THE SCIENCE OF PRECISE MANAGEMENT™

PRODUCT PORTFOLIO OVERVIEW

SONATA® ULTRASONIC METER
IF DESIGN AWARD WINNER

WATER LINKS US TO OUR NEIGHBOR IN A WAY MORE PROFOUND AND COMPLEX THAN ANY OTHER.

John Thorson

Federal Water Master for the Lummi Decree

MISSION STATEMENT

Deliver world-class innovative technology to water utilities to ensure efficient, effective and lasting resource management capability.

BUILDING A BETTER H2O FUTURE

At Master Meter, we are focused on the future of water management. Everything we do is designed to help our utility customers reduce costs, improve efficiencies, and promote water stewardship through empowering conservation.

Master Meter is a study in innovation. Our parent company, Israel-based Arad Group, is located in the world's most robust center of resource management technology development. With few natural resources, Israel has positioned itself as a global leader in desalination, micro-irrigation, water management software, advanced meter infrastructure, solar power, pipe rehabilitation, and more. Albert Einstein famously noted, "Necessity is the mother of all invention." Our customers enjoy a real advantage in working with the very best technologies available today.

Our Sonata and Octave smart water meters are based on solid-state technology and leverage the most innovative science to ensure that your water meters stay accurate. Over 6 million Dialog® 3G AMR, Allegro Mobile, and Allegro AMI Under-the-Glass (UTG™) endpoints are in use today, making our networking solutions a tried and trusted technology for remotely communicating consumption and performance alert information.

Whether you're serving small rural populations or major metropolitan areas, delivering water only or provisioning combination utilities, Master Meter is your partner to deliver game changing results across Finance, Customer Service, and Utility Operations. Master Meter's vast sales presence and partner network ensure a personalized, attentive service to ensure your specific needs are met, and your expectations exceeded. Contact us today to determine which smart water metering solution is right for you.

EVERYONE IS A WATER MANAGER™

We believe that each one of us is a steward responsible for this life-sustaining, vital resource. We all must take care in using it wisely, responsibly, and with respect.

CONTENTS

ALLEGRO AMI

Master Meter's Allegro™ AMI Network is a robust RF communication network that interfaces between a water utility and their residential and business customers. The tower based system operates in the licensed 450MHz – 470MHz frequency spectrum offering superior reliability and extensive geographic reach.

The 2-way system offers a rich set of security features and provides remotely upgradable endpoint firmware. Also, the proprietary RF architecture incorporates a time-synced system to alleviate network RF collision while providing time-stamped data. The result is the most effective and dependable water-focused AMI network available.

BENEFITS

Allegro register endpoint universally fits on most any mechanical meter body, has no wires, and is based on the Interpreter system

*Precisely synchronized consumption data to identify non-revenue water (NRW)*

Granular Usage Data: Hourly Default. 15 minute on-demand

Scalable and migratable from Mobile to Fixed Network

Encrypted, inherently secure time sequenced communication

Forward-ready, remote firmware upgrades

Over the air, remote programming and diagnostics

Allegro Base Station

Allegro Solar Repeater

Allegro AC-Powered Repeater

Allegro Under-the-Glass (UTG) Register Endpoint

Allegro Light Pole Repeater
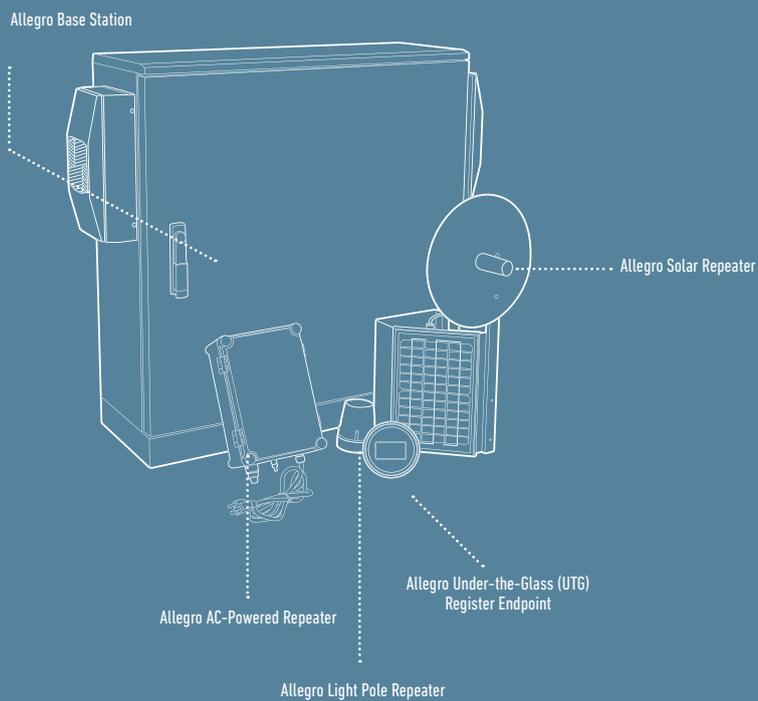
A ROBUST RF COMMUNICATION NETWORK

