



ARB® UTILITY MANAGEMENT SYSTEMS™ WATER | ELECTRIC | GAS



ARB® Utility Management Systems™ for Water Utilities

A SUPPLIER WITH INTEGRITY: Neptune Technology Group.

Neptune Technology Group is a leading provider of data collection systems and water measurement products. Since 1892, Neptune has continually focused on the evolving needs of water utilities – revenue optimization, operational efficiency and improved customer service. Along the way, Neptune has amassed a number of industry firsts, including: first compound meter, first fire service meter, first absolute encoder register, first handheld data capture system, first commercial fixed-base AMR system, and first absolute encoder featuring advanced functionality beyond the basic meter reading.

Neptune was the first meter manufacturer to switch 100% of its production to a no-lead bronze alloy. Our state-of-the-art manufacturing facility has maintained ISO 9001 certification since 1997, and all of our meters are backed by a Certified Customer Support Center.

Neptune has worked to bring the highest integrity in four fundamental areas: system, data, measurement and supplier. This approach has resulted in our ARB® Utility Management Systems™, end-to-end management systems with advanced features that put you in control with accurate data, maximum efficiency and superior customer service. Our vision is to be viewed as the most valued partner in assisting utilities to more effectively serve their customers.

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Take Control of Your System

 - **Migratable:** By focusing on backward compatibility, Neptune minimizes the risk of stranded assets.
 - **Hybrid:** Utilities are free to choose the right technology for their specific needs, knowing that all levels of reading sophistication can be supported by the system.
 - **Scalable:** ARB Utility Management Systems are designed to provide outstanding value to any size water utility.
 - ARB Utility Management Systems address hard-to-read meters and help ensure the safety of your personnel.
 - ARB Utility Management Systems safely reduce meter reading times while maximizing meter reading success rates, allowing for improved productivity and optimal use of resources.

- 2

Take Control of Your Data

Absolute Reading Accuracy:

 - Because absolute encoders generate remote readings from the same source as visual readings, reading accuracy is absolute – establishing a solid foundation for all levels of ARB Utility Management Systems.
 - Neptune introduced the first absolute encoder for water meters over 40 years ago – the technology which has become the industry standard.
 - The E-Coder absolute encoder offers the same error-free remote reading and provides advanced customer service and operational benefits.
 - The E-Coder)R9007™, Neptune’s wireless automated meter reading solution, provides reliable data that can easily be transferred to your customer information and management systems.

- 3

Take Control of Your Measurement

 - **Revenue Optimization:** Neptune’s meters meet or exceed AWWA and ANSI/NSF 61 standards.
 - Neptune provides the tools to support water loss management and conservation initiatives.
 - Accurate measurement and meter reading optimizes your revenue, reduces your costs and helps maintain water rates.

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Take Control with a Reliable Supplier

 - **Customer Satisfaction:** ISO 9001 certification since 1997; backed by a Certified Customer Support Center.
 - **Meter-to-Bank:** Neptune provides critical building blocks to the utility’s revenue cycle – cash registers (meters) and data collection systems.
 - Over 1,800 ARB Utility Management Systems customers.
 - All meter manufacturing is done on-site in Tallassee, AL.

Technology Migration Pyramid

Backed by over 110 years of experience, Neptune prides itself on providing utility automation systems that allow customers to migrate from their initial investment to the latest technology in a seamless fashion. With ARB® Utility Management Systems™, Neptune guarantees accurate meter reading and provides intelligent data that optimizes the operations of any size utility.

up to
**96 reads
per meter**
per day

Hybrid System

Neptune's ARB Utility Management Systems provide utilities with a hybrid approach that allows use of the best technology – walk-by, mobile, fixed network, or any combination of these technologies.

up to **96 reads
per meter** per day

Fixed Network RF

Neptune's EZNet™ System allows utilities to target specific groups of meters to collect more detailed usage information as necessary. EZNet further enhances the leak, reverse flow and tamper detection capabilities of the E-Coder.

2,000-30,000 reads per day

Mobile RF

Mobile data collectors allow utilities to maximize operational efficiencies by reducing meter reading times, maximizing meter reading success rates while safely obtaining accurate readings and capturing important leak, reverse flow and tamper detection data.

1,000-2,000 reads per day

Walk-by RF

With the addition of R900 Radio Frequency Meter Interface Units (RF MIUs), meter readings are transmitted directly to handhelds as the meter reader walks the route. The same meter reading software provides seamless technology migration by allowing collection of keyed, probed or radio transmitted meter readings all within the same route. With the E-Coder, readers can also capture vital leak, reverse flow and tamper detection data.

175-450 reads per day

Walk-by Probe

Neptune's wireless probes and handhelds capture meter readings from ProRead absolute encoder registers. Neptune's meter reading software guides meter readers along their routes, minimizing errors and improving meter reading accuracy and efficiency.

