Tech Spec

IQ™ Platform

The IQ Platform offers state-of-the-art command and control features in an easy to learn and use interface. IQ provides advanced water management features saving money and time. The IQ Platform consists of three options: IQ-Desktop v. 3.0, IQ-Cloud v. 3.0, and IQ-Enterprise v. 3.0.

Applications

All IQ versions provide remote programming, management, and monitoring of ESP-LX Series Controllers from the computer in your office. IQ is the perfect irrigation control solution for parks departments, school districts, property managers, landscape maintenance contractors, and water managers. IQ can manage small single-controller sites as well as large multi-controller sites and supports both ESP-LX Series traditionally-wired and 2-wire decoder controllers.

IQ-Desktop is installed and operated on a single desktop computer. IQ-Desktop is ideal for organizations with one administrator who can control the system from their computer in their office. The IQ-Desktop software package provides 5-satellite controller capacity. IQ software satellite controller capacity can be upgraded in 5-satellite increments with the IQ5SATSWU.

IQ-Cloud is a cloud-based service allowing users to login and control their irrigation system from any internet connected device. IQ-Cloud is ideal for organizations with multiple irrigation system administrators and/or users that require mobility. IQ-Cloud features IQ-Mobile which provides quick access to key features in an interface designed for touchscreen devices found in smartphones or tablets. Users are not restricted to an initial capacity and can add satellites at will. Internet access is required.

IQ-Enterprise enables organizations with internet access restrictions, tight security protocols, and a robust local area network to install a version of the software on their servers. Users can access all the features of the software on their approved mobile devices. The IQ-Enterprise software package provides 5-satellite controller capacity. IQ software satellite controller capacity can be upgraded in 5-satellite increments with the IQ5SATSWU.

IQ Platform Software Features

- Software 5-satellite controller capacity upgradable in 5-satellite increments (IQ-Desktop and IQ-Enterprise)
- Compatible with ESP-LXM & ESP-LXME traditionally-wired and ESP-LXD 2-wire decoder controllers
- Site, satellite, and station names
- Programming in seconds, minutes, and hours
- Daily or Monthly Seasonal Adjust % or ET station run time adjustments by site
- Dry-Run™ Graphical Program Review
- Manual Program, Test Program, Station starts
- Detailed logs and reports
- Automated or user initiated satellite Synchronize & Retrieve Logs and Weather Source Retrieve Weather Data communication
- Automated Email Alarm/Warning and Satellite Station Run Time Reports
- Satellite PIN-Code Protection (4-digit PIN-Code required to make programming changes at the satellite)
- Satellite 2-Way Programming (changes made at the satellite can be viewed and accepted in the IQ software)
- Copy/Move Satellite Utility (copy or move a satellite to another site)
- Automated MAD (Management Allowed Depletion) Irrigation Scheduling adjustments
- Software uses Irrigation Association terminology and formulas
- ET/Rainfall Weather Sources include:
  - CIMIS Internet Service (California only)
  - ETMI ET Manager Weather Reach Service (North America only)
  - Rain Bird WSPROLT Weather Station
  - Rain Bird WSPRO2 Weather Station
- IQ Global Weather Internet Service which provides local weather data including rain fall
- 4 ET Checkbooks per satellite controller
- Export to Microsoft Excel® for customized reports
- Retrieves minute-by-minute flow logs from flow sensor equipped ESP-LXMEF and ESP-LXD Satellite Controllers
- Flow Logs vs. Projected Flow Graphical Report (identifies which programs & stations where running at any point in time)
- Actual Flow Totals added to Satellite Station Run Time Report (included in Automated Email Reports)
- Context-sensitive help system. Click on the help icon available in most screens and be taken directly to the help topic feature you are using
- User selectable languages include English, Spanish, French, German, Chinese, Italian, and Portuguese

Additional 5-Satellite Capacity Upgrade

- IQ Software satellite controller capacity can be upgraded in 5-satellite increments
- Additional capacity is added through a purchased software activation keycode

Building Management Software Integration

- IQ SCADA delivers the proven water management features of IQ, combined with the SCADA user interface customers require for simple, remote daily operations
- Standard setup using OPC Unified Architecture
- The IQ SCADA upgrade is added through a purchased software activation keycode

Recommended Computer Requirements for IQ-Desktop

- Operating System: Windows® XP, 7 or 8, 32-bit or 64-bit
- Processor: Intel I5-540M or equivalent
- RAM Memory: 3 GB
- Available Hard Disk Space: 10 GB
- CD-ROM Drive: 8X speed minimum
- Display Resolution: 1024 x 768 minimum
- Network Connection (for Ethernet, WiFi, GPRS communication)
- Serial Port or USB to Serial Adapter (for Direct Connect and External Modem communication)

Recommended Server Requirements for IQ-Enterprise

- Intel I5-540M processor
- 3GB RAM
- 10 GB free disk space
- Windows Server 2008

IQ-Mobile (Available with IQ-Cloud and IQ-Enterprise

- Use smartphones and tablets as a remote
- Start stations, start programs, start test programs
- Set Rain delays and turn controllers off/auto
- View current satellite controller status
- View logs
- Accessible from all smartphone and tablet internet browsers: www.rainbird.com/iqmobile

How to specify

IQ Platform

IQ-Desktop (IQ2006):	Desktop Software Package, 5-Satellite Capacity
IQ-Enterprise (IQ2008):	Enterprise Software 5-Satellite Capacity
IQ5SATSWU:	5-Satellite Capacity for Enterprise & Desktop Versions
IQ-SCADA (IQ2008S):	Enterprise Software, 5-Satellite Capacity, SCADA/BMS Software
IQSCADABMS:	Software Feature Pack for IQ Enterprise

Specifications

The irrigation central control system shall be the IQ™ Platform as hereafter specified and as shown on the drawings. The system shall be fully programmable, providing the operator with absolute and full control of the entire control system. The system shall provide a degree of flexibility such that, in effect, anything that could be done at the satellite controller shall be capable of being done at the central computer.