ALLEGRO MOBILE

Utilizing the same Allegro UTG endpoint used in our fixed network solution, Allegro Mobile is a full-featured hybrid meter reading platform that simplifies AMI technology migration without any wires or connections. If fixed network AMI is a potential next step, this is the product to consider.

BENEFITS

450MHz Licensed frequency

Enhanced long distance communication range

Available 15 minute usage data. Hourly default

Time-stamped consumption data and events

Simple, cost-effective migration from Mobile AMR to Fixed Network AMI to preserve ROI on existing Allegro endpoint investment
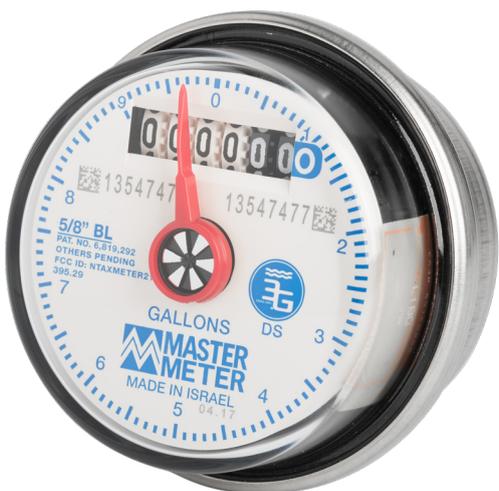
DIALOG® 3G MOBILE AMR

Master Meter's 3G Mobile AMR solution is a comprehensive meter reading platform able to universally read water, gas, and/or electric meters without wired connections. Realize advanced 3G DataLogs™, 3G Zones™, 3G Revenue Impact Alerts™ and other water management tools with the convenience and flexibility found in our stalwart mobile technology.

BENEFITS

902 - 928 MHz license-free frequency

Secure, military-derived spread spectrum RF technology

Power supply with 10 year full / 10 year prorated warranty

System-wide read synchronization for non-revenue water (NRW) analysis with integral real-time clock (RTC) technology

Backflow, Theft, Leaks, and Tamper Revenue Impact Alerts

GIVE WATER AN INTELLIGENT VOICE

REGISTER SHROUD

3G UNIVERSAL
INTERPRETER REGISTER

REGISTER
BAYONET ADAPTOR

METER BODY

THE INTERPRETER REGISTER SYSTEM

The Interpreter is a patent protected, programmable, interoperable register system that can be universally applied to most any water meter in use today. It is smart, self-sensing, and plug-n-play to allow immediate connectivity and data communication benefits to utilities.

OVERVIEW

Interpreter is built on our patented Under-the-Glass (UTG) register design with no wires. Proven reliability with over 6,000,000 deployed world-wide

Small form factor is IP68+ rated to withstand any harsh environmental challenge

Peace of mind warranty protection: 10 year full + 10 year prorated

Reprogrammability for use on different meters over time ensures lasting investment protection

Interpreter design supports different communication protocols, different frequencies and different licensed/unlicensed environments

eLINX ENCODER REGISTER

eLinx is a universal encoder register based on Interpreter architecture and connects any meter, to most any AMR/AMI system, when using the UI-1203 communications protocol, and meter bodies with a standard bayonet top design. eLinx provides options in selecting water meter and automated meter reading and/or advanced meter infrastructure systems.

BENEFITS

Interoperability between any meter and any system

Reprogrammability for use on different meters over time ensures lasting investment protection

Built on the proven reliable Interpreter Register System

Compact factor IP68+ design withstands any harsh environmental challenge

Peace of mind warranty protection: 10 year full + 10 year prorated

100% digital solid-state design

ACCULINX ENCODER REGISTER

AccuLinx is a mechanical encoder register designed to connect Master Meter mechanical meter products to our Dialog 3G AMR, Allegro AMR, Allegro AMI, or any competitive system. This product is an excellent connectivity solution for basement located meters where the present of batteries may be a concern.

