



Managing Water Resources  
Simply and Efficiently.



# Company Profile



مؤسسة عراقة الشرق التجارية  
ARAQAT AL SHARQ EST.

**EMS** ENERGY MANAGEMENT SYSTEM CO., Ltd



الوكيل في الشرق الأوسط / مؤسسة عراقة الشرق التجارية

**ARAQAT AL SHARQ EST.**

Kingdom of Saudi Arabia - Al Riyadh - Al Malaz  
C.R. 1010701965 C.C.No. 375804 P.O.Box 156146 Riyadh 11778

Tel.: +966 11 291 4571 Fax : +966 11 291 4571

[www.araaqa.com](http://www.araaqa.com)





# Energy Management System CO., Ltd.

- Founded: 1991
- Head Quarters: Southern Taiwan Science Park, Tainan, Taiwan
- No. of Employees: 160



## SINCE 1991

Established in 1991, EMS Co., Ltd. (Energy Management System Co., Ltd.) has 25 years of professional experience in water measurement technology and includes departments from our own R&D studio to sales and services, with many trade secrets and patents in smart metering technology, we provide best-in-class products for clients around the world.

We not only launched several high-tech metrological products and wireless logger interfaces but also held numerous patents throughout the world. With the trending in AMR / AMI development, we have provided customized water resources management system solutions and have emerged as the leader in intelligent water meter manufacturer in Taiwan.



Website



Video



**CEO**  
Mr. Abdullah N. Al Salwah



**Chairman**  
Mr. Yung Hsien Ma



**CEO**  
Mr. James Yang

# COMPANY MISSION

To be leading company in smart water meter technology and comprehensive water resource management systems.

## VISION

To provide complete water management solutions

To improve resource management efficiency

## ACTION

Design, develop and manufacture in Taiwan. Customizable and human-centered concept to follow new trends of intelligent product technology, energy saving and carbon reduction projects.

## RESULTS

Intelligent electronic water meter.  
Automatic meter reading (AMR) system planning.  
Water resource monitoring systems.  
(flow, pressure and quality)  
DMA (district metering area) implementation.  
Waste water/Underground water monitoring systems.  
Campus/Office/Dorms submetering solutions.  
Water meter testing and calibration services.  
(ISO/IEC 17025:2005)



## SERVICES

### Consultancy



### Product Portfolio



### Construction



### DMA Planning & Design



### AMR Systems



### Service & Maintenance



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Simply and Efficiently.







Managing Water Resources Simply and Efficiently. 



# LABORATORY ISO/IEC 17025:2005

Automatic performing system to conduct water/flow meter testing and calibration service.

ISO/IEC 17025:2005 Certified laboratory for testing and calibration, international recognized certification TAF (under ILAC-MRA Association).



Largest Tank  
24000 L



Control Center



## CERTIFICATION

- ISO 04064:1993
- ISO 9001:2008/ CNS 12681
- CE Verification (No. 91223403-E)
- iMeter Type Approval: (No. FD099021)
- TAF Certificate of Accreditation ISO/IEC 17025:2005
- Certificate of Accreditation ISO/IEC 17025:2005
- Certificate of Self-Verification (Certificate No. 098S0019)



**TAIWAN**  
EXCELLENCE 2016

## RECENT AWARDS

- Pittsburgh International Invention Fair 2013 **GOLD** Award
- Golden Torch Award
- Taiwan Excellence 2016



Large Diameter. Test





# ELECTRONIC WATER METER INTRODUCTION

## FEATURES

### **The first non-magnetic drive electronic water meter.**

Gear free and non-magnetic drive design, no wear or magnet disruption problem.  
Detect lower flow for better measurement accuracy.  
Intergrated smart functions: totalizer, instant flow.  
(Leakage alarm, Leakage day, Leakage amount, Reverse flow, Back flow alarm, Meter oversize, Meter undersize, Tamper, Magnetic influence records)  
Pittsburgh International Invention Fair 2013 GOLD award winner.

