

SmartPID - Brewfather

integration guideline





Brewfather vs SmartPID



Brewfather is one of the best platform for recipe design and brewing experience on both desktop and mobile devices. With a modern design that is easy to use interface allows any hoberwer to design the recipe and manage the brewday



SmartPID is a powerful and flexible controller for complete BIAB/RIMS brewing process automation and recipe management as well fermentation temperature control. SmartPID is wifi connected for data logging and remote process control via web and mobile

Design

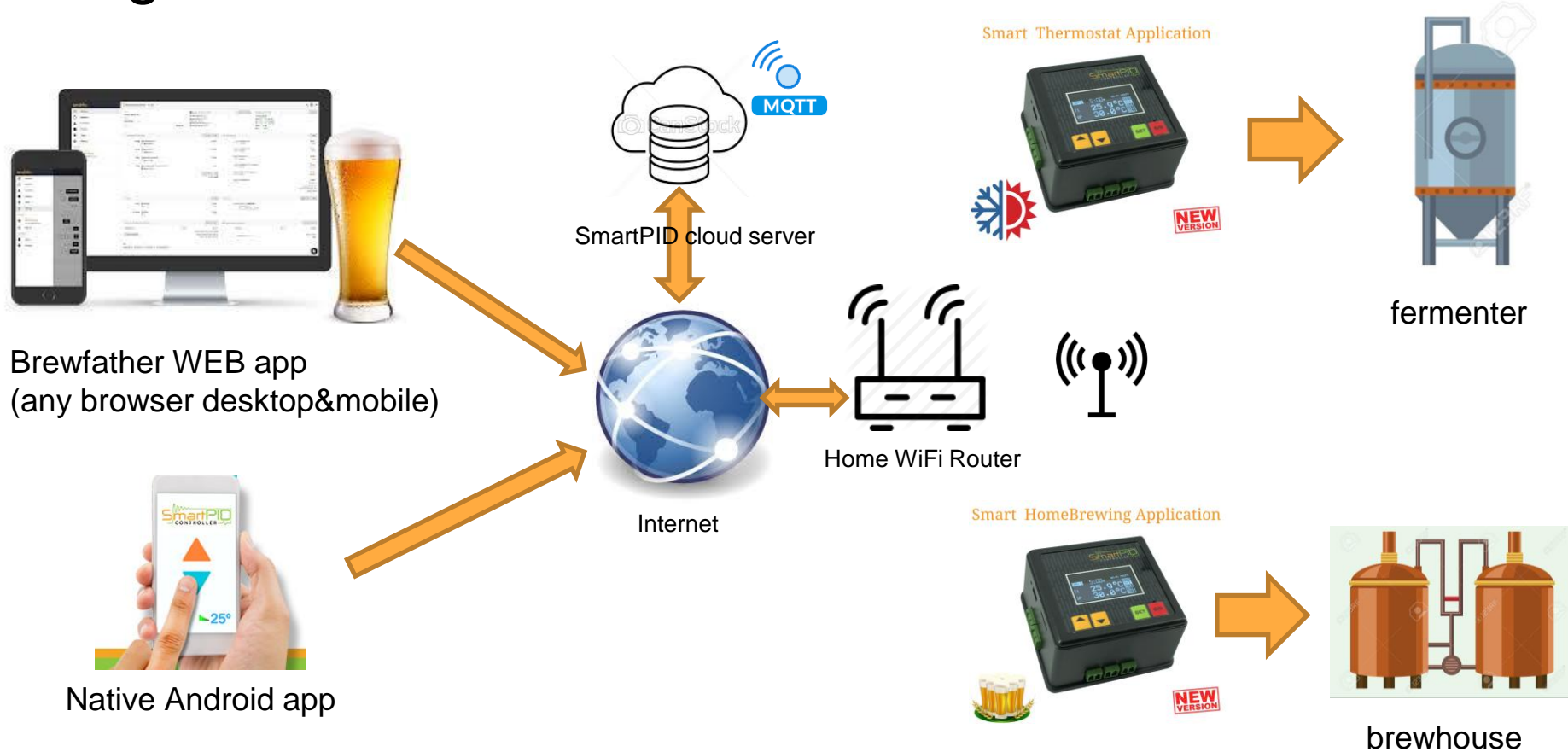
Plan

Execute

Track

Analyze

Integration architecture



Integration features

The integration of the physical process controller and the design tool enable lot of feature and functions

