- Data monitoring of integrated systems (all channels) with filter and customised presets
- Scheduled reporting
- Customised channel charts

### Remote access

noriNet enables secure, worldwide remote access to your automation and control systems. This allows diagnostics, software updates, and error analysis to be performed quickly and accurately, enabling faster troubleshooting and minimising the need for a technician on-site.

This not only reduces maintenance costs but also minimises downtime and increases the system availability. Especially in difficult-to-access locations, noriNet offers an efficient solution for monitoring systems at any time, responding to faults, and sustainably optimising operations.

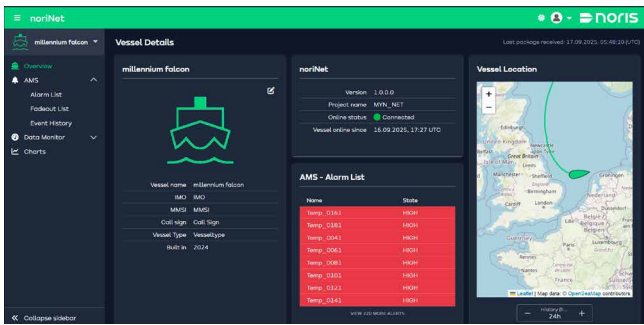


Fig.: Dashboard

## noriNet features

### Overview with the dashboard

The "Dashboard" provides a quick overview of the most important information of a ship, such as ship name, IMO number, ship type, the most recent alarms and the position of the ship. The scope of the display depends on the available data in noriNet.

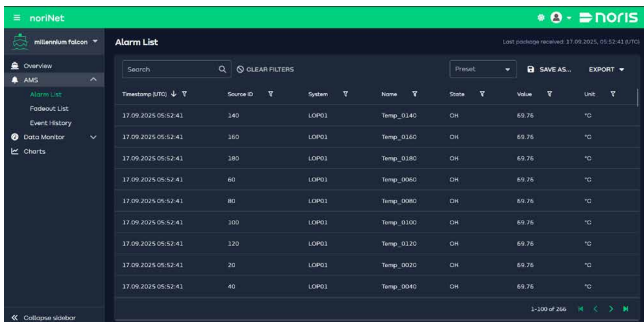


Fig.: Alarm List

### Alarm and monitoring system (AMS)

The "AMS" shows the alarm list, the list with faded out channels and an event history for all system channels.

With the "Preset" function, you can save filtered channels in a preset group for each list separately (Alarm List, Fadeout List, Event History). This group can be accessed quickly to call up recurring monitoring requests.

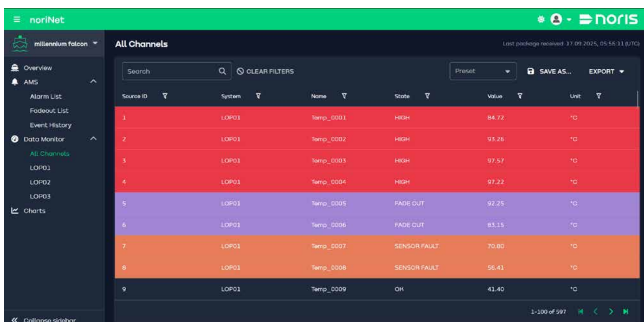


Fig.: Data Monitor

### Data Monitor

The "Data Monitor" displays all channels available in the system in a clear channel list. Furthermore, if required, channels can be created in project-specific sub-groups, which can then be accessed via the navigation menu. In our example for different LOPs connected to noriNet. The "Preset" function is also available with "Data Monitor".



Fig.: Charts

### Charts

The "Charts" function enables the graphical visualisation and comparison of specific channels. The diagram can be individually configured for the respective channel selection. From the time period of the view, to the colour scheme for individual channels, to the scaling of the value range to be displayed and the labelling of the axes.

Of course, preset groups for recurring applications and quick access can also be saved.