## APPLICATION

### **Built-in management functions – From “Measurement” to “Management”**

Data analyze : Residents water patterns for water resource management.  
Abnormal event : Leakage detection, leakage day/ amount record, reverse flow.

### **Data transmission system – Remote water resource monitoring centre**

Wired/wireless data transmission interface applicable for remote monitoring.  
Customized AMR system for DMA, Supply Network, Submetering, management.  
Available on computer or mobile devices (tablets / smart phone).

## BENEFITS

### **Professional water resource management system in electronic water meter**

Water resource management function in each water meter. Simple method to manage abnormal event, leakage and reduce the lost of water resource.  
Wild range application for Water Utilities, Smart home (Farglory Group), Condos (Taipei Public Housing) ,Business Building (T.S. Dream mall) and more.



Managing Water Resources  
Simply and Efficiently.



Leakage  
Detection

Water  
Consumption  
Database

Intelligent  
Management  
Function





# PRODUCT WATER METER



## Intelligent Multi-jet Water Meter (TH series)

Body: Brass  
Performance: Class C/ R250  
Diameters : 15~50mm  
Output: Digital Encoding  
Display: LCD  
Enclosure: IP 68



## Intelligence Woltmann Water Meter (WT series)

Body: Cast Iron  
Performance: Class C/ R250  
Diameters : 50~300mm  
Output: Digital Encoding  
Display: LCD  
Enclosure: IP 68

## Intelligent Multi-jet Water Meter (PH series)

Body: Plastic  
Performance: Class C/ R250  
Diameters : 15~25mm  
Output: Digital Encoding  
Display: LCD  
Enclosure: IP 68



## Valve Control Multi-jet Water Meter (PR series)

Body: Plastic  
Performance: Class C/ R250  
Diameters : 15~20mm  
Output: RS-485/Modbus  
Display: LCD  
Enclosure: IP 68  
Power supply: Main powered



## Prepaid Multi-jet Water Meter (PM series)

Body: Plastic  
Performance: Class C/ R250  
Diameters : 15~20mm  
Communication: Mifare/ STS  
Display: LCD  
Enclosure: IP 68



**M**ore Information for  
Intelligence Functions.

## Electromagnetic Flow Meter (MF3.2 series)

Diameters : 15~2200mm  
Output: 4-20mA, Pulse, Rs485(Mudbus)  
Enclosure: IP 68 (Sensor)  
IP 67 (Transmitter)  
Power Supply: 85~265 VAC



## Strainer

Body: Cast Iron  
Diameters : 80~300mm  
Easy to clean the filter without uninstalling the strainer. Mud pipe to disseminate mud.



## Ultrasonic Flow Meter (US series) (Clamp-on type)

Diameters : 50~600mm  
Output: 4-20mA, Pulse, RS-485  
Flow rate: 0.2~20m/s  
Resolution: 0.0001 m/s  
Enclosure: IP 68 (Sensor)  
IP 67 (Transmitter)  
Power Supply: 12~30VDC;100~240VAC







# PRODUCT INTERFACE



## GPRS/GSM Wireless data logger (GTI 5 Series)

In-put signal: Pulse, Build-in Pressure transmitter, Electronic water meter  
Data logging: 10~1440mins  
Data transmission: 10~1440mins  
Enclosure Rating: IP 68  
Power supply: 5 years  
(daily transmission)



## Gauge Data Recorder (GDR)

In-put signal: Built-in pressure transmitter  
Pressure Range: 0~10 Bar/ 0~145psi  
Logging Capacity : 32,000  
Enclosure Rating : IP 68  
Power supply: 5 years (1 data/min)

## GPRS/GSM Wireless data logger (MINI-G)

In-put signal: digital encoding signal  
Data logging: 10 mins  
Data transmission: Daily  
Enclosure Rating : IP 68  
Power supply: 3 years  
(daily transmission)



## RS-485/Modbus Transfer Interface (RMT)

In-put signal: digital encoding signal  
Output signal: RS-485/Modbus  
Power supply: 100~220VAC  
Enclosure Rating: IP 68