BENEFITS

Battery-free, mechanical design

Interoperability between Master Meter products and any system

Innovative, patented positional encoding 'Grey Wheels' design

Small form factor is IP68+ rated to withstand any harsh environmental challenge

8-wheel design for enhanced reporting data granularity

* eLinx and AccuLinx registers can be pre-fitted with the most popular connections in use today.

LANDIS+GYR NETWORK INTERPRETER REGISTER

The Landis + Gyr Interpreter® endpoint is a universal AMI solution for water utilities designed to operate under the Landis + Gyr GridStream® AMI Network.

BENEFITS

Universal programmable transceiver register quickly retrofits existing meter assets and provides interoperability without service interruption

Elegant, 100% fully integrated under-the-glass (UTG) design has no wires for cost-effective deployment

Robust IP68+ engineered design activates with plug-n-play convenience

Peace of mind warranty protection: 10 year full + 10 year prorated

Time stamped data and events

These smart grid-accessible Interpreter register endpoints are a cost-effective and innovative approach that enable water utilities to leverage the existing infrastructure of their electric utility, and for combination utilities that provision both water and electricity.

SILVER SPRING® NETWORKS INTERPRETER REGISTER

The Silver Spring® Networks Interpreter® endpoint is a powerful, universal AMI solution for water utilities designed to leverage Silver Spring Networks' proven Critical Infrastructure Platform.

BENEFITS

Universal programmable transceiver register quickly retrofits existing meter assets and provides interoperability without service interruption

Elegant, 100% fully integrated under-the-glass (UTG) design has no wires for cost-effective deployment

Robust IP68+ engineered design activates with plug-n-play convenience

Peace of mind warranty protection: 10 year full + 10 year prorated

IPv6 data capabilities

Time stamped data and events

CONNECT TO THE SMART WATER NETWORK

Allegro UTG endpoint - the foundation of our Smart Water Network - universally upgrades most every mechanical meter in use today to AMI, without wires.

HARNESS THE POWER OF DATA

HARMONY ENTERPRISE MDM

Harmony Enterprise™ Suite is an open platform, enterprise-level Meter Data Management Software, compatible with nearly every advanced metering infrastructure (AMI) network on the market today. Leveraging the Microsoft® Azure™ cloud, Harmony creates an exceptional highly intuitive user experience for managing, reporting, and analyzing data from AMI and mobile data acquisition systems. Harmony is compatible with every billing system on the market and is designed to provide analytics and add value to most Customer Information Systems (CIS), Asset Management, and GIS Software used by today's water utilities.

BENEFITS

Broad interoperability with 3rd party software, AMI and AMR systems.

Highly secure, encrypted and SOC II compliant foundation.

Built on the Microsoft Azure-cloud for superior speed, performance, data security, and uptime reliability.

Designed for utilities by utilities with continually enhanced features and modules.

Integrated Google Street View™ for enhanced asset management
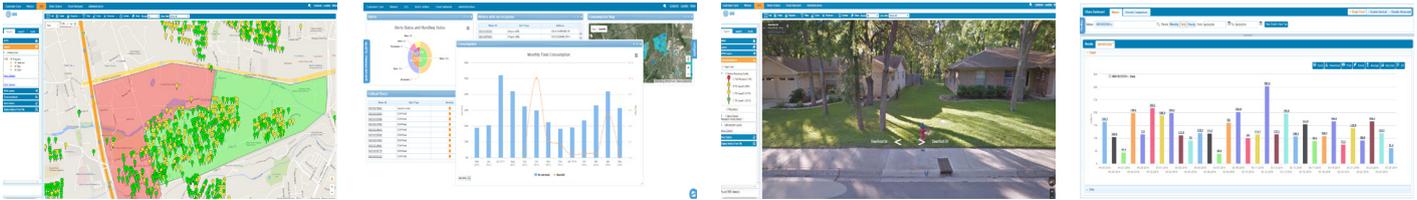
HARMONY MOBILE

Master Meter Harmony Mobile software + Panasonic ToughBook is the ultimate in versatile mobile workforce productivity. Whether reading meters using Allegro or 3G Mobile AMR , proximity wand read, or manual data entry, Harmony Mobile makes the experience intuitive and easy to navigate. This powerful in-field computer also doubles as a technician's smart tool to diagnose challenges in the field.

