

EP4 SmartBridge

Quick Start Guide

EP4 SmartBridge

Water Insight -Irrigation Management System

Revision 02



WATER-INSIGHT

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00	March 2026	First Issue
01	May 2026	Updated Next Steps section included part numbers formatted for A5 booklet
02	June 2026	Minor fixes.

Introduction

About this Guide

The Water-Insight Irrigation Management System (IMS) is an advanced web-based application which creates visibility of farm operations, by allowing you to control and monitor your solid set (fixed grid) sprinklers from anywhere at any time. IMS also offers sensor options that can provide useful data to help support your irrigation decisions and aid with on farm water management.

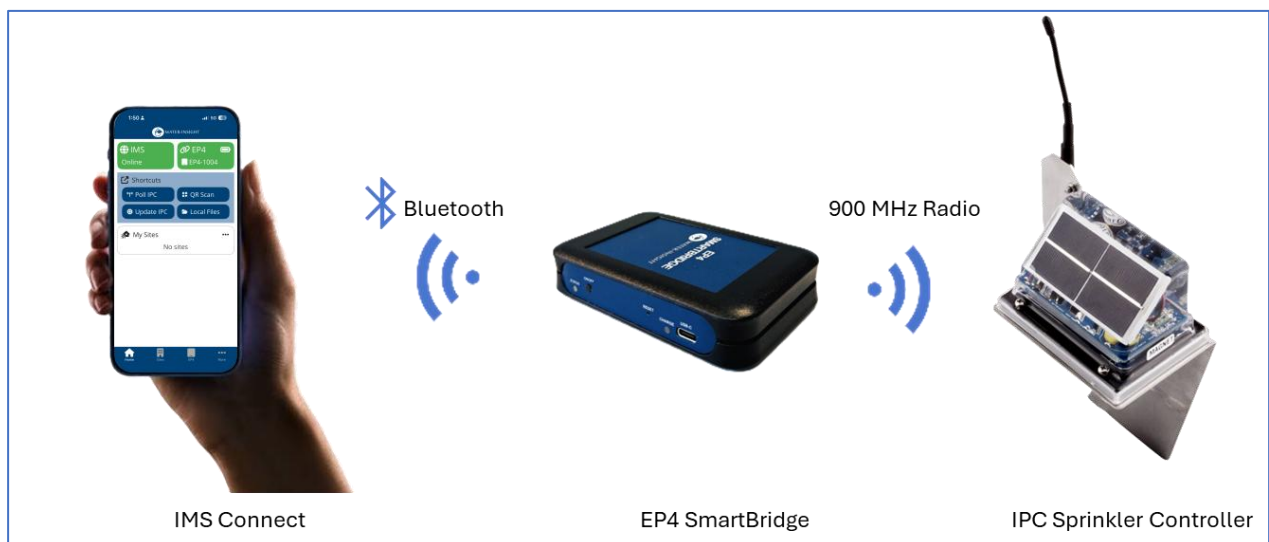
The EP4 SmartBridge is an invaluable field support tool that enables Farmers, Irrigation Installers and experts to configure and schedule Water-Insight irrigation sprinkler controllers (IPC) in IMS or in standalone or systems that are not connected to the IMS cloud application. It is used in conjunction with IMS-Connect, a smartphone application for Android or Apple phones.

This guide is intended to provide a quick “out of the box” introduction to get started with the communicating to an IPC Sprinkler Controller, it assumes some familiarity with the Water-Insight product range and briefly covers:

- Getting started with the EP4 SmartBridge
- Installing IMS-Connect
- Quick Steps to get going communicating with an IPC
- Indicators and their meanings
- Synchronising with your IMS account
- Operating a small, standalone (local) site
- Care and Maintenance of your EP4 SmartBridge



For additional help use the in-app help in IMS connect, refer to water insights online support videos, guides and application notes at www.waterinsight.co.nz or contact QTech support at techsupport@qtech.co.nz



Product Overview

What's in the Box

The EP4 SmartBridge is shipped with the following:

- ❖ The EP4 SmartBridge product
- ❖ A type USB-C cable adaptor, which will plug into a USB type-A socket on your PC, Phone charger, or mains adaptor to charge your SmartBridge
- ❖ A spare magnet for use with IPC Sprinkler Controllers
- ❖ A copy of this guide

The product is not shipped with a mains power charge adaptor because most phone devices now use a USB-C connector and come with a charger that you can also use to charge your EP4 SmartBridge. The device can also be charged from a laptop or PC with a USB Type A socket outlet.

