



MOSCAD®

*WIRELESS MONITORING AND CONTROL SOLUTIONS
FOR THE WATER/WASTEWATER INDUSTRY*

MOTOMONITOR

SOPHISTICATED

MOSCAD is a product born of Motorola's 60-year commitment to cutting edge technology. This quest for communications of the future is what makes MOSCAD the expandable, flexible solution for the growing and changing needs of Water and Wastewater.



The MOSCAD Remote Terminal Unit (RTU) provides a turnkey data collection and processing unit with the intelligence required to operate in sophisticated SCADA systems.

MDLC COMMUNICATIONS PROTOCOL

MOSCAD's MDLC protocol supports a multimedia, multi-channel network for systems spread over a large geographic area. The protocol allows distant sites to communicate through store-and-forward technology. Priority ratings and full redundancy can be assigned to high-risk water and wastewater sites. MOSCAD MDLC can efficiently transmit programs, databases and parameters at high speeds. Yet, its complex structure is completely transparent to system operators.

COMBINED SEWER OVERFLOW MONITORING

MOSCAD can interface directly to flow and level instrumentation to record accurate site information. Low power consumption makes photovoltaic systems a viable option. Large amounts of time-tagged data can be stored so that critical overflow information is not lost, even if there are problems with communications or a central site. In fact, MOSCAD can be used where no communication channels are available; stored data can be uploaded to a portable computer carried to the site. MOSCAD is the flexible, expandable solution for the growing and changing needs of any water management solution.



Whether monitoring and controlling remote pump sequencing operations or handling in-plant processes, Supervisory Control and Data Acquisition (SCADA) systems offer substantial benefits.

PROVEN PERFORMANCE

For nearly twenty years, Motorola has been delivering SCADA solutions to the water/wastewater industry. From small rural water operations to complex systems with remote wells, treatment plants and storage reservoirs, our customers benefit from Motorola's commitment to their success. Today, approximately eighty percent of the top utilities in the nation utilize one or more of our wireless communication systems. More than 1,000 of our SCADA systems are used in water/wastewater applications alone.

INTEGRATED

FLEXIBLE

A FLEXIBLE, FULLY INTEGRATED SOLUTION

Motorola's MOSCAD puts industry expertise to work. Its client/server architecture improves the performance of applications throughout a networked system. Its superior communications, connectivity and programmability make MOSCAD the solution for today...and tomorrow.

Through an array of central computer configurations and a network of remote terminal units (RTUs), MOSCAD monitors and controls virtually every water or wastewater management function, thereby conserving water and maintaining employee safety. Its 32-bit processor and control language compiler allow complex operations to be programmed in ladder logic understood by all PLC users, as well as C programming language for computer users.

AMONG OTHER BENEFITS MOSCAD ALLOWS YOU TO:

- Easily implement peer-to-peer communications to control system levels, pressure and flow with minimum reliance upon a central station.
- Directly interface with flow and level instrumentation to give accurate and intelligent site information on everything from accumulated flow to storm and combined sewer overflows.
- Store time-tagged data so that important operational information is not lost if the central computer or communication channel were ever to fail.
- Calculate power factor, real power and reactive power to implement an energy savings program.

ADVANTAGES FOR THE WATER/WASTEWATER INDUSTRY

Motorola's broad-based design, manufacturing and engineering capabilities give MOSCAD the distinct advantage of having the radio, CPU, I/O modules and power system all under the Motorola label with the accompanying world class quality control.



MOSCAD-L provides the features of both a Remote Terminal Unit (RTU) and a Programmable Logic Controller (PLC).

*Designed for the
radio environment
by the radio experts*



UNPARALLELED COMMUNICATIONS

- MOSCAD MDLC protocol provides seamless integration of multiple communication systems from VHF and UHF to trunked, wireless broadband, as well as leased wirelines. Multiple communication ports can be configured for RS232, RS485, IP or radio use.
- MOSCAD's design permits system intelligence to be distributed among many equipment sites allowing for remote site report-by-exception and minimizing the need for continuous polled communication.

MAXIMUM CONNECTIVITY

- MOSCAD's MDLC protocol will accept information from a variety of manufacturers' products, including electronic primary sensing devices.

SYSTEMS APPROACH

- Forward looking centralized database design.
- Stored data can be easily accessed by a number of different users and applications.

USER PROGRAMMABILITY

- MOSCAD is completely user programmable to meet your needs
- Algorithms are available for flow splitting, chemical addition/flocculation and clarification as well as filter backwashing, chlorination and local totalization.
- MOSCAD can be used in wastewater plants to control activated sludge, dissolved oxygen, return sludge and sludge wasting as well as solids digestion and effluent disinfection.

IMPROVE SECURITY MEASURES

- Leverage your MOSCAD SCADA system to improve site and operations security.
- Use MOSCAD RTUs to interface with intrusion sensors, keypad entry devices and manage video monitoring.

CURRENT AND FUTURE COMPATIBILITY WITH OPEN STANDARDS

- MOSCAD's MDLC protocol adheres to the Open System Interconnect (OSI) model as recommended by the International Organization for Standardization (ISO).
- MOSCAD supports multiple third party protocols including Modbus, DNP 3.0, PLC-5, X.25 and more.

READY FOR CHANGE AND GROWTH

- MOSCAD is designed to easily integrate with a user's existing equipment and to expand when they're ready to grow.
- MOSCAD has all the Input/Output (I/O) capacity, local control capability and communications needed for in-plant operations.
- With MOSCAD's scalability, upgrades and expansions can be made in an incremental manner depending on the utility's requirements.
- MOSCAD allows for remote diagnostics, configuration information and application program upload/download.

UNIVERSAL CONTROL CENTER SOFTWARE SUPPORT

- MOSCAD uses an open standard protocol to connect to a variety of SCADA software packages.



Motorola's Commercial, Government and Industrial Solutions Sector is a recipient of the prestigious 2002 Malcolm Baldrige National Quality Award. This honor demonstrates our commitment to performance excellence and quality achievement.



MOTOROLA

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RC-11-2006