The system shall have a Windows® graphical user interface (GUI) that allows easy programming and graphical depiction of the satellite controller programming.

The system shall be compatible with the ESP-LXME Series traditionally-wired controllers with 1 to 48 station capacity. The system shall also be compatible with ESP-LXD Series Two-wire decoder controllers with 1 to 200 station capacity. The system shall have an adjustable satellite controller capacity allowing the customer to expand the system capacity over time.

The system shall allow virtual log-on passwords to administer access privileges to multiple users of the system. The system shall support multiple languages including English, Spanish, French, German, Chinese, Italian, and Portuguese. The system shall also support user defined date/time, number, and unit formats.

The system shall allow virtual site configurations, allowing the user to group satellite controllers into a site to simplify common adjustments. The system shall incorporate a satellite controller dry-run feature that graphically depicts the program operation, showing minute-by-minute program activity, expected flow rates, and the programs/stations operating at any point in time.

The system shall incorporate program adjust values for each satellite controller program. The system shall also include a site-level daily or monthly seasonal adjust percentage that adjusts the station run times for all satellite controllers in the site. The system shall also offer site-level daily or monthly ET value adjustments as an alternative to seasonal adjustment percentage. The software shall utilize NCC Network Communication Cartridges to interface with the system controllers. The cartridges shall be available with internal 3G Cellular, Ethernet, & WiFi modems or RS-232 external modem port. The cartridges installed in the controller shall be field configurable as a Direct, Server, or Client Satellite. The Server satellite shall share its IQ central computer communication link with up to 149 Client satellites and be capable of sharing weather sensors and master valves amongst the 150 satellite controllers.

The software shall incorporate a site configuration utility that contacts the satellite controller, reports the hardware configuration and retrieves the configuration and programming data. The software shall verify the satellite hardware configuration has not changed each time it contacts the satellite controller. The controller and NCC cartridge firmware shall be upgradeable from the system central computer.

The software shall be capable of manually starting a program, test program, or station on any satellite controller. The software shall be capable of over-riding the satellite controller Auto/Off dial position and sensor Active/Bypass switch position.

Satellite controllers equipped with flow sensors shall provide a learn flow utility to measure the nominal flow rate of each station. The learn flow rate shall be compared to the actual flow sensor flow rate each time the station operates. A user defined percentage above and below the learned flow rate shall be used to determine if the flow rate is problematic. User defined reactions shall be programmable including a diagnose mode where the cause of the problem flow rate is identified and the problem station or water source is shut off. A manual MV water window shall be provided to automatically open the master valve and account for manual watering flow rates without turning off the flow sensing functions of the satellite controller. Both normally closed and open master valves shall be supported. All flow sensing features shall be programmable through the software.
The system shall offer user definable station-level priorities and a program-level water window. Stations are selected to operate based on their priority with high priority stations operating first. If a program cannot complete the run time of all stations in the water window the station operation shall be paused and resumed at the start of the next water window.

The system shall provide user definable number of simultaneous station to operate per program and for the whole satellite controller. The combination of these features shall be used to automatically shorten the overall operating time of the satellite controller programs. All features listed shall be programmable through the software.

The system shall provide automatic communication and email reports.

The system shall provide satellite controller PIN-code lock-out and 2-way programming. Each satellite shall have minimum of 5 assigned PIN-codes. Lockout options shall include full or partial lockout. All PIN-codes shall be programmed through the software.

The system shall provide automatic program adjustment based management allowed depletion scheduling. ET/rain weather sources shall include CIMIS Internet, ETMI Weather Reach, and WSPROLT and WSPRO2 Weather Stations, and IQ Global Weather.

The system shall provide minute-by-minute flow logs in a graph comparing actual flow and projected flow. Actual flow totals shall be included in the automated email reports.

The IQ™ Platform shall be as manufactured by Rain Bird Corporation.

Rain Bird Corporation
6991 East Southpoint Road
Tucson, AZ 85756
Phone: (520) 741-6100
Fax: (520) 741-6522

Rain Bird Technical Services
(800) RAINBIRD (1-800-724-6247)
(U.S. and Canada)

Rain Bird Corporation
970 West Sierra Madre Ave. Azusa,
CA 91702
Phone: (626) 812-3400
Fax: (626) 812-3411

Rain Bird International, Inc.
1000 West Sierra Madre Ave.
Azusa, CA 91702
Phone: (626) 963-9311
Fax: (626) 852-7343

The Intelligent Use of Water ™
www.rainbird.com