



METERS



Data Collection



CONTROL

Dialog3G

AMR/AMI Solutions

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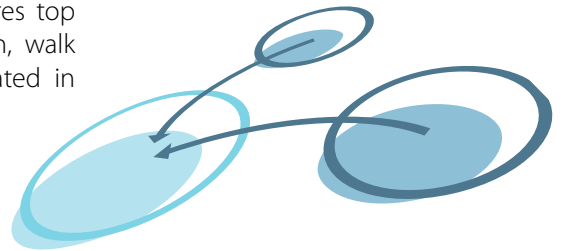
The Arad Group of affiliated companies and independent distributors around the world offers its customers a fully integrated source for a complete water management system



Arad Ltd. designs, develops and manufactures top quality precision water meters for applications such as domestic, waterworks, irrigation and water management throughout the world. Situated in Dalia, Israel.



Arad Technologies Ltd. develops, and manufactures top of the range automated reading systems, for touch, walk by, drive by and fixed area network systems. Situated in Yoqne'am, Israel.



North America



Master Meter Inc. assembles, markets and services water measurement needs throughout the United States and Canada, offering a wide range of sizes, configurations, accessories, and special application meters. Situated in Texas, USA.

Mexico



Cicasa manufactures, develops and distributes water meters in Mexico since 1953. Situated in Mexico City, Mexico

Europe



Contazara Established in 1984 and developed unique electronic water measuring solutions. During years of operation, Contazara has managed to take significant share in the Spanish market. Situated in Saragossa, Spain.

Asia



Arad Metering Technologies Wuhan Co, Ltd. (Arad China) is a subsidiary of Arad Group, aimed to service the group in the local Chinese territory. Situated in Wuhan, China.

AMI/AMR Solutions from ARAD

When precise control, exact measurement and real time billing of water is critical, the Arad Group's specifically designed, patented solutions and products meet the needs of utilities, agriculture and waterworks companies reducing water waste, improving overall water metering management capabilities and saving money.

Founded in 1941, Arad has built up a worldwide reputation for quality and precision in measuring, reading, collecting and managing data from water metering to billing systems.

Today 75% of all our sales consist of meters with Automatic Meter Reading (AMR) capabilities.

Arad's products are distributed in over 60 countries throughout the world and meet world standards of quality and performance including ISO, and AWWA standards. Our quality system is certified ISO 9001:2000, ISO 14000, ISO 18001, ISO 17025, and our products hold the CE mark. Every system is individually tested and inspected to ensure it meets the highest quality requirements.

With annual revenues exceeding \$130 million, Arad Group has shown double-digit growth in each of last ten years from the sale of water measurement systems. Millions of its water meters are installed worldwide and the company has already sold more than three million smart meters, turning it into a world leader in advanced measuring solutions.

In order to maintain its leading position, the Arad Group is committed to investing a large proportion of its revenues in R&D each year, and to ensuring that its customers benefit from the most advanced solutions available in the market.

1.000
PROJECTS
3.000.000
METERS
800
MDM SYSTEMS



AMR / AMI Solutions

Arad Group offers advanced real-time Automatic Meter Reading and Advanced Metering Infrastructure (AMR/AMI) systems along with comprehensive meter data management for accurate water measurement.

Our AMR/AMI solution is a tailor made solution designed to meet the specific requirements of each client. We check every project individually according to needs, demands and geographic area to assure that our customers get the best solutions for their own needs.



AMR

The Automatic Meter Reading (AMR) technology of automatically collecting consumption, diagnostic, and status data from water meter or energy metering devices and transferring data to a central database for billing, troubleshooting, and analyzing saving utility providers the expense of periodic trips to each actual location to read a meter



AMI

Advanced Metering Infrastructure (AMI) are systems that measure, collect, and analyze energy usage, and communicate with metering devices either on request or on a schedule. These systems include hardware, software, communications, consumer energy displays and controllers, customer associated systems, Meter Data Management (MDM) software, and supplier business systems. AMI extends current advanced meter reading (AMR) technology by providing two way meter communications, allowing commands to be sent toward for multiple purposes, including “time-of-use” pricing information, demand-response actions, or remote service disconnects.



Increased productivity and data collection

Southern Water

As one of the largest water and wastewater companies in England, Southern Water needed to develop long-term plans to ensure it could continue to supply high quality drinking water to more than one million households in the South of England, one of the driest areas in the UK.

Implementing an effective way to measure water consumption, detect leakage and encourage customer water savings is an integral part of Southern Water's strategic goals to secure cost effective water resources in the long-term.

