

# **Application Notes**

Rev 01

# AN11 - INC – Bootloader Firmware Upgrade Procedure

#### Introduction

This document describes how to upgrade the Bootloader Firmware in the Irrigation Network Controller (INC). Application firmware is upgraded using the touchscreen interface on the INC (Refer to INC user guide).

## **Equipment Required:**

- Water-Insight Workbench V2.05 or later running on Windows laptop or similar device
- USB cable A-B
- Jumpers (usually sitting on one of the ISP pins on the INC main board)

#### Procedure

The upgrade procedure should be undertaken by professionals trained in the handling of electronic products from Water-Insight. At all times please use practices for avoiding static discharge onto the device including:

- Handling the board as little as possible and only at the edges
- Ensuring that you ground yourself to reduce the risk of static discharge prior to handling the device

Step	Procedure	Notes
1	Turn off the power to the INC	
2	Carefully remove the case lid of the INC. There are no screws to remove.	
3	Locate the In-System-Programming (ISP) jumpers and insert the jumpers	
4	Turn on the power to the INC	

5	Connect the USB cable to the laptop and launch Water-Insight Workbench software	QTech Workbench v25     File Device Type Help	
		Offline     Connect       IV AL 4 Pus     IV Overview     RTU Clock 01 Jan 0001 00:00:00       Power Supply Aam     Sand Muhor     Replacative Vesion       Power Supply Aam     Sand Muhor     Power Supply Aam       Power Supply Aam     Power Supply Aam     Power Supply Aam       Power Supply Aam     Power Supply Aam     Power Supply Aam       Power Supply Aam     Power Supply Aam     Power Supply Aam       Power Supply Aam     Power Supply Aam     Power Supply Aam       Power Supply Aam     Power Supply Aam     Power Supply Aam       Power Supply Aam     Power Supply Aam     Power Supply Aam       Power Supply Aam     Power Supply Aam     Power Supply Aam       Power Supply Aam     Power Supply Aam     Power Supply Aam       Power Supply Aam     Power Supply Aam     Power Supply Aam       Power Supply Aam     Power Supply Aam     Power Supply Aam       Power Supply Aam     Power Supply Aam     Power Supply Aam       Power Supply Aam     Power Supply Aam     Power Supply Aam       Power Supply Aam     Power Supply Aam     Power Supply Aam       Power Supply Aam     Power Supply Aam     Power Supply Aam       Power Supply Aam     Power Supply Aam     Power Supply Aam       Power Supply Aam     Power Supply Aam     Power Supply Aam	
6	Select the <u>SAC</u> device type in Workbench	QTech Workbench v2.5      File     Device Type     Help     Cellular Data Logger     DATRAN XL4 RTU     DATRAN XL4 Plus RTU     RTU     CICk	
		Multi Point Controller     Overview       QTech Digital Radio     Fmware Version     v???       Radio Access Controller     MAC Address     ?????       Radio Access Controller V3     Product Id     ????       Security Access Controller     Product Id     ????       SAC-Q50     Daylight Saving     No       Wireless Data Logger     In Daylight Saving     No       Wireless Point to Point     DLS Start Date     Unknow       Use End Date     Unknow     US Start Date       SMS Lite     Image: Start Saving Address     Image: Start Saving Address	
7	<ul> <li>Select the Firmware Upgrade Category</li> <li>Browse to locate the firmware upgrade file supplied by Water-Insight.</li> <li>Click the program button</li> </ul>	Qefech Workbench v2.5             File             PericeType             Help                  PorticeType             Help                 Offline               Configuring: Security Access Controller                 Categories               Orenriew                 Categories               Communications                 Categories               Communications                 Vio Depansion Configuration               Waring: Do red discomment Mai are programming.                 Waring: Do red discomment longers               Waring: Do red discomment Device whiat it is                  programming                 Worky after program               Wart on Douellow                 Worky fore program               Worke to Device	
8	<ul> <li>Once programmed and verified turn off the power to the INC.</li> <li>Remove the ISP jumpers</li> <li>Replace the case cover</li> <li>Turn on the power</li> <li>Using Workbench click the connect button to establish a connection to the unit</li> <li>Click the overview category. It should populate with the device configuration thus verifying that it is operating</li> </ul>	Note: When the power is turned on the INC CPU OK LED should be blinking to indicate normal operation.	

### Notes

Upgrading the firmware should not result in the loss of configuration data. However, the settings shown in workbench should be checked and reconfigured if necessary.

Do not set factory defaults unless instructed to by Water-Insight support.

For more information contact Water-Insight support@waterinsight.co.nz