- Smart Hombrewing Application

- Remote monitor of process parameters (set point, current temperature, PID out, pump status, timers)
- Process events notification and alarms
- Remote actions (process start/stop pause/resume, set point change, power change, pump start/stop)
- Recipe definition and upload for execution

- Smart Thermostat

- Remote monitor of process parameters (set point, current temperature, PID out, timers)
- Process events notification and alarms
- Remote actions (process start/stop pause/resume, set point change..)
- Fermentation profile definition and upload

(*) premium features

Pre-requirements

In order to perform the integration specific Firmware level is needed on smartPID
NOTICE that both classi **DIN box** controller and new **CUBE** version are fully compatible with BrewFather

Smart Homebrewing ⇒ version 1.3-010

Smart Thermostat ⇒ version 0.5-014

Download the FW from the [wiki page](http://smartpid.com/wiki-page/) on the web site and upgrade as usual

<http://smartpid.com/wiki-page/>

Integration logical steps


Signup or login Brewfather account (30 days free premium)



Enable SmartPID controller in the brewfather settings



Register SmartPID account

- If you have a SmartPID account (android app) you can sign in using it
 - if you don't have a SmartPID account you can register new one (and you can use on android app)
- 

Signin with your account and add your device via serial number

FOR THE SMARTPID CONTROLLER WIFI AND MQTT SERVER CONFIGURATION PLEASE REFER TO THE SPECIFIC GUIDE

http://smartpid.com/wiki/doku.php?id=demo_tutorials

1. Login/Sign Up Brewfather account

open <https://web.brewfather.app>

Singup for a new account

or

Login with your Brewfather credentials

Please sign in to

Brewfather

Email

Password

LOGIN

SIGN UP

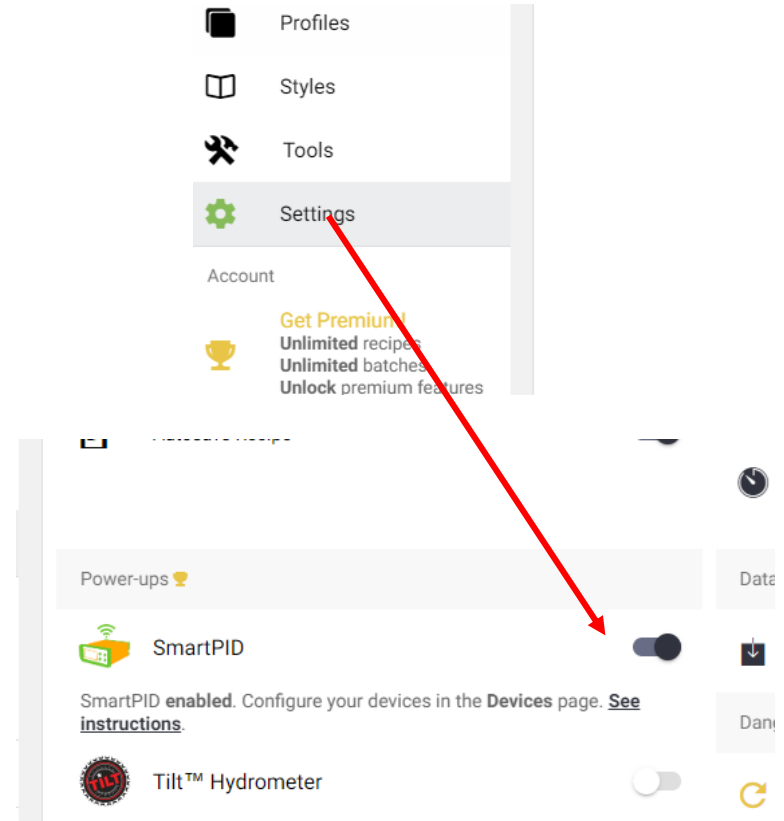
[forgot your password?](#)

or click to sign in with...

