



# MEx Mobile Exchange

Map supported mobile meter readout

## Your benefits

- GIS map supported readout of different meters:  
**Optimized meter readout and overview**
- Complete integration into the existing IT environment:  
**Direct data transfer to the billing system – no manual data transfer required**
- Automatic consumption verification (plausibility check) at the time of reading:  
**Deviations can be clarified on site**

## Application

- «Manual» readout and «Drive-by» radio readout of water, gas and heat meters
- For mobile radio readout of hard to access meter locations, e.g. pits, with support of exact map location
- Integrated meter exchange process in the field. Serial number and meter reading are sent directly to the responsible person.

## Features

- Meter readings are attributed automatically to the customer during readout and are then transferred automatically and directly to the billing system after validation. No manual processing required.
- In combination with a wall or radio module, it is possible to read out the GWFcoder® register readings without having direct access to the meter
- Continuous data chain – no manual transfer of readings necessary
- Cost effective radio readout – more than 250 meters in 30 minutes with map overview

## MEx Mobile Exchange

With the help of MEx Mobile Exchange, a mobile readout system, meters are accounted for reliably and efficiently. The relevant customer data is taken over by MEx Mobile Exchange simply from the billing system and written back after the read-out of the meters has taken place.

With a user friendly interface, the software is easy to use and after only a short introduction can be used effectively. MEx Mobile Exchange was conceived particularly for smaller and middle sized utilities.

## Components

### MEx Office – Tour management

The MEx Office software is part of MEx and is used as hub between the billing system and the reading device. The integrated import/export functions make simple, fast and safe data exchange possible with different billing systems. Furthermore, MEx Office supports and simplifies the management of the tours and readout devices. The contents of the meter data can be examined before exporting it to the billing software. Additionally, the readout data can be exported for example into a Microsoft® Excel file for the maintenance of meters.



MEx Tablet  
(map view)

### MEx Tablet – Manual readout

The mobile device shows all meter locations on the GIS map and meter readings can be attributed easily manually. Meters that have already been read out are hidden on the map. This way, the map always provides the reading technician with an overview of the addresses where meters still need to be read out due to the absence of the customers.

### MEx Tablet – Radio readout

Readers with radio can be read out efficiently in «Drive-by» mode. The mobile device is connected with the mobile radio receiver via Bluetooth. Meter readings are attributed to the meter on receipt. The meters that have already been read out are automatically hidden on the map. This way, the map always provides the reading technician with an overview of the addresses where meters still need to be read out.



Radio receiver MBW BLUE

### Tablet – Meter exchange

MEx supports the meter exchange process directly in the field. Meter numbers and meter readings are transferred directly to the mobile device, collected and sent to the billing system by simply pressing a button. The exchange data are always available and accessible in MEx Office.

### MEx Office – Reading point

Readout and meter exchange data are managed automatically by MEx Office during all readout periods and are always accessible for service and plausibility check. In the archive, the original tours and meter exchanges are stored permanently.

## Applications



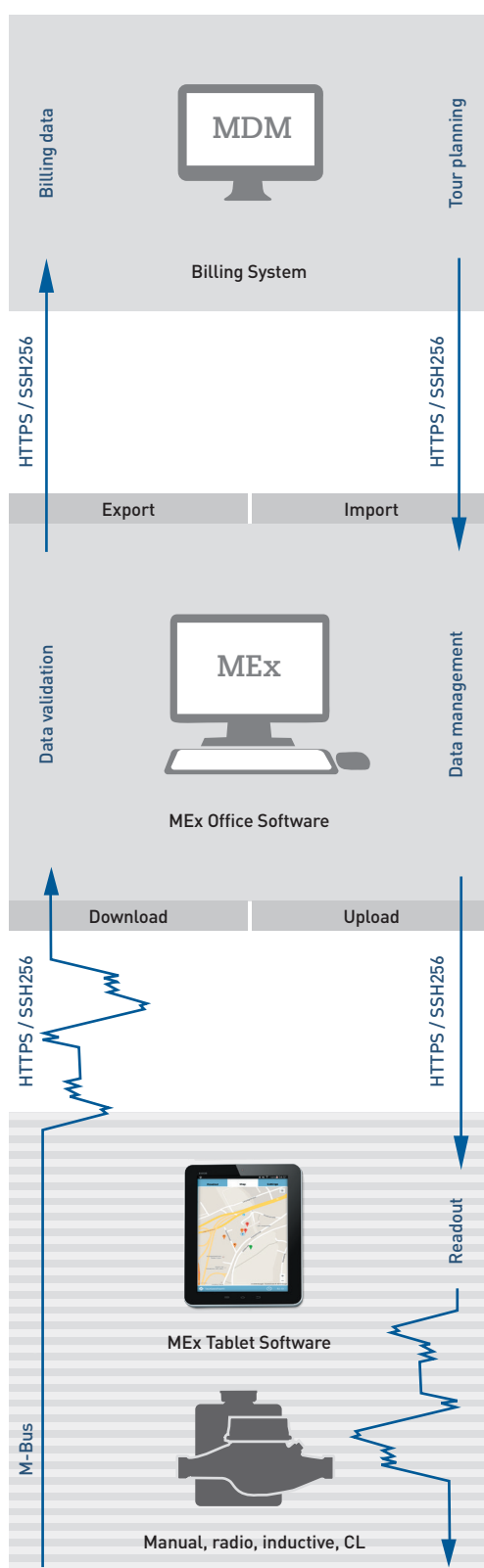
### MEx Exchange – «Hard to read meters» read easily