Many vehicles are also now equipped with a USB Charging socket that can also be used. Cigarette lighter sockets in vehicles may be used but an adaptor (not included) is required to convert to the required USB interface.

Product Features

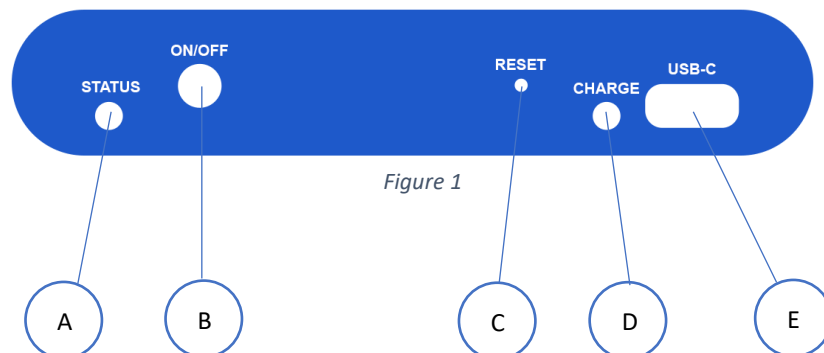
The EP4 SmartBridge is a pocket-sized radio device with a built-in replaceable battery. It can also be operated by connecting the device via a USB cable to a laptop. The Antenna is built-in but the product can be purchased as a separate item, fitted with an SMA antenna connector for externally mounted antennas (e.g. magnetic mount whip antenna for a vehicle).

The device provides both audible and visual cues as to its status for example, to notify you when you are connected to the IMS Connect smartphone application or if the EP4 battery is running low and the device needs recharging.

General features include:

- Lightweight water-resistant case
- Bluetooth 5 (BLE) Smartphone interface
- 915-928 MHz 100 mW ISM Band short range radio with internal antenna
- Internal 1500 mA/hr rechargeable Lithium-ion Battery
- Audio alert beeper

The front panel layout is shown below:



Feature	Function
A	Multi-colour Status LED Indicator
B	Power on/off pushbutton
C	Factory Reset Pin hole
D	Battery Charging LED Indicator
E	USB-C Data cable and power charger Socket

Purchasing options

Part Number	Description
QI2550	EP4 SmartBridge (internal antenna)
QI2550-EA	EP4 SmartBridge (external antenna fitting)
QI2102	Replacement Li-ion Battery (3.7V LiPo 1500 mAh)
PD9232	3 dBm (stubby) Adjustable Antenna (SMA connector)
PD9233	3 dBm Magnetic/Suction Whip Antenna (3m cable, SMA connector)

Operating the EP4 SmartBridge

To turn the device **ON** press the on/off pushbutton briefly. The device will play a short “turning on” tune (if audio output has been enabled) and the Status led will show a blue flashing signal.

To turn the device **OFF** press and hold the on/off pushbutton for about 5s. The device will play a short “turning off” tune (if audio output has been enabled) and the Status led will turn off.

A pinhole aperture is provided to **FACTORY RESET** the device back to its factory settings. Use a paper clip inserted into the hole to press a pushbutton switch for about 2s. Note that this will erase any user-configured settings in the EP4 and revert them back to factory defaults. The settings can be reconfigured using the IMS Connect app. Do not routinely use this feature. It is intended for use when the device becomes inoperable and will not turn on or off, yet the battery is known to be charged. Contact techsupport@qtech.co.nz for further advice.