With the implementation of Arad's Gladiator water meters, integrated with Arad's Dialog 3G system, Southern Water's customers are gaining control over their water use and their bills. The meters allow Southern Water to remotely read the individual water consumption and send an accurate bill to each household, according to their actual consumption.

In addition, thanks to Arad's advanced water meter features, Southern Water can improve its leakage detection, thus saving significant amounts of water and energy.

"The Arad meter best fulfills our needs.... Greatly increases productivity and allows more data to be collected."

"The long term data storage means we can display consumption trends and quickly identify leaks."

Jon Crooke, Installation Manager
Universal Metering project



Darren Bentham
Director for Universal Metering project, (holding the Gladiator meter).

Reducing non-revenue water by 75%

Meimei Hadarom

Meimei Hadarom Agricultural Cooperative Society, based in central Israel 20 km south of Tel Aviv, is one of Israel's oldest and largest utilities. Established in 1968, it supplies water for both residential and agricultural purposes.

Looking for a solution that would help reduce non-revenue water, Meimei Hadarom turned to Arad's overall solution achieving accurate, fair billing, improved water management and providing data that would be used as the basis for future strategic planning. The availability of real-time data on water consumption, i.e., statistical data improved the decision-making process and reduced the number of customer service calls and disputes.

- Non Revenue Water dropped from 8% to 2%
- Reduced maintenance costs
- Accurate billing
- Easy, remote reading
- Improved leakage detection
- Real-time data management
- Reduction in customer service calls and disputes



"Today, thanks to Arad, we are updated on a day-to-day basis on water consumption, alerts, tampering and leaks, and can respond immediately to every problem that occurs"

Yoav Cohen, CEO
Meimei Hadarom Agricultural Cooperative Society

AMR / AMI Network Types

The Arad Group offers tailor made, fully implemented, comprehensive remote meter-reading solutions for fixed, drive by, walk by and remote site base systems, allowing utilities and water corporations to automatically collect data and control remote water meters in real time.

Automatic real time remote water meter control

Arad's Fixed Network improves utilities' operational efficiencies, resulting in better customers' service, enhanced revenues and excellent management abilities.

The Arad Group offers tailor made, fully implemented, comprehensive remote meter-reading solutions for fixed base systems, allowing utilities and water corporations to automatically control remote water meters in real time.

Arad's solutions combine extensive experience and advanced wireless abilities with powerful Meter Data Management software tools. The advanced system requires no physical access or visual inspection of meters and provides alerts in real time on problems such as water loss or pipe breakage.

Key benefits:

- Proven success in reducing non revenue water significantly
- Already installed in hundreds of utilities
- Real-time information availability
- Highly accurate and reliable data collection
- Many kinds of real-time alerts
- Integrates with most billing systems
- Wide variety of features for reports and statistical analysis
- Reliable DMA (Districted Metered Area)



Walk By / Drive By (AMR)

The Arad Group's most popular solution offers innovative Walk By / Drive By automated data reading and collection system, enabling cost-effective and efficient smart water meter reading.

Walk By - Automated Walk By reading systems. Ideal for places inaccessible to vehicles, with all the benefits of the Drive By solution mentioned below.

Drive By - Efficient large area water meter coverage

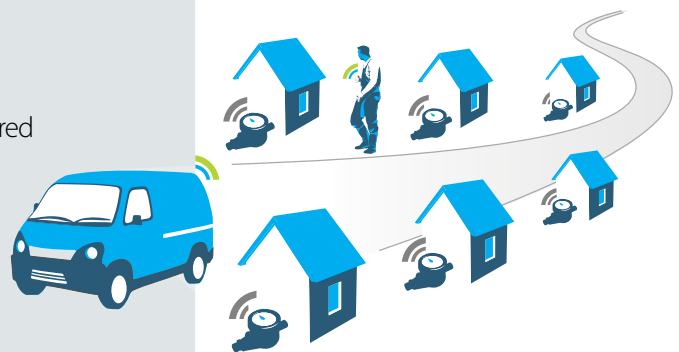
The remote reading device, installed in the vehicle, automatically collects all readings from nearby water meters equipped with Arad's advanced wireless transmitting technology. The system can read more than two thousand water meters per hour, using a single reader in a suburban area, and even more from high-rise buildings.

Arad meters are read efficiently and reliably even from underground pits. For improving operational efficiency, a 10-month reading history is provided by the meters, enabling the establishment of different water tariff systems.

Arad's navigation software enables the designing of the most efficient reading routes, thus saving fuel and labor and lowering carbon footprints.