175-450 reads per day

Absolute Encoder Registers

Neptune's absolute encoder registers are the first step toward a fully automated meter reading system. The **ProRead** absolute encoder register provides error-free remote electronic meter reading capability, solving access problems for basement, pit and vault-set meters. The **E-Coder** solid state absolute encoder register maximizes the value of RF systems by providing error-free readings along with information such as leak, reverse flow and tamper detection.

100-125 reads per day (with route book)

125-175 reads per day (with handheld)

Standard Meters

Neptune's water meters maximize revenue with increased accuracy over the widest effective flow range and are easily upgradeable from direct read registers to AMR-compatible absolute encoder registers. Neptune meters meet or exceed AWWA and ANSI/NSF 61 standards.

Build a Water ARB Utility Management System

Neptune's ARB Utility Management Systems maximize revenues and put you in full control with accurate and intelligent data, operational efficiency, and enhanced measurement capabilities, all of which translate into superior customer service for utilities of any size.

Take control with a system that is both intelligent and tough:

Endpoints

THE E-CODER)R900)™

By integrating the E-Coder solid state technology and R900 into a single device, the E-Coder)R900) provides a truly wireless solution with the lowest cost of ownership – lowering installation costs and reducing the potential for tampering. The intelligent data from the E-Coder)R900) can be easily transferred to your customer information and management systems.

E-CODER SOLID STATE ABSOLUTE ENCODER

The E-Coder duplicates all of the features of a basic absolute encoder register, plus provides intelligent data such as leak, reverse flow and tamper detection. Remote and visual readings from the E-Coder are generated from the same source, eliminating discrepancies. E-Coder PLUS data flows seamlessly into billing packages, CIS screens and operational reports.

PROREAD ABSOLUTE ENCODER

The ProRead is a fully programmable absolute encoder register. Available in both inside and pit set configurations, the ProRead register allows migration from probed to R900 radio frequency AMR with no additional programming. The ProRead helps utilities shorten billing cycles and automate bill preparation for improved cash flow.

THE R900 RF MIU

The R900 Radio Frequency Meter Interface Unit (RF MIU) is a high-power one-way communication device available in both wall and pit mount configurations. The R900 interrogates the encoder register and transmits the meter usage data via spread-spectrum frequency-hopping technology to ensure data integrity, maximize read success and reduce reading times. The R900 functions in a walk-by, mobile, targeted fixed network, or hybrid environment, allowing utilities to create the optimum meter reading solution.

Data Collection Systems

Neptune's systems allow utilities to create a hybrid system utilizing the data collection components that best suit their specific needs.

WALK-BY APPLICATION

Designed to be both rugged and ergonomically sound, the CE5320X is perfect for the tough requirements of utility meter reading. The handheld system can support any combination of keyed, probed and RF readings.

MOBILE APPLICATION

Neptune's mobile data collectors, the MRX920™ and MTX950, balance powerful performance with ease-of-use. The MRX920 is targeted for R900 meter reading whereas the MTX950 is also compatible with Itron electric ERTs and R300s. Both devices utilize a 72-channel receiver to ensure maximum meter reading success rates with reduced meter reading times.

FIXED NETWORK APPLICATION

EZNet™ is a fixed network system for targeted applications such as commercial and industrial accounts where more detailed usage information is required. The system can be used as a stand-alone system or as part of a hybrid system with handheld and/or mobile data collection systems. Utilities can use EZNet to monitor for leaks and collect usage profile information. In conjunction with E-Coder, the EZNet system allows utilities to collect usage profile information in 15-minute intervals.

Host Software

Neptune's Equinox™ meter reading software manages information from any combination of manual keyed entry, walk-by, mobile, or targeted fixed network data collection. The software enables utilities to optimize operational efficiency through route control, leak detection, reverse flow detection, tamper detection, and identification of stopped meters. This information helps reduce water loss and maximize revenue generation.

Neptune provides the peace of mind that comes from our ability to adapt to your changing needs while providing a path to future technologies.



Billing / CIS System



Equinox Software***



CE5320X Handheld
Data Collection Computer



MRX920™
Mobile Data Collector



EZGate Fixed Network
Data Collector



R900 Wall and Pit RF MIUs



E-Coder|R900*



T-10 Meter with
E-Coder™ Electronic
Absolute Encoder*



T-10 Meter with
ProRead™ Absolute Encoder*



T-10 Meter 5/8" - 1"



T-10 Meter 1 1/2" - 2"



TRU/FLO 2" - 6"



HP Turbine 2" - 10"



PROTECTUS 4" - 10"



Fire Service Turbine 4" - 10"

* The E-Coder|R900, E-Coder, and ProRead absolute encoder registers are easily mounted to any Neptune meter.

** E-Coder value-added data is available through R900 in walk-by, mobile, and targeted fixed-network systems. E-Coder outputs ProRead protocol when utilized in a probed system.

*** E-Coder value-added data is transmitted via RF to data collection devices and into meter reading software. Data can be seamlessly integrated into billing/CIS system.



Take Control with ARB® Utility Management Systems™

Neptune's ARB Utility Management Systems take you to a new level of accuracy, efficiency and customer confidence. Contact us today for more information on how Neptune can help you take control.

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