

# CloudFM portal

## Management of telemetry devices and data visualization



- *An overview of measured data, consumption, equipment status, alarms and events at the measuring site*
- *Mass data collection, including the possibility of remote control and command*
- *All data in one place, quickly accessible and visualized clearly and intelligibly*
- *Notifications and notifications by email, SMS or WhatsApp messages*
- *Full remote parameterization of all units*
- *A responsive environment that adapts to the equipment used*
- *Data exports for customer information systems*
- *High data security and user rights and access control*

### Basic description

CloudFM Portal is a responsive web application that provides users with remote access and visualization of data obtained from stations, sensors and IoT networks. The portal displays not only long-term collected historical data, but also current values and supports the reception and visualization of data in real time.

The user sees this data in a visually friendly form thanks to graphs and tables, while the entire interface can be customized according to the client's requirements. CloudFM offers an overview of monitored measuring points and the possibility of sending notifications in emergencies such as floods or water leaks, etc.

Remote water and energy readings through CloudFM work fully automatically, saving time and helping to create savings. The portal enables mass management of physical devices and offers the possibility of comparing values and consumption between locations.

### Security

For online access to data, via a web browser or mobile application, it is necessary to have an individual user account set up on the CloudFM portal.

Access can be set for individual users with different rights. Depending on the level of access rights, the user can, for example, only view or modify specific parameters and data according to his role.

Auditors can also benefit from the ability to extract information about which user and when performed a particular operation at a given unit or collection point.

Connection to the services is secured by a certificate and encrypted according to security standards.

### Basic functions

The portal offers a wide range of functions that allow easy control and effect. management of your activities.

Users have groups of screens with measured data, which can be assembled from graphic blocks such as graphs, tables, icons and / or information bars. The portal also offers a set of advanced graphic blocks for creating control rooms and surveillance systems such as map visualizations and technology screens.

The alarm system allows you to set alerts for monitoring measured quantities and the status of physical devices. Typically monitored situations are level heights, machine operations and faults and fluctuations in consumption, eg excessive flow, backflow, exceeding the night minimum or moving sum, etc. Alerts can be sent eg by email, SMS or WhatsApp message.

The visualization also allows you to insert photos of the location of the devices, display the location or other important information, eg written in the form of a note in the mobile application.

### Integration with other systems

Data obtained from IoT network sensors can be exported individually or in bulk to files in several data formats such as CSV, XML or JSON. At the same time, the portal can be connected to the customer's information system and the data is automatically provided for backup, invoicing, modeling or other further processing.

Data can be exported based on the user's request or automatically, ie as soon as it is measured and received into the cloud storage.

## Remote management of sites and devices

Key features of the portal include tools for managing measuring points and communication devices, which allow the operator's administrators to effectively monitor the infrastructure and easily keep it in perfect condition so that it can deliver important information in the event of a crisis. Administrators can rely on online monitoring, full remote parameterization, and device firmware updates from a web browser from almost anywhere.

All changes made in the device parameterization are recorded and archived. The user can browse the change history and restore the settings in the device according to the older configuration.

It is possible to apply a complete configuration change to the device according to the regulation or to make only partial changes and thus adjust only selected parameters.

Partial parameter changes can advantageously be applied in bulk to several devices at once. The user can change the sending time or adjust the phone numbers in the notification and alarm settings in a moment.

## SCADA and dispatching

The graphical extension of the CloudFM portal can be extended by the management of technological processes, the so-called CloudFM SCADA. The main building blocks are FIEDLER physical control units with permanent connection support and cloud graphics that enable remote process control in real time.

SCADA simplifies the management and control of larger units and operations. It enables monitoring and control of industrial and technical objects, including ongoing processes in the plant, and provides a graphical representation of, for example, production operations via live diagrams and interactive technological screens.

## Technical parameters

<b>Functions:</b>	data visualization, management of IoT devices, alarms and notifications.
<b>Supported browsers:</b>	Mozilla Firefox, Opera, Google Chrome, Microsoft Edge
<b>Secure connection:</b>	TLS / SSL
<b>Login:</b>	common, shared account for FIEDLER services
<b>License:</b>	reserved, based on the number of sites
<b>URL:</b>	<a href="https://cloud.fiedler.company">https://cloud.fiedler.company</a>
<b>Recommended resolution:</b>	FullHD (1920x1080)
<b>Service support:</b>	helpdesk-cloudfm@fiedler.company



## Instruments and other data sources

Device search is also a valuable feature for administrators. The platform enables fast and efficient search based on, for example, the registration number.

The CloudFM visualization portal is a graphical extension to a robust platform that consists of, among other things, a database cluster and communication servers that receive data from a number of different sources. The platform is designed with modularity and flexibility in mind. Typically, it collects data from FIEDLER telemetry controllers and smart communication modules designed for the Industry 4.0 and SmartCity technology initiatives.

The portal is connected via IoT networks, for example, to devices for remote readings, which read data from meters and sensors, and this data is then uploaded and archived on servers.

CloudFM supports various types of meters (electricity meters, gas meters, water meters, level meters, thermometers, flow meters, etc.) and a wide range of transmission technologies such as LoRa, SigFox, NB-IoT, WiFi, GSM, satellite transmission and more. The system also allows the integration of meters from several manufacturers.

Although various data collection technologies are supported, for the customer, the data is presented in a unified manner, always in the same form, whether it is communication within the local network of his house or from a remote station installed in extreme conditions of mountains communicating via satellite.

Data does not have to be collected only automatically from measuring instruments. For example, the portal is synchronized with the FIEDLER Connect mobile application, which allows data from manual readings to be recorded in the interface. Fiedler Connect can store data offline and then transfer it to CloudFM after connecting to the Internet. This replaces the lengthy and often complicated transfer of data via files or cable connections, or even manual copying of values.