Other Status indications are as follows:

Event	Status Led	Audio Annunciator
Power on	Blue flashing (Heartbeat)	Four beeps, rising pitch
Power Off	Off	Four beeps, falling pitch
Bluetooth EP4 connected to Phone	Blue flashing (slow flash)	Two beep, rising pitch
Bluetooth EP4 disconnected	Blue flashing (Heartbeat)	Two beep, falling pitch
Radio Activity or firmware upgrade in progress	Short red flash, high rate	none
Bluetooth File Transfer	Short green flash, high rate	None
EP4 battery Low	Blue/red alternating, slow flash	Long beep low tone
Hardware or Firmware Fault	three red flashes in short succession, slow rate	Three beeps, high pitch

When the charge cable is connected to a power supply:

Event	Charge Led	Audio Annunciator
Cable inserted, battery not fully charged	On (red)	none
Cable inserted, battery fully charged	Off	none

Getting Started

What to do

- ❖ Unpack and charge your EP4 SmartBridge
- ❖ Download and install the IMS Connect app to your Apple iPhone or Android phone
- ❖ Pair the SmartBridge to your phone via Bluetooth
- ❖ Verify that it works by checking the status of an IPC Sprinkler Controller

Prepare the Device

When you receive your EP4 SmartBridge device, the battery will have some charge but will need charging for field use. Remove the device from its packaging then plug one end of the Adaptor cable into the device charging socket and the other into your USB charger outlet socket. Charge the device for at least 10 minutes before using, preferably fully charge it.

While the device is charging the LED indicator adjacent to the charging socket on the device will be lit. Once the device is fully charged the LED will turn off and the device can be removed for the charger and is ready for use.

If you have purchased the EP4 SmartBridge with an external antenna, connect the antenna via the supplied antenna cable so that you can test the device.

Install the IMS Connect App

The EP4 SmartBridge operates in conjunction with your Apple or Android Smartphone. Installing the App is best done when you have good internet and WiFi coverage (e.g. at home or in the office).

The Android application is downloaded from the Google Play Store app on your phone (search for Water-Insight IMS Connect).

The Apple IOS Application is downloaded from the Apple App store app on your phone (search for Water-Insight IMS Connect).



Warning. The application uses GPS locations to identify location of IPC Sprinkler controllers on the farm and uses Bluetooth to connect to the EP4 SmartBridge. In addition, the app can use your camera to scan the QR code on an IPC Sprinkler controller to quickly connect to it and communicate. When the app is installed, you will be asked to permit the app to use phone functions for these purposes. If you deny these permissions the app may not provide certain features or ultimately may be unable to communicate with Sprinklers.

Once you have installed the app on your phone tap the app icon and you will be shown the app Home screen (Figure 2). The key features of the Home screen are:

- ❖ At the top the IMS button and the EP4 button show connectivity status to the IMS cloud and to the EP4 SmartBridge, respectively. Green indicates connected and grey indicates disconnected.
- ❖ Below these buttons is an area for shortcuts. Shortcuts allow you pin common tasks to the Home screen instead of navigating through the app to get to them. Initially, there may only be one or two shortcuts
- ❖ Below Shortcuts is a list of your Sites. Sites are blocks of IPC Sprinkler controllers that you regularly control and configure This area is initially empty until you either create a site or

synchronise to your farm site in IMS. This topic is covered in the IMS Connect in-app help (https://ims.qtech.co.nz/downloads/ims_connect_help.pdf).

- ❖ Below the My Sites area buttons may appear on the screen to direct you to perform certain functions. E.g. Tap the Connect EP4 button to connect to the EP4 SmartBridge
- ❖ At the bottom of the home screen there is space for a number of application navigation icons:
 - Tap the Home icon to go to the Home screen from wherever you are in the app.
 - Tap the Sites icon to list and configure your sprinkler sites
 - Tap the EP4 icon (which appears when you are connected to the EP4 SmartBridge) to configure and control the device
 - Tap the More icon (three dots) to access advanced features and additional menu items
- ❖ Other icons shown in the app (both shown below but present on other screens) include:
 - a Back Arrow icon to take you back to the previous screen
 - a Cog icon to allow you to change the configuration settings of an object (such as an IPC)
 - a Sync icon to allow you to resynchronise your device to the IMS cloud application
 - a Cloud icon to indicate if data is queued for pending upload to the IMS cloud