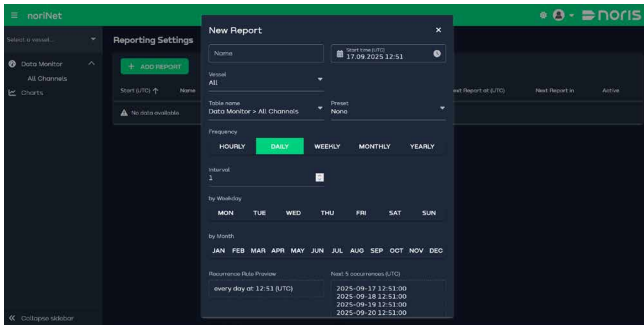


Fig.: Creating a new report

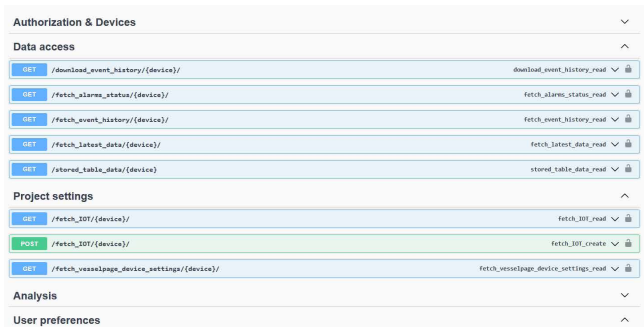


Fig.: REST-API (Swagger)

## Automated reporting

noriNet cloud data can be used to generate customer-specific reports from any events or status changes. These reports can be scheduled to be sent via email or manually exported as \*.xls or \*.csv-file.

All events and status changes are listed chronologically, fade-outs can be viewed separately. Critical issues are highlighted.

## Data access via REST-API

noriNet provides an interface via REST-API. This enables you to transfer the processed data to your own systems, e.g. for condition monitoring and predictive maintenance, to plan maintenance cycles or for performance analyses. Noris provides the interface, the programming of the interface is carried out by the customer.

## Live data monitoring

The live data monitoring enables the comparison of detailed trends for the vessel, performance tracking and analysis of technical issues. Any number of custom-configured charts can be set up.

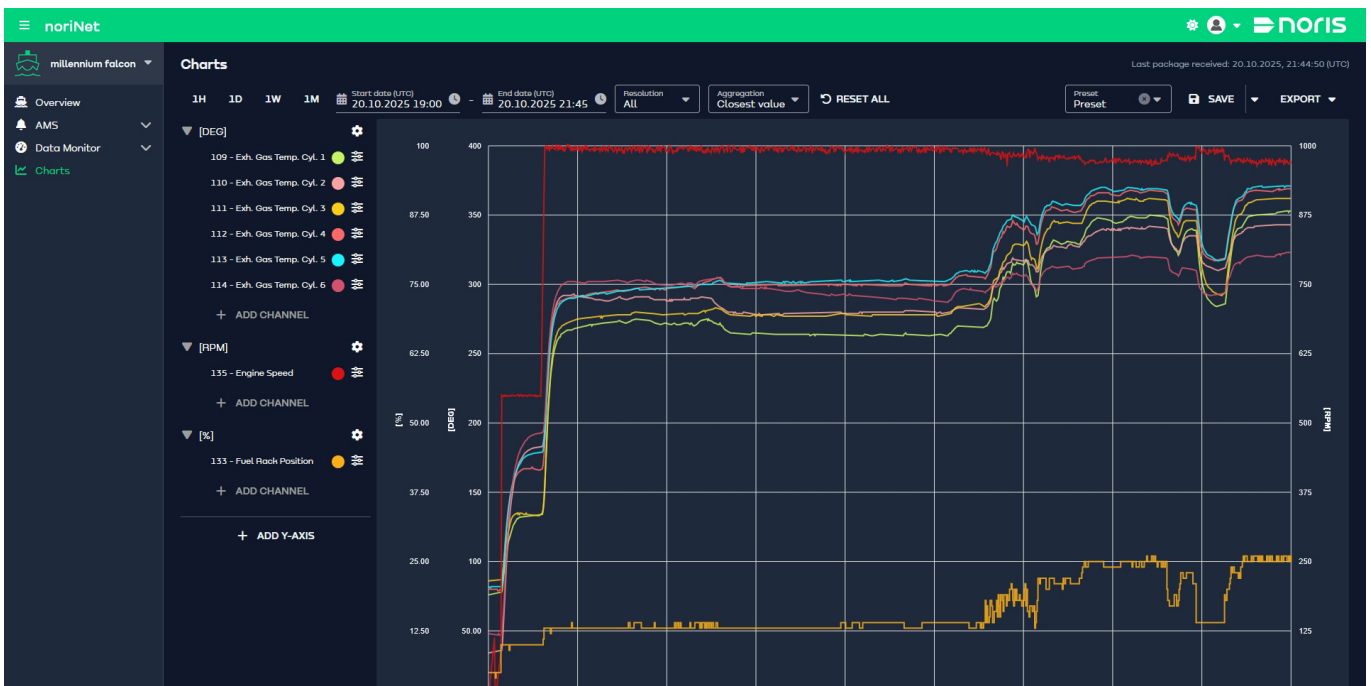


Fig.: Charts example