## Meter Interface Unit (MIU)

In-put signal: Digital encoding signal  
Remote display  
Enclosure Rating : IP 65  
Power supply: 8 years



## Pulse Code Regulator (PCR)

In-put signal: digital encoding signal  
Output signal: open collector  
Power supply: 8 years  
Enclosure Rating: IP 68



## GPRS/GSM Wireless data logger (GTI 3 Series)

In-put signal: Pulse, RS-485, 0-5V, 0-10V, 1-5V  
Build-in Pressure transmitter  
Electronic water meter  
Data logging: 1~1440mins  
Data transmission: 10~1440mins  
Enclosure Rating: IP 68  
Power supply: 5 years (daily transmission)



## Submetering Solution (GMC+CMR)

In-put signal: digital encoding signal  
Data logging: 1~1440mins  
Data transmission: 10~1440mins  
Max. meter: 32 meters  
Enclosure Rating : IP 68  
Power supply: 3 years (daily transmission)







# PRODUCT

# WATER MANAGEMENT SYSTEM (AMR)

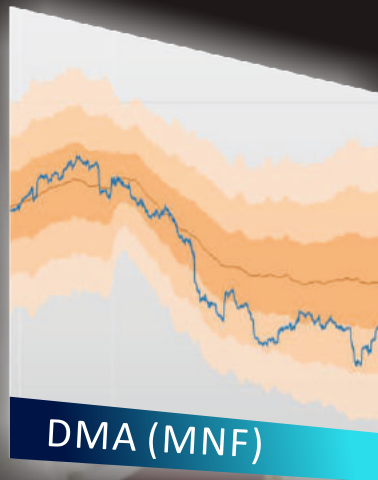
## UTILITY SUPPLY SYSTEM

Mobile Management



## i-ECO SYSTEM

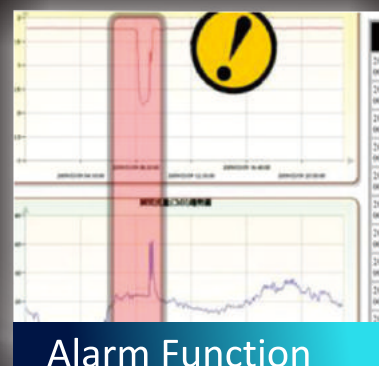
Water, electricity, gas, air conditioning, heat resource management.



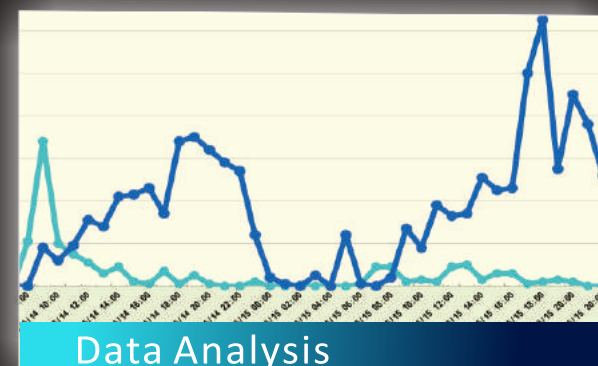
DMA (MNF)



