

## LNK WiFi Module

### WiFi Mobile Application

The LNK WiFi Module shall allow users to connect remotely to a Rain Bird ESP-Me or ESP-TM2 Irrigation Controller through a plug-in accessory and using an Apple iOS or Android compatible mobile device with access to the Internet.

### Easy to Install Hardware

The LNK WiFi Module shall connect directly to the accessory port featured on compatible controllers.

### Mobile Application

A mobile application with user interface shall install on the user's smart device and allow remote configuration of multiple Irrigation Controllers. Options for irrigation scheduling shall be provided as well as access to current weather conditions.

### Supported Mobile Devices

The LNK WiFi Module Mobile Application shall be available for devices running the following operating systems:

- iOS 8.0 or later
- Android 4.4 (KitKat) or later

### WiFi Networking

- The LNK WiFi Module shall provide direct wireless communication to compatible smart devices through a WiFi Access Point
- Connecting to the Rain Bird Cloud Server shall allow the server to send a daily seasonal adjustment once per day based upon the Controller's ZIP code
- Push notifications shall be available through Google Cloud Messaging or Apple Push Notification Service
- A multi-color LED light on the LNK WiFi Module shall indicate status of the Access Point and Internet connections

### WiFi Connection Security

The LNK WiFi Module shall automatically detect the appropriate WiFi security mode using a user-provided network SSID and network key.

The following security modes are available:

- None
- WPA-AES
- Open
- WPA2-TKIP
- WEP
- WPA2-AES
- WPA-TKIP
- WPA2-AES-TKIP

### Mobile App Features

- Controller View shall display an image of the Controller with name, station or zone list and local weather report
- Expanded View shall allow remote programming of irrigation schedules including a Manual Watering feature
- General Information View shall display the selected Controller by name, location by ZIP code and a notifications list
- Calendar View shall show a graphical representation of the selected Controller's irrigation schedule
- Remote Control View shall provide instant access to manual operation for each station or zone
- Program View shall provide access to all irrigation scheduled parameters for program based Controllers
- Add Controller View shall provide access to a setup wizard for adding one or more controllers to the mobile app home screen
- Controller Settings View shall provide configuration and editing of Controller information, network settings and notification preferences
- App Settings View shall provide access the mobile app version, help screens, enable or disable of push notifications, and access to group controllers



### Operating Specifications

- Operating Temperature: 14° F (-10° C) to 149° F (65° C)
- Storage Temperature: -40° F (-40° C) to 150° F (66° C)
- Operating Humidity: 95% max @ 50° F to 120° F (10° C to 49° C) non-condensing environment

### Electrical Specifications

- 24VAC(RMS) 50/60Hz; 55mA max

### Certifications

- UL, cUL, CE, CSA, FCC Part 15b, WEEE, S-Mark, IP30, IFETEL

### Dimensions

- Width: 1.13"
- Height: 1.83"
- Depth: 0.48"

### How To Specify:

#### Models

LNKWIFI

## Specifications

The LNK WiFi Module is designed for direct plug-in connection to the accessory port on Rain Bird ESP-Me or ESP-TM2 Irrigation Controllers.

The connector interface shall have adequate mechanical resistance to prevent accidental disconnect during normal use, while allowing easy tool-less insertion and removal by the user.

The LNK WiFi Module shall support direct WiFi communication to a mobile device through a WiFi Access Point (hotspot) broadcast by the LNK WiFi Module, or through a LAN connection broadcast by a WiFi router. At power-up, the LNK WiFi Module's internal WiFi Access Point (hotspot) shall be automatically enabled if a LAN connection is unavailable.

The LNK WiFi Module shall support network communications over a WiFi network connection.

The LNK WiFi Module shall have a user accessible push button for configuration and incorporates a dual green and red color LED for status indicators.

Momentary push button presses shall toggle the LNK WiFi Module's WiFi Access Point (hotspot) Mode functionality ON/OFF.

The LNK WiFi Module shall have a Factory Default settings reset feature that is accessed through the device push button. To execute a Factory Default, press and hold the push button on the LNK WiFi Module for 5 seconds.

The Mobile Apps weather report shall display the current day plus 4 day weather forecast for the target location. The source of weather data is as follows:

- United States: NOAA
- Canada: Environment Canada
- Europe: European Centre for Medium-Range Weather Forecasts (ECMWF)
- Japan: Japan Meteorological Agency
- All other International: METAR

The Mobile Device App shall represent Controllers through "cards" that may be organized into groups. The Mobile App Home Screen contains all Controllers. Users can create additional Controller Groups with selected Controllers. Controller cards can be deleted manually by the user.

The Mobile App Home View Controller cards shall show an image of the Controller with name, type, the number of zones supported and interface icons for Remote, Calendar, Share and Delete features.

The LNK WiFi Module shall support server communications by connecting to (polling) the server on regular intervals. The server check-in interval is every 10 seconds.

The server shall allow Mobile Apps to subscribe to push notifications using Apple Push Notification Service (APNS) or Google Cloud Messaging (GCM).

The Server shall disassociate all Mobile Apps from a LNK WiFi Module that reported an access pass code change.

The LNK WiFi Module shall store a remote access pass code in nonvolatile memory and report an access pass code change to the Server. If a connection to the Server is not available at the time of the pass code change, the LNK WiFi Module shall continue to attempt to report the change until successful.

The LNK WiFi Module has no built-in surge protection and relies on the Irrigation Controller's Electrical Surge Protection features.

## LED Operational States

LED	Indication
Solid red	System booting
3 green flashes at power up	Authentication with Controller confirmed
Flashing red	Not in WiFi Access Point mode and no LAN connection programmed
Alternating red/green/OFF flashing	ON and broadcasting
5 rapid green flashes, followed by regular green flashing	LNK WiFi Module successfully authenticated to WiFi router
Solid amber (orange/yellow)	Factory Default Reset successful

**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

**Specification Hotline**  
1-800-458-3005 (U.S. and Canada)

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

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[www.rainbird.com](http://www.rainbird.com)