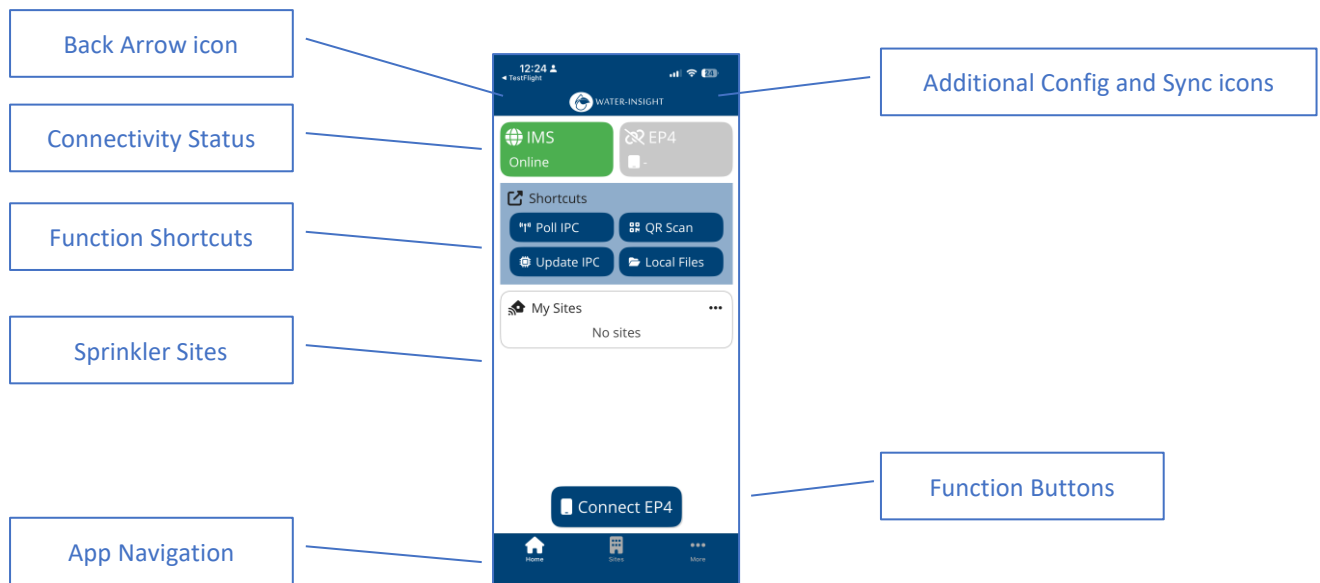


Figure 2

Connect to EP4 SmartBridge

Make sure the Bluetooth function on your phone is turned on. Once you have installed the IMS Connect App place the EP4 SmartBridge nearby and press the power on/off button briefly to turn it on. Note if you press and hold the power button for about 5s then the EP4 SmartBridge will turn off.

Using the IMS Connect app with the EP4 turned on, tap either the Connect EP4 function button (Figure 3) or the EP4 connectivity status button at the top of the Home screen. This will take you to the EP4 Connect Screen.

Your new device will be listed under other devices with just the name "EP4". This is the default name for new devices. Later you can give the Device a nickname Like "Jane's EP4" or in the case of the example below "EP4-1004" which will make it easier for you to chose in future. Also, the app can be set to automatically connect to the EP4 SmartBridge whenever it is turned on. (see the section on personalising your system).

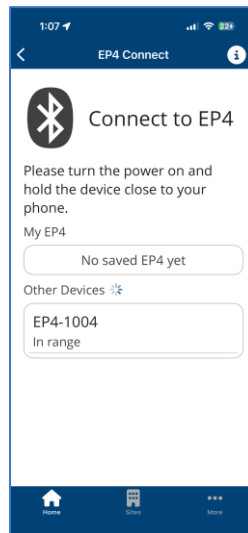


Figure 3

Tap on the name of your EP4 device in the other devices list. This will then connect your phone to the device and you will hear a tone and the status LED on your EP4 will change to flash more slowly.

Tap the Home icon at the bottom to go back to the Home screen. The EP4 connectivity status will now be green. And a small battery indicator will show the battery charge state of the EP4. If it is red then you should charge your EP4 until it is full by connecting the device to your charger using the USB – C cable to the EP4 charger socket.

The next time you use IMS Connect and your EP4 SmartBridge, your Device should be listed under “My EP4”. Tap the name to connect back to the app.

When the EP4 is connected, an additional icon appears next to the Sites icon at the bottom of the screen. Tapping this icon allows you to view and change the EP4 configuration.