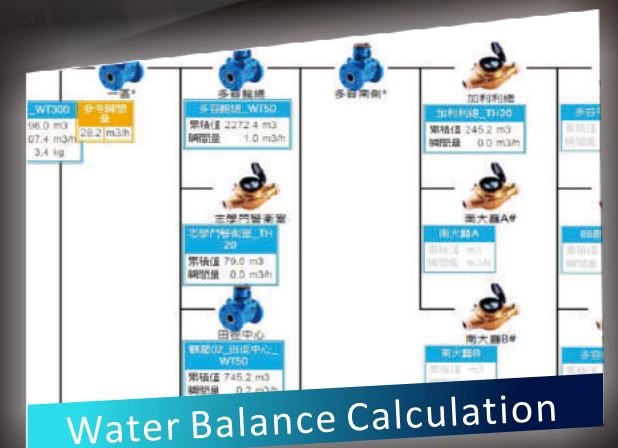
GIS System



Alarm Function



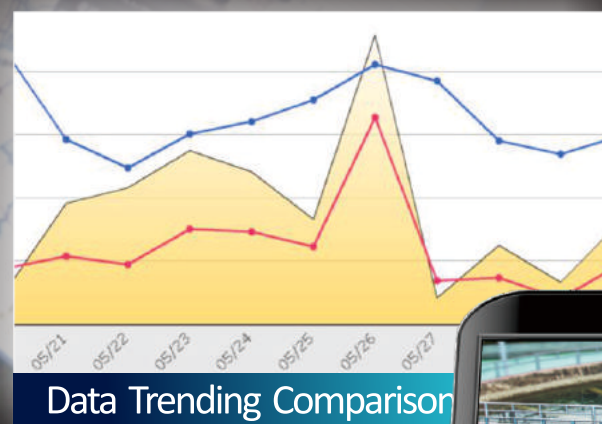
Data Analysis



Water Balance Calculation



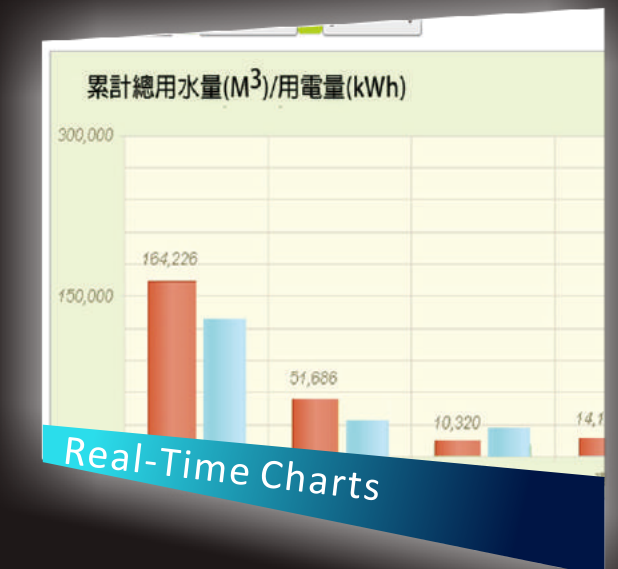
Flow/Pressure Tables



Data Trending Comparison



Water Distribution Map



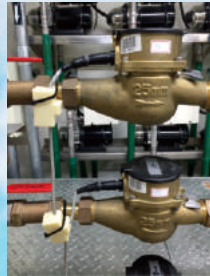
Real-Time Charts





# PROJECT REFERENCE

Installation Site

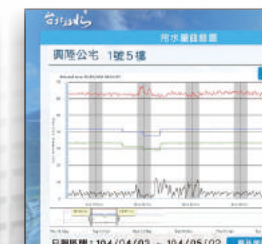


## TAIPEI WATER DEPARTMENT



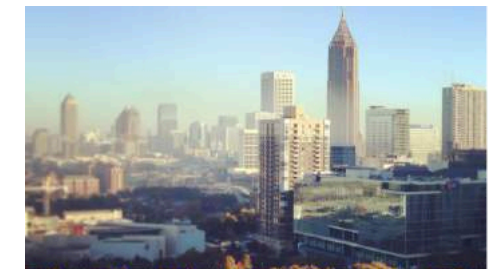
- Pressure/quality/ flow real time monitoring
- 1st application of smart metering in public housing
- All data can be accessed on computer/mobile device

### Monitoring System



## Taiwan Water Corporation

- Water supply system
- DMA: design, implement and maintain
- Flow/Quality/Pressure



## Industry & Science Park

- Industrial Technology Research Institute
- Clean/Waste water management



## University

- National Dong Hua University
- Submetering for dormitory



## Shopping Mall

- AEON MALL(Indonesia)
- Submetering, water resource management for all kinds of high-rise buildings



## Smart Building

- Cooperated with Chungwa Telecom and Farglory Land
- Water/Gas/Electricity management