Key benefits:

- Up to 2,000 meter readings per hour
- Upgradable to fixed network with no meters changes required
- No meter activation needed
- Meters can store up to 4,000 previous calls
- Real-time alerts
- No access to property required
- Precise billing data
- Precise Billing Tariff changing, without additional meter readings needed



Remote and isolated data collection (Dialog3G Cellular)

Dialog Cellular is one of the most advanced solutions in the market, and can be connected to digital, analog and Dialog 3G water meters. With a built-in GPRS Modem, the Dialog 3G Cellular uses available cellular networks for transmitting metering data to control centers.

The self-powered unit transmits accumulated data numerous times each day. Users can find out exactly what is happening in their water supply network and react immediately to any crisis or alert condition.

Key benefits:

- Covers "out of the way" meters
- Digital and analog programmable inputs
- Tamper alarms
- Leak alerts
- Control outputs
- Accumulated meter reading data
- Rate of flow indication and alerts
- Water supply loss calculation and indication
- Two-way communication abilities with City-Mind Meter Data Management



Dialog 3G CityMind

Control and Management

Meter Data Management (MDM) - Supervising, managing and controlling water metering networks

Arad Group offers powerful web-based Meter Data Management solutions to help utilities and water companies supervise, manage and control their metering networks.

The CityMind solution, based on Arad's innovative Dialog 3G system for remote automatic meter reading (AMR), provides a varied collection of reports and statistical analyses. The system offers real-time location specific alerts on breaches, leaks, suspected theft and interfaces seamlessly with automated software systems.



Key benefits:

- The most advanced water meter reading management
- Real-time detection of alert situations
- Availability of numerous reports and statistics
- GPS-style map with alerts and statuses
- Two-way communication abilities with Dialog Cellular
- Consumer portal
- Reliable DMA (Districted Metered Area)
- Accumulated meter reading data
- Rate of flow indication and alerts
- Water supply loss calculation and indication

Arad's solution is based on a special algorithm, written in cooperation with IBM water management professionals, to ensure the most accurate, reliable and comprehensive data mining.

CityMind collects water data and enables the remote control of every meter in the area. This advanced system allows utilities to manage, in a simple and friendly way, a continuous follow-up of its activities at any given moment and to automatically organize tables, graphs and reports such as comparative consumption, history deviation, and so on.

Dialog 3G CityMind

Main Features

District Metering Area (DMA) - Water companies and utilities are continuously seeking ways and new solutions in order to improve customer service, reduce waste water along with non revenue water charging as well as increasing productivity and profitability.

By dividing a water network into District Metering Areas (DMAs) water utilities can better manage end user consumption, leakage or tampering and provide improved accuracy, efficiency and overall state of the art water management control.

Detailed geographical based reports

Supports all data layer formats (ESRI, AutoDesk, ArcGIS etc.)