Verify by communicating with an IPC.

The final step to checking your product works is to use IMS Connect to communicate with a Water-Insight IPC sprinkler Controller with the EP4 SmartBridge acting as the go-between.



Figure 4

Testing with an IPC is best done with a V5 IPC (running version 5 firmware). If you have an IPC that is known to be working, you can check its status using the IMS Connect App. The test also works best if your phone has cellphone coverage (you have enough bars in the signal strength to make a phone call).

Don't try this test with a unit that may have a fault, use a good IPC unit so that you can check your EP4 and App are working.

Follow these steps:

1. First check that your EP4 SmartBridge is on and connected to the App.
2. Tap the **"Poll IPC"** shortcut on the Home Screen (Figure 2)
3. Enter the serial number of the IPC (as printed and visible inside the unit)
4. The app will search IMS to retrieve the radio information for the IPC and will list the device serial number when found
5. Tap the serial number found in the search results, this will take you to the next screen which lists device information (the Device screen)
6. Tap the **poll status** button this will commence radio communications with the IPC. The App will try all the radio channels until it finds a radio channel on which the IPC responds. When it does the current status of the IPC will be listed in the status results area (Figure 5)

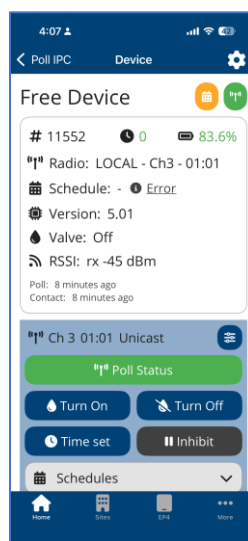


Figure 5

If your IPC is running legacy firmware (version 3 firmware) there are additional steps required to communicate with older devices, which use a slightly different communication protocol.

Perform steps 1 to 5 as above then:

6. Tap the **cog** icon at the top of the screen to change the IPC configuration then Tap the **Type** button
7. Select type **IPC_V3** from the list then tap **OK**.
8. Tap the **Save** button then tap the **back arrow** icon to return to the Device screen
9. Now tap the **Poll Status** button and a search for of radio channels will commence to find and retrieve the status from the IPC.

Next Steps

If you can get the status of an IPC then that is enough to show that you are up and running and ready to set up to check your entire site. At this stage you should **refer to Online user guides for the App or videos and tutorials on the Water-Insight web site** under support.

Synchronising with your IMS account

Readers of this section will be familiar with using the IMS Cloud application to communicate with IPC sprinkler controllers via the on-farm IMS Gateway. For more information contact Water-Insight.

If you have an IMS subscription account, then you can synchronise your farm irrigation system with the IMS Connect app and use the EP4 SmartBridge to connect to your Sprinkler controllers in addition to using the IMS Gateway.

Use the Sites icon and tap **Import IMS Site** to start the procedure to connect to your Farm in IMS. You will need to login to IMS with your account information to complete this process.

Creating a small, Standalone (local) site

IMS Connect can be used to create your own Site and add IPCs to it. These sites are called local sites and they are stored only on your phone and data is not synchronised to the IMS Cloud. You do not need an IMS account to create a local site.

Creating a local site is useful when installing a new site or simply familiarising yourself with IMS Connect and the EP4 SmartBridge.

Use the Sites icon then tap **Create Manually** to start the process of making your own fixed-set site. You will not need an IMS account to complete this process. Any sites you create will be accessible only on your phone but can be exported for later import to IMS.

Connecting to Legacy or other Managed Sites

For existing sites that are currently managed using the EP3 Handheld IPC configuration tool and Scheduled using applications such as RX Plastic's RX PodScheduler (RXPS) or QTech's IPC manager (IPCM)¹, there are several pathways for using the EP4 SmartBridge and IMS-Connect:

Sites created and managed in RXPS must use RXPS when making additions and alterations to the site e.g. adding or swapping or scheduling IPCs. From RXPS the data can be interchanged with IMS when migrating the farm to use an IMS gateway. The interchange can also be used to export from IMS to RXPS to use the scheduling features offered by RXPS.

