

WATER DISTRIBUTION SYSTEM MANAGEMENT

- Consumption data is collected and stored in database
- Meter reading devices are not require the presence of electrical power or communication cables
- The installation of the endpoint devices and the communication structure is easy and efficient
- The implemented Zig-C communication is wireless and uses license free frequency band
- Optimized industrial grade GPRS communication for the collected data
- Cutting edge web based user interface without license fee
- Built-in features, such as filters, bar charts and trend diagrams for analyzing consumption data
- Prepared reports for leakage detection, for locating damaged meters or for presenting consumption data

SYSTEM STRUCTURE



DW 4300 U

The DW 4300 U End Device can be installed right to the utility meter. The device is continuously monitoring the output of the meter, read the consumption related pulses, count and summarize them.

Consumption data is stored in the internal memory of the end device and transmitted periodically in a pre-defined time period - i.e. hourly or daily. The data packages contain other relevant information; such as time stamp for the consumption data, battery level, signal strength, security signal and data for time synchronization.

That periodical data transmission is optimized and shifted in time to decrease the number of collisions and to avoid communication jams.

End Devices operate from internal batteries, which have a minimum lifetime between 3 to 10 years depending on application.



DW 3510 U

The DW 3510 U Routers (Sensors) are for transferring data from the End Devices to the Network Coordinator.

The Router is fully transparent, however; every router gives some additional information to the original message – such as own device ID and signal quality. This added information is stored in the central database as well and can be used for monitoring the quality of the transmission and for analyzing the communication network.

Nodes, routers, and coordinator devices automatically form the most efficient network topology possible.



CHOOSING LOCATION

The chosen position should have a good line of sight for the desired coverage area. It is recommended to place the device as high as possible and in a standing position.

TWO LAYERS OF ROUTERS EXIST IN THE NETWORK:

- Router Infrastructure Layer: These routers are usually placed on the top of high buildings, they have clear line of sight of each other and can connect distant points.
- Router Data Aggregation Layer: These routers are usually placed on electric poles or illumination poles. They route the data of End Devices up to the Router Infrastructure Layer.

Routers are operated from external power supply.

DW 3910 U

The DW 3910 U Coordinator is for receiving data from the End Devices directly or through Routers.

The Coordinator collects, stores and transfers all of the data to the central server via GSM or via Ethernet.

COORDINATOR IS RESPONSIBLE FOR:

- receiving and acknowledging messages from the End Devices
- local storage
- time synchronization all over the Zig-C network
- storing and managing system parameters
- gateway to central server through other networks (GSM, Ethernet)

Central communication is initiated by the Coordinator. Central server receives data in an optimized and acknowledged way.

Coordinators require continuous external power supply.

