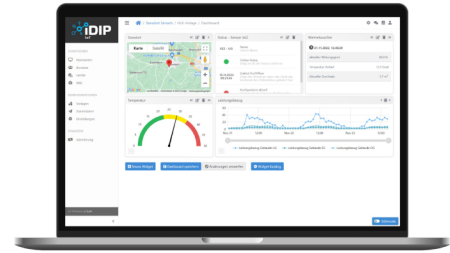# Secure Remote Maintenance

Secure and convenient remote maintenance is an important building block of a modern infrastructure. Many applications such as remote maintenance or alarming or even the data collection of systems were previously set up in separate silo solutions. iDIP IoT combines these and other applications in a modern and innovative IoT platform. This allows you to monitor and operate your plants and machines with ease.

Remote maintenance is carried out via LAN or LTE/5G, so that plants can be reached easily. Therefore security is the most important of a remote maintenance solution.

The remote maintenance concept does not allow access from remote maintainers to the target network. Instead, all connections run via the secured VPN cloud. Furthermore the two user roles "remote maintainer" and "operator" ensure that, if required, remote access can only be activate through two different people.

Operation via the iDIP IoT Portal enables simple and reliable management of all remote maintenance of your systems. Thanks to the multi-client capability, you can offer the remote maintenance option together with other applications from the iDIP IoT Portal to your end customers as a closed system.

The most important component for remote maintenance is the iDIP IoT Gateway, which establishes the connection between your plant network and the iDIP IoT Portal.
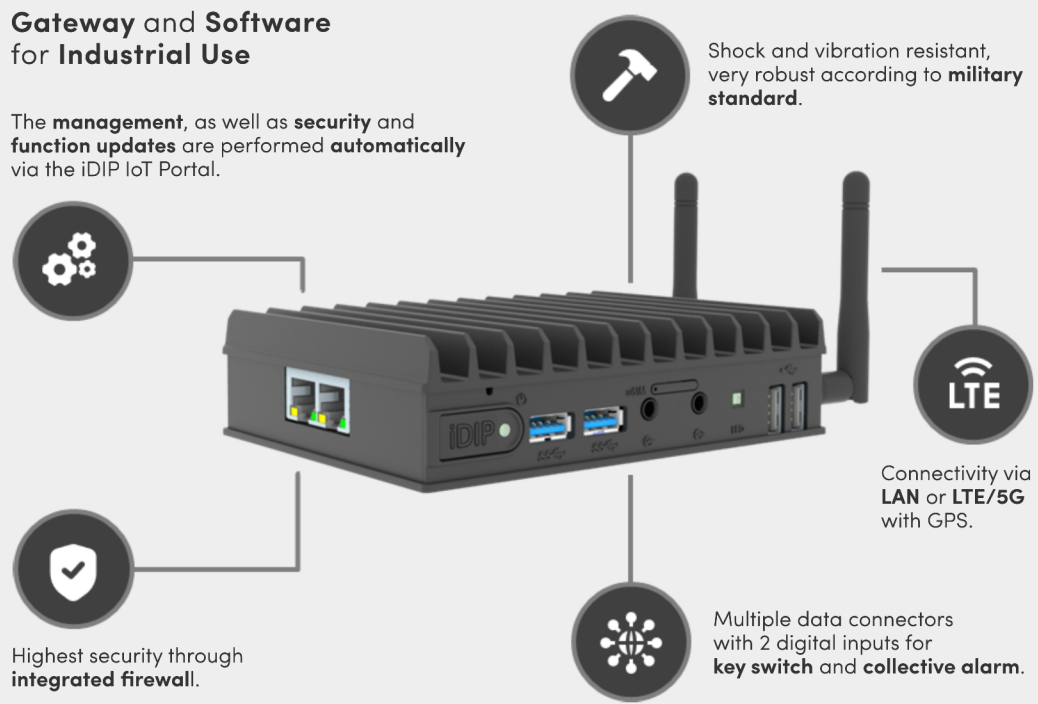
iDIP IoT Portal

- Live Dashboards with KPI
- Alerting and Monitoring
- Remote Maintenance
- Remote Visualization of Systems
- Remote Control of Actuators
- Report Generation of Data
- Data Exchange via REST API
- Multi-Client Management
- Own Customer Portal (white labeling)
- LoRa, LTE-M, MQTT, REST API
- Swiss Data Center (ISO 27001 / ISO 50001)

iDIP IoT Gateway

- 2x LAN + 2x LAN (optional)
- LTE/5G, GPS, NTP
- Power Supply: 7V – 42V DC Power
- Temperature Range: –40°C bis +85°C
- Robustness: Military Standard 810G
- Industrial mounting ready: DIN Rail
- Firewall: DNAT, Static Routing
- Remote Maintenance: OpenVPN mit 2FA
- VPN Operator: Start / Stop
- VPN Client: Windows, MAC, Linux

Data Connectors
MQTT, OPC-UA, Modbus TCP, Modbus RTU ready, REST ready, 2 digital inputs

Possibility for direct data forwarding to external systems e.g. Power BI

Gateway and Software for Industrial Use

The **management**, as well as **security** and **function updates** are performed **automatically** via the iDIP IoT Portal.
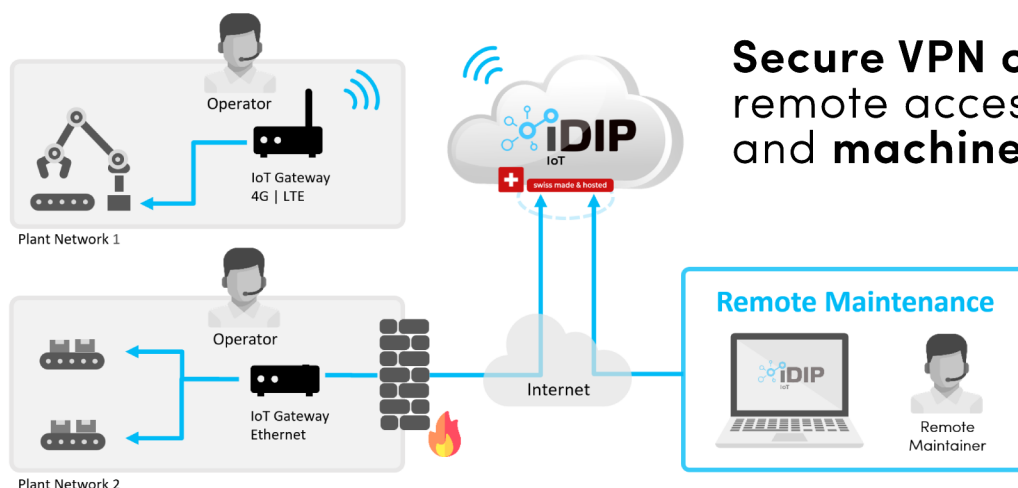
Shock and vibration resistant, very robust according to **military standard**.

Connectivity via **LAN** or **LTE/5G** with GPS.

Highest security through **integrated firewall**.

Multiple data connectors with 2 digital inputs for **key switch** and **collective alarm**.

Secure VPN connection for remote access to **plants** and **machines**

Operator
IoT Gateway 4G | LTE
Plant Network 1

Operator
IoT Gateway Ethernet
Plant Network 2

Internet

Remote Maintenance

Remote Maintainer

- 2-factor authentication
- Access via 4-eyes principle
- Assignment of user permissions
- No fixed IP address
- Remote access log for auditing

Remote access can also be **activated** via a **key switch**.