From RXPS the data interchange format can also use the IMS Cloud Online conversion utility to generate a QR code to download the Site data to IMS-Connect on your phone. This tool is free to use and simplifies the process of transferring data from third party schedulers to IMS-Connect. The conversion utility can be found here: <https://ims.qtech.co.nz/ep4-exchange>

If you only have a set of Podlist and schedule files on an SD memory Card, the Online utility can also convert these, ready for download to IMS Connect on your phone.

Legacy sites using an older IPC communication protocol (V3) can still be handled in IMS-Connect but because they use an obsolete version of the radio protocol, they will not support new features. These sites can still be upgraded to the current protocol (V5) by upgrading the firmware in the IPC using IMS-Connect and EP4 SmartBridge.

In IMS-Connect you can also export data for purposes such as backing up your personal sites or getting a site that you have created ready for import to IMS. This is useful for installers who "build sites as they go". These processes are detailed in the Water Insight web site support area.

¹ Qtech IPC Manager has been retired and the IMS Cloud application is now used for Scheduling IPCs

Care and Maintenance



WARNING

- DO NOT connect mains voltages to this product
- DO NOT operate the device without an antenna attached. Failing to comply with these requirements can damage the device. This applies only to models offered with external antenna connections.
- DO NOT substitute antennas; use only those antennas recommended by the manufacturer
- DO NOT immerse the product in water, avoid direct exposure to strong water blasts
- AVOID dropping the unit on hard surfaces or knocking (impacting) the device with hard objects
- DO NOT use the product in close proximity to medical devices including but not limited to pacemakers and hearing aids.
- AVOID opening the device and touching components to avoid damage via electrostatic discharge
- DO NOT remove the battery by pulling directly on the wires to remove the connector.
- AVOID using the device in a pocket that also contains magnetic or metallic objects. This may reduce the performance of the radio.



NOTICES

- For optimal use, recharge the unit on a regular basis. Use only 5Vdc power supplies via the USB interface.
- Replace battery only with a battery supplied by the manufacturer.
- If the device has been immersed in water while operating, it may be damaged. Carefully disconnect the battery, remove and dry the device (in sunlight or a warm cupboard) and return to factory for assessment if the device fails to operate.
- For best radio range use the device oriented vertically along the long axis with the power on/off button at the top

Specifications

Specifications are subject to change without notice.

Item	Parameter	Specification
General		
	Dimensions	Approx. 117 x 73 x 24 mm
	Weight	130 gm
Environmental		
	Temperature	Operating: 10 - 65 degrees C Storage 0 - 65 degrees C (vacuum sealed)
	Humidity	30 - 50% RH
	Ingress Protection	IP54
Electrical		
	Battery	Li-ion 3.7V (nominal) 1500 mAHr
	Charge	5 Vdc 450 mA via USB (type C connector)
Radio	Regulatory	ISM band, AS/NZS 4268
		Bluetooth 5.3 LE ISM Band 2.4 GHz
	Antenna (internal)	3 dBi
	Antenna (external)	Detachable, SMA (option)
	Operating Frequency	915 – 928 MHz
	Output power	0.1W (20 dBm) Max.
	Modulation	GFSK
	Performance	Outdoor line of sight up to ~400m (with supplied internal antenna) Outdoor line of sight up to ~1km (with external 6dBi Whip antenna) Outdoor line of sight up to ~3km (with external 9dB Yagi antenna) Distances are indicative only and terrain dependent
Interfaces		
	Inputs	Power on/off: momentary PB, Factory Reset: momentary PB (pinhole)
	Outputs	Status LED Charging Active LED
Communications		
	USB 2.00 (C)	Charging and Device management and configuration via dedicated software by QTech

Warranty

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The hardware and software for this product is covered by the QTech Limited Warranty Agreement and software End User License Agreement, respectively.

Please refer to the QTech Limited Product Warranty Agreement, which may be downloaded from the QTech website: www.qtech.co.nz

QTech Data Systems Limited does not warrant the suitability of this product for any particular application as the conditions in which it is used are beyond our control. This is not withstanding warranty of merchantability.

Additional Information and Support

If you have problems, try the following:

- Visit the Water-Insight web site for application notes and guides
- Contact the support desk at techsupport@qtech.co.nz
- Phone the support desk, contact details at beginning of this document

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