BENEFITS

Supports simultaneous reading technologies Allegro Mobile (easily migratable to Allegro AMI) and 3G Mobile AMR

Scalable and migratable workforce mobility

Equipped with Windows 10 Professional and an Intel Core M5 processor to make a formidable mobile computing workhorse in support of most any mobile application

Integral on-board connectivity including, Bluetooth, WiFi, 4G LTE cellular broadband with satellite GPS, HD camera, web conferencing, and expansion options

Ruggedized to meet rigorous MIL-STD-810G and IP-65 environmental standards

MY WATER ADVISOR™ INTERACTIVE CUSTOMER PORTAL

Put the benefit of Harmony in the hands of the consumer, with the My Water Advisor™ (MWA) customer engagement suite. This online portal empowers utility customers with access to up-to-date hourly usage information and promotes the self-management of their consumption. MWA helps stop the endless unexpectedly high month-end bill complaints to City Hall. Customers can set usage threshold alarms and receive timely leak alerts in the palm of their hands.

BENEFITS

Knowledge is power - this empowers ratepayers with clarity in how they use water

Available for both Apple iOS, Android, and cloud-based desktop access

Helps end month-end high billing surprises

Monitor expected / unauthorized usage while away on vacation

Understand better how much water is used for gardening or other activities

Compare one's usage against similar households for more effective conservation programs

OCTAVE ULTRASONIC METER

The Octave Commercial & Industrial (C&I) Ultrasonic flow meter masters non-revenue water (NRW) and large usage accountability. With an impressive turndown ratio as high as 1000:1, the Octave's wide flow range is among the highest available for any solid-state C&I meter on the market. With FM Approval available on all sizes, the Octave was designed to be the single meter of choice for all of your C&I metering needs.

BENEFITS

Sizes	*Range from 2" – 12" (the 2" is double-drilled to fit 1-1/2" services)*
No Moving Parts	*Optimal lifetime revenue with accuracy preservation*
Non-Revenue Water	*Reduces NRW with superior low flow measurement*
Iot-Ready	*Universal communication to any AMR/AMI, or SCADA network*
Data Logging	*Internal data logging available right at the meter*
Floating Flange	**Reduces product weight and enhances ease of installation Available on sizes 2" – 6"*

Octave

*Not all items are currently available at the time of printing.

ACCURACY, MASTERED.

sonata

SONATA ULTRASONIC METER

The Sonata Residential Ultrasonic flow sensor is Master Meter's next step in unifying our ultrasonic solid-state measurement product portfolio. Utilizing advanced ultrasonic flow measurement, the Sonata improves turn-down ratio by 57% compared to residential mechanical meters. The patent-pending construction of Sonata's flow tube eliminates obstructions from the center of the pipe, which in turn reduces head loss and potential damage to vital measurement components. Sonata and Octave are the only solid-state meter family provided by one company and built on the same measurement technology platform.

BENEFITS

Sizes	*Range from 5/8" – 1"*
No moving parts	*Provides lifetime meter accuracy*
Non-Revenue Water	*Reduces NRW with superior low flow measurement*
Communication	**Internal RF or wired output for AMI or AMR connectivity*
Data logging	*Internal data logging available right at the meter*
Flow Tube	**Available in both Bronze and Polymer*

iF DESIGN AWARD

MULTI-JET METERS

Master Meter's Multi-jet metering line exceeds the ANSI/AWWA C708 standard. With sensitivity to measure water flowing as low as 1/8 gallon per minute and accuracy unaffected by common particulates and build-up that would freeze other types, you can count on our Multi-jet technology to provide long lasting and accurate flow measurement.

Shown with 3G Mobile AMR register endpoint and internal MJ measurement chamber

BENEFITS

Sizes	Range from 5/8" – 1"
Proprietary Design	Produces a smooth, laminar flow to improve accuracy
One moving part	Measurement with one moving part reduces wear and preserves accuracy
Capture leaks	High sensitivity optimally records leaks and low flow
AMI/AMR Output	Compatible with all of Master Meter's complete line AMI/AMR registers

POSITIVE DISPLACEMENT METERS

Master Meter's PD metering line was designed to improve low flow accuracy and decrease head loss. By shifting the oscillating piston harmonics outside of the normal flow range, the MMPD provides quiet flow measurement compared to other oscillating piston PD meters. The MMPD meets or exceeds all aspects of the ANSI/AWWA C700 Standard.

Shown with Allegro AMI register endpoint and internal PD measurement chamber

BENEFITS

Sizes	Range from 5/8" – 1"
Reduces head loss	Decrease head loss by up to 19% compared to other PD meters
Accuracy benchmarks	Independent study verified sustained accuracy after 6 million USG
Capture leaks	High sensitivity optimally records leaks and low flow
AMI/AMR Output	Compatible with all of Master Meter's complete line of AMI/AMR registers

MASTER METER