Hard to access meters for example in houses, flats or shafts can be read with a minimum of effort. The added advantages of safety reliability and speed of reading are obvious advantages.

#### Note:

GWf offers specifically for pit meter readings an innovative flood proof IP68 solution – both Encoder meter register and radio module can be submerged under water without damaging the modules.

## Data Chain



## Technical Data

### MEx Tablet readout software

Features	<ul style="list-style-type: none"> <li>GIS map supported route readout</li> <li>Search- and filter function</li> <li>Route status interface – Route progress graphical status</li> <li>Random read – Intermediate readings</li> <li>Automatic saving of meter data</li> <li>Microsoft® Excel export (CSV) for evaluation and maintenance</li> </ul>
Readout types	<ul style="list-style-type: none"> <li>Manual readout</li> <li>Radio readout</li> <li>Inductive readout CAB-05/04</li> <li>Interface CL(CS) CAB-05/04</li> </ul>

### MEx Office data (Web hosting)

System	<ul style="list-style-type: none"> <li>Data center – Lucerne/Switzerland</li> <li>GEO redundancy</li> <li>Managed Firewall</li> <li>Managed vServer</li> <li>Data transfer HTTPS</li> <li>Encrypted data exchange</li> <li>Web browser (current version)</li> </ul>
Languages	<ul style="list-style-type: none"> <li>German</li> <li>French</li> <li>English</li> <li>Italian</li> <li>Estonian</li> <li>Latvian</li> <li>Other (on demand)</li> </ul>
Billing data Export/Import	Interface: XML, CSV, TAB, SAP other formats on request

### MEx Tablet – Mobile readout device of your choice

System	<ul style="list-style-type: none"> <li>Smartphone or tablet (Samsung, Lenovo, Asus)</li> <li>Operation system Android &gt;7.1 or later</li> <li>RAM: 3 GB or higher</li> <li>CPU: 1,6 GHz or higher</li> <li>Internal storage: 16 GB</li> <li>Display size <math>\geq 5</math> inches or larger</li> <li>GPS function</li> <li>Bluetooth</li> <li>WiFi</li> <li>3G/4G (optional)</li> <li>External memory card (optional)</li> <li>IP68, water and dust proof: Optional</li> </ul>
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## Data encryption

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- Radio readout protocols are **encrypted via M-Bus/AES128** and are only decrypted with suitable keys
- Your data packets between MEx Mobile and MEx Office are transmitted on the banking standard, the packets are also protected with **double SHA256** standard
- Any MEx Mobile data traffic with the MEx Office backend is **encrypted via SSL/HTTPS**
- For the **individual keys** of the meters **proprietary encryption** is used

## How we protect your data

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### 1. Data encryption

All radio connections from your meters to MEx Office are encrypted. The maximum level of security is achieved with individual keys per meter and is fully supported by our system.

### 2. Controlled data access

MEx Office ensures that only persons with the necessary authorization have access to data records. This role model is integrated in all MEx applications.

### 3. Logging activities

All activities on MEx Mobile and MEx Office, as well as on the interfaces, are permanently logged. Each transaction can thus be tracked «end-to-end».

### 4. Application security layer

MEx Office has been developed with several security layers. These layers do not allow access to outside the own layer. Starting with the infrastructure up to the GUI.

### 5. TaskForce & emergency plan

GWF is ISO/IEC 27001 certified and ensures cyber security, data privacy awareness in the organization. Thus, in the event of a security breach, GWF has an internally defined team of IT infrastructure & development experts at its disposal who can act immediately and close the breach. Logging allows conclusions about the breach to be drawn quickly, thereby ensuring a fast and effective solution to occurring problems.