

## FlowStation™

The FlowStation with V3.5 firmware is a powerful shared flow controller that allows up to 20 BaseStation 3200 irrigation controllers to share water resources. Whether you have one large mainline across a property, or you are combining controllers across multiple mainlines, the FlowStation offers the features and flexibility to tackle the job.

With the FlowStation, you can share water sources and control points and have each control point assigned to a shared mainline. The FlowStation will intelligently manage each mainline and allocate water resources among the connected BaseStation 3200 controllers.

### Display Features

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- High contrast 3.25" backlit mono LCD screen
- Screen resolution 128x64 pixels
- Screen LCD brightness of 250 lumens for easy viewing in direct sunlight

### FlowStation Features

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The FlowStation can share:

- Water resources with as many as 20 BaseStation 3200 irrigation controllers
- Up to 20 separate water sources
- Up to 20 separate control points
- Up to 40 separate mainlines

### Programmable Features

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You can assign the shared water sources, control points, mainlines, and BaseStation 3200 irrigation controllers from the FlowStation main display or from Baseline's FlowStation App™ (with a paid subscription).

**Note:** For more information about the FlowStation App, refer to Baseline's Central Control Technical Specification.

## Water Sources

You can set up the water sources from the FlowStation main display or from the FlowStation App.

- Enable/disable each water source
- Set a priority for each water source. The priority setting controls how water is allocated to controllers.
- Set a water budget limit for each water source and set the water source to shut down if the water budget is exceeded
- Set up an empty condition for the water source. Water sources have empty conditions monitored by moisture sensors, event switches, and pressure sensors

## Control Points

You can set up the control points from the FlowStation main display or from Baseline's FlowStation App.

- Enable/disable each control point
- Set a target flow for each control point
- Set flow limits for each control point
  - Set a limit for high flow through this control point
  - Set the control point to shut down if the high flow limit is exceeded
  - Set a limit for unscheduled flow through this control point
  - Set the control point to shut down if the unscheduled flow limit is exceeded
- Set up pressure limits for each control point
  - Set a high pressure limit on this control point
  - Set the control point to shut down if the high pressure limit is exceeded
  - Set a low pressure limit on this control point
  - Set the control point to shut down if the low pressure limit is exceeded

## Mainlines

You can set up the mainlines from the FlowStation main display or from Baseline's FlowStation App.

- Enable/disable each mainline
- Set a maximum flow limit for each mainline. The flow is dynamically allocated to the controllers.
- Set a priority for each mainline
- Specify the pipe fill stabilization for each mainline in seconds or by pressure (PSI)
- Set basic and advanced flow variance parameters for each mainline
- Set delays for zones on each mainline

## Hydraulic System Configuration

In the FlowStation, you can assign the following hydraulic system components:

- Water source to a control point
- Control point to a mainline
- Mainline to a mainline
- Mainline to a control point

## Reports

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### Controller Status

- Status of each connected controller
- Controller number
- Controller serial number
- Controller MAC address
- Requested/Assigned Flow (alternates every 30 seconds)
- Requested/Assigned Concurrent (alternates every 30 seconds)
- Controller description

### Controller Mainline Status

- Status of each controller mainline
- Controller mainline number
- Requested/Assigned Flow (alternates every 30 seconds)
- Requested/Assigned Concurrent (alternates every 30 seconds)

### Booster Pump Status

- Status of each booster pump
- Booster pump number
- Booster pump description

## Control Point Status

- Status of each control point
- Control point number
- Control point reported GPM flow rate
- Control point reported usage in gallons
- Control point reported PSI
- Control point description

## Water Source Status

- Status of each water source
- Water source number
- Total usage reported from all assigned control points
- Water source description

## FlowStation Messages

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Messages notify you when something in your system needs your attention, such as an error on the controller that affects all programs, a disconnected controller, or a flow fault.

## BaseStation 3200 Features for Shared Flow

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**Note:** Complete details for the BaseStation 3200 irrigation controller are found in the BaseStation 3200 Technical Specifications.

## Operating Features for Shared Flow

- When a start condition is met for any one of the BaseStation 3200's shared schedules, the controller requests water from the FlowStation. If the FlowStation determines there is adequate water available, it will allocate the water to the requesting controller's schedule. If water is not available, the schedule will wait until the FlowStation allocates water before it begins.
- The FlowStation allocates water based on the priority setting for the shared water sources.
- Booster pumps that are configured on the BaseStation 3200 and assigned to the FlowStation can be started when water is used from the shared control point.
- If a shared control point has a high flow or high pressure shutdown event, the controller will shut down the control point and notify the FlowStation immediately.

- If a configuration change is made to the BaseStation 3200, the change will be sent to the FlowStation.
- When a control point is assigned to the FlowStation, it maintains all the settings that were assigned on the BaseStation 3200 except priority and rationing.

## **Programmable Features for Shared Flow**

- In the BaseStation 3200, the user can assign any/all of the following hydraulic components to the FlowStation:
  - Water sources
  - Control points
  - Mainlines
- When the hydraulic component is assigned to the FlowStation, it is known as a “shared” resource and is labeled with “Managed by the FlowStation.” When the hydraulic component is assigned to the BaseStation, it is known as a “local” resource and is labeled with “Managed locally.”