Pressure management and valves control

Web based architecture



Dialog 3G CityMind

Main Features

GIS Module - Visual and friendly geographic information system

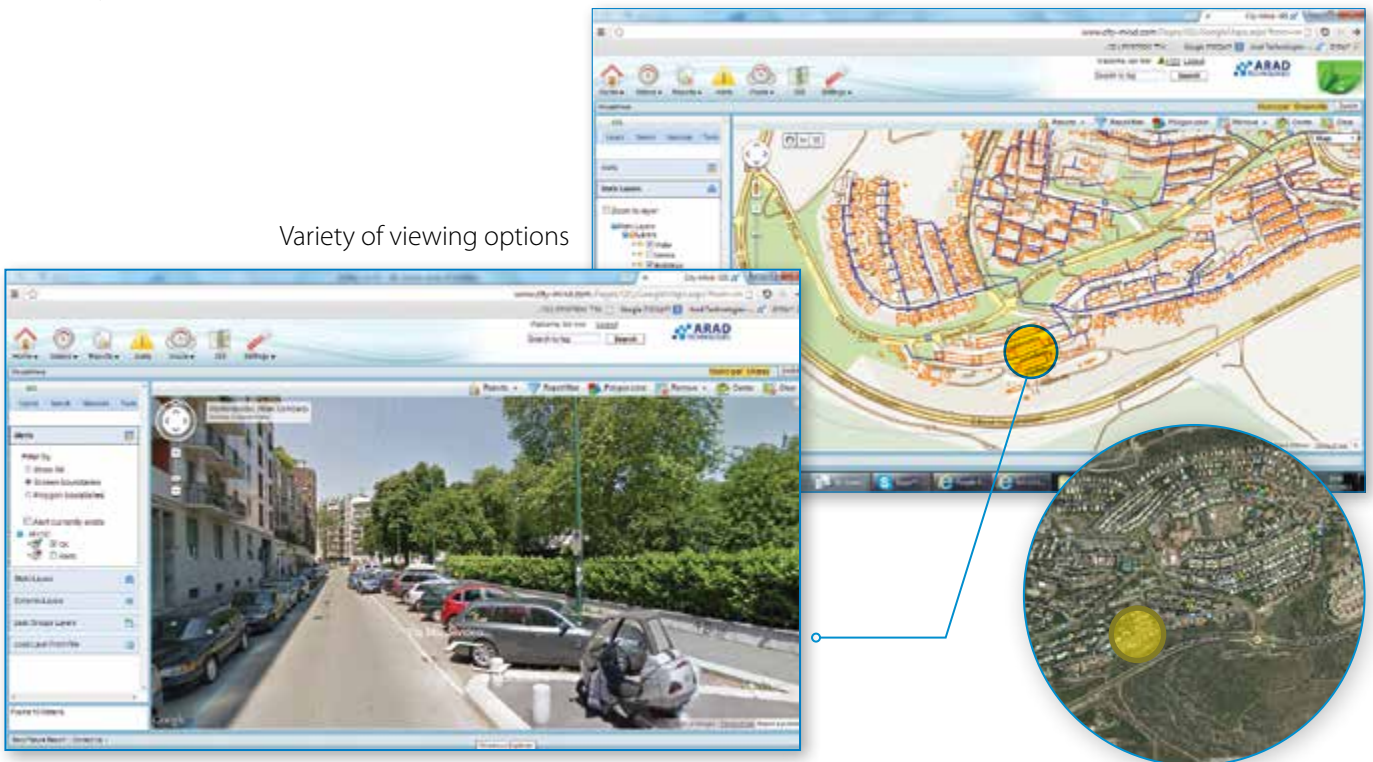
Arad's advanced geographic information system (GIS) module is specifically designed to improve overall water management capabilities. The innovative mapping software platform provides utilities and water companies with full geographical data, allowing them to capture, store, analyze and manage their entire water system in a visual and friendly manner.

CityMind, which is already used by a large number of utilities worldwide, provides a "live" map of the city, presenting all statuses and alerts in a simple graphical view. CityMind also includes a comprehensive system covering all aspects of billing and payment automatically. The easy-to-use online Internet-based software solution is compatible with most existing billing software, including SAP and salesforce.com.



"Live" city map presenting statuses and alerts

Variety of viewing options



ARAD's Personal Digital Solutions

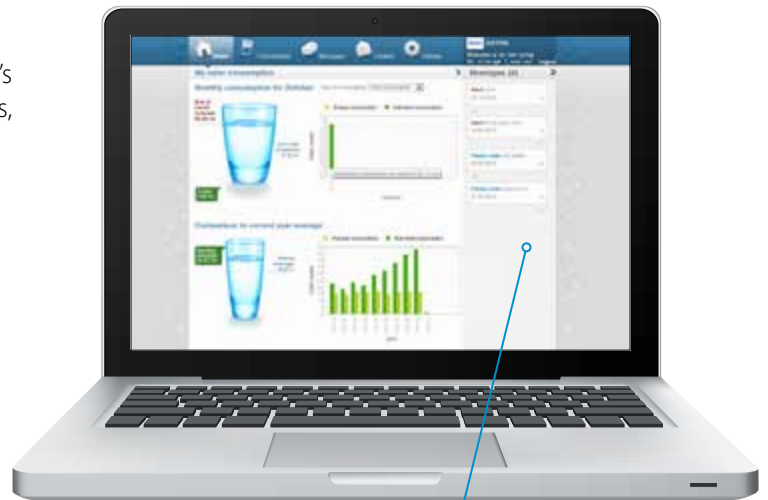
Web Application

Arad's web-based application allows consumers to get extensive real time information about their water consumption.

The application, which can be integrated into the utility's web site or a dedicated portal, sends alerts and predictions, allowing customers to better conserve water.

The system offers the following benefits:

- Full transparency
- Consumption forecast
- Leak and "away from home" alerts
- Smart messaging system with customer support
- SMS and Email notifications



Smartphone Application

The newly developed smartphone application allows consumers to track their water consumption wherever they are.

The app, which is available in iPhone and Android versions, offers the following advantages:

- Detailed consumption graphs
- Leak alerts
- Real time notifications
- Consumption forecast





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Integrated Metering Technologies



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