

Open SCADA irrigation management solutions for Smart Cities.



United Arab Emirates

Operator
Abu Dhabi Municipality
Abu Dhabi, UAE
Integrator
Precast FZCO
Dubai, UAE

- Open SCADA system
- Smart City integration
- BMS compatible systems
- Total irrigation management
- Pump stations and water supply
- Leak detection
- Compliance management
- ET based scheduling

Extreme duty application

Abu Dhabi is the capital and the second most populous city of the United Arab Emirates and is situated on an island in the Persian Gulf, and the city has an estimated population of 1.45 million.

The region is considered to have a desert climate, weather is generally extremely hot and humid, there is virtually no rainfall, (average annual rainfall is nominally 75mm), the average annual temperature is 26.8 °C, but during the summer months the with maximum temperatures averaging above 41 °C.

Innovation

In 2011, the Abu Dhabi Municipality issued an expression of interest document for an open sourced irrigation control system that could integrate to their city-wide SCADA platform easily.

As a solution, Tonick Watering adapted the RM-2 irrigation controller to this application, supported by local UAE based automation and SCADA specialist, Precast FZCO using the T-BOX RTU from Servelec Technologies providing the open SCADA framework.

Providing remote connectivity and water balance irrigation control, the Tonick RM-2 is a powerful irrigation control system that provides scalable solutions for very large-scale irrigation and water management applications.

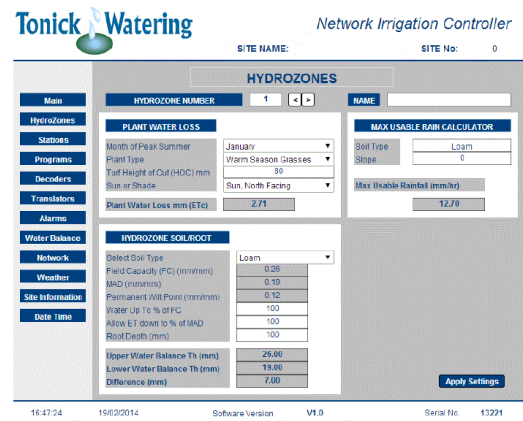


Tonick RM-2 and weather station installed in Abu Dhabi park.

September 2019



Tonick RM-2-wire translators and Landscape decoder



Tonick RM-2 Scheduling Tool

Project scope

- Up to 2,000+ controllers (RTU's) in total.
- Networked to Abu Dhabi Municipality SCADA.
- Field control via 2-wire decoder system.
- Flow, pressure and weather inputs.
- Irrigation scheduling software.
- Local support via SCADA specialist Precast FZCO.

Currently there are more than 200 Tonick RM-2 controllers in Abu Dhabi city installed by Precast FZCO as part of a rolling upgrade.

Once online to the SCADA, the municipality operators can access relevant data from the irrigation network in the entirety of the city, all in one central system.

Technology at a glance.

- Third party RTU.
- Ethernet or cellular (3G/4G) connectivity.
- Tonick 2-wire decoder system.
- Open SCADA protocol.
- BMS compatible.
- Tonick RM-2 Scheduling software

The Tonick RM-2 irrigation control system is RTU based and supports various open protocols enabling the integration to third-party SCADA or BMS platforms.

Activation of the control valves and reading of flow and pressure is via the Tonick decoder system, with multiple 2-wire paths operating from the one controller.

Intuitive software

The Tonick RM-2 provides remote access via your smart phone, tablet, PC or centralized monitoring system.

The system is configured using its own web interface, enabling the user to,

- Setup watering stations and program times.
- Display historic alarms and the current the status of each watering station.
- Allows the user to test individual or groups of stations by using the manual override feature, a very useful during the commissioning phase of any project.

Advanced flow management and leak detection is possible with the Tonick RM2 system.

Want to know more?

For more information on the Tonick Watering range of innovative solutions, visit www.tonick.com, send us an email sales@tonick.com or consult your regional Tonick Watering partner.