## **FlowStation System Backup & Restore**

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- You can export all FlowStation data to a USB flash drive or to BaseManager (with a paid subscription).
- You can also restore all FlowStation programming information directly from a USB flash drive or from BaseManager.

## **Communication Requirements**

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- The FlowStation shall require an IP address on the local area network (LAN) or a cellular network to communicate with each BaseStation 3200 in the shared flow group.
- In the shared flow group, the BaseStation 3200 shall be capable of using a static IP address or it can operate in DHCP mode.
- Each BaseStation 3200 shall be assigned to a FlowStation by programming the IP address of the FlowStation into the controller at the controller interface or remotely in the cloud.
- A single BaseStation 3200 can facilitate communication to a FlowStation device using a local area network (LAN) or using cloud-based communication.
- Where an existing network is not available, a radio network can be set up using Baseline Ethernet Radios, Cellular Modems, Wi-Fi communication modules or the Cloud Network Module. Access to the internet is not required.
- For more information, please see Baseline’s Ethernet Radio Technical Specification and Wi-Fi Module Technical Specification.

## Information Security Controls

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The FlowStation includes information security controls that enable secure networking with other Baseline products.

To learn more about the FlowStation security controls, refer to the Baseline Security Controls Technical Specification available on the Baseline website.

## Electrical Specifications

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### Power Specifications

The FlowStation comes standard with a 120 VAC transformer, which has apparent power of 12 VA.

### Surge

- Up to 5 levels of surge protection built into the controller boards
- Minimum surge response time of 1 picosecond

## FlowStation Enclosure Options

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### “X” Cabinet—Wall Mount Enclosure

- Dimensions: 15.50” x 12.38” x 6.40”
- Powder-coated, 16 gauge steel

### “XS” Cabinet—Wall Mount Enclosure

- Dimensions: 15.50” x 12.38” x 6.40”
- 16 Gauge, 304-grade stainless steel

### “P” Pedestal Enclosure

- The FlowStation is an add-on module for a BaseStation 3200 controller in a “P” enclosure
- Dimensions: 17.38” x 36.25” x 12.63”
- 16 Gauge, 304-grade stainless steel

### “PSS” Super Strong Pedestal Enclosure

- Dimensions: 16” x 38” x 15.5”
- 16 Gauge, 304-grade stainless steel

## Enclosure Notes

- FlowStations in the “X” and “XS” enclosures are large enough to hold the controller and a communication module. The communication module will be built into the enclosure by the factory when ordered together.
- Baseline recommends that “X” or “XS” enclosures be specified when a wall-mount enclosure and communication modules are required.
- The FlowStation is not available as a stand-alone unit in a pedestal enclosure. It can be installed as an add-on module in a BaseStation 3200 pedestal enclosure.
- When adding a FlowStation into the enclosure of a BaseStation 3200 pedestal, the communication module should be specified as part of the controller. Refer to the BaseStation 3200 Configuration and Specification Guide for more information.

## How to Specify

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### Start with the FlowStation:

BL-FLOWSTN

### Designate the enclosure for the FlowStation with one of the following codes:

‘-X’, ‘-XS’, ‘-P’, ‘-PSS’

### Specify the number of BaseStation 3200 irrigation controllers:

BL-3200

### Designate the enclosure for each BaseStation controller with one of the following codes:

‘-X’, ‘-XS’, ‘-P’, ‘-PSS’

**Add a communication option:**

**Note:** Communication modules may also be ordered separately. Ethernet is included with all FlowStations.

**4G LTE CELL MODEM**

BL-CLOUDFS-LTE-AT-X  
 BL-CLOUDFS-LTE-VZ-X  
 BL-CLOUDFS-LTE-AT-P  
 BL-CLOUDFS-LTE-VZ-P  
 BL-CLOUDFS-LTE-AT-PSS  
 BL-CLOUDFS-LTE-VZ-PSS

**2.4 GHz Wi-Fi**

BL-CLOUDFS-WFE-X  
 BL-CLOUDFS-WFE-P  
 BL-CLOUDFS-WFE-PSS

**Ethernet Radio**

BL-ER-X  
 BL-ER-P

**Example:**

BL-FLOWSTN-X  
 BL-CLOUD-LTE-VZ-X

This customer is getting a FlowStation in an X-cabinet. They are going to use the Cloud Network Module with the Verizon Cell Modem installed in an X-cabinet.

## Warranty

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- The FlowStation and installed equipment carry a standard warranty of 5 years from date of installation.
  - Please review the Baseline Warranty Statement available on the Baseline website ([www.baselinesystems.com](http://www.baselinesystems.com)).
- The user can apply for an extended warranty of 10 years from date of installation. Approval of the extended warranty is based on:
  - Fully completed extended warranty application
  - Successful site inspection completed by an authorized Baseline representative
- The extended warranty includes coverage of surge damage, even from a direct lightning strike.
  - Surge protection equipment must be installed according to specification.