2. Enable SmartPID controller

Open Settings page

Enable SmartPID controller



3. Register SmartPID account

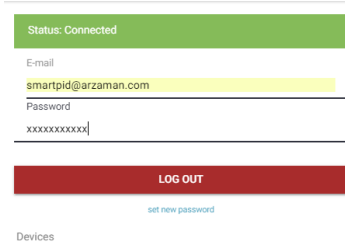
go to devices page

click on configure

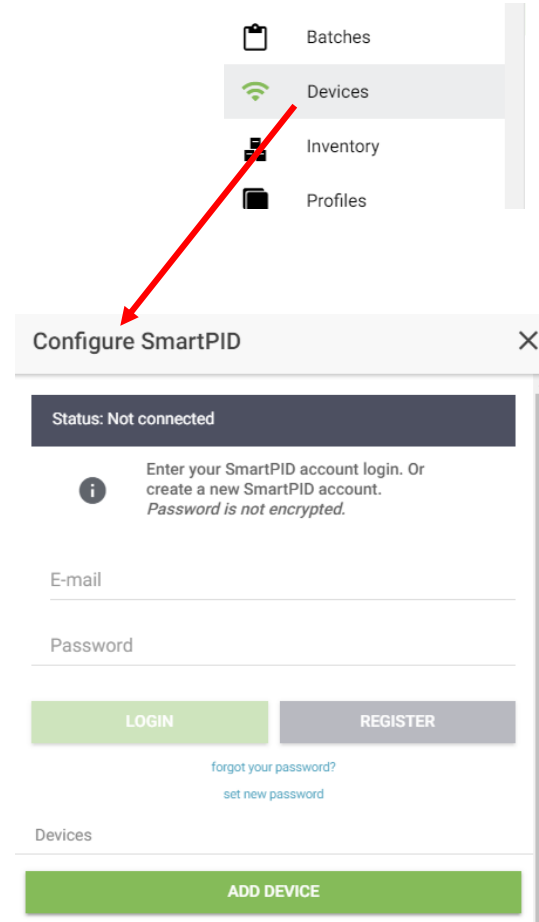
1. register for a new account
2. login with existing account credentials

if the registration is successful you get notification

Status: connected



Notice that account administration is common with native android app



4. Add new smartPID controllers

from configure window click “add device”
button

Insert a name for your smartPID controller

Select the proper application (homebrewing
/ thermostat)

enter the 14 characters serial number

enable CH1 and/or CH2 monitor

Save to add to your device list

Configure SmartPID

Configure SmartPID Device

Name
My SmartPID

Serial NO
03000103843913

Mode

- Homebrewing
- Thermostat

Enter the 14 character serial number

Channel 1
Name

Channel 2
Name

CANCEL SAVE

Operational Mode - Homebrewing

Remote commands

Monitor dashboard MASH

Monitor dashboard HLT

Events notification

Updated just now Smart HomeBrewing Manual

STOP PAUSE RESUME PUMP ON
PUMP OFF

MASH

Manual

Temperature °C	Set Temp °C	Power %
22,7	24,0	19

Pump OFF Total Time 11d 03:40:19

SET TEMP SET POWER SET DURATION

HLT

Manual

Temperature °C	Set Temp °C	Power %
22,9	40,0	0

Total Time 11d 03:40:19

SET TEMP

Events	
00:33:45	Resume
00:33:42	Pause

Process parameter settings


Operational Mode - Smart Thermostat

Remote commands

Updated just now Smart Thermostat Standard

▶ START **■ STOP** **⏸ PAUSE** **▶ RESUME**



Monitor dashboard CH1

Heating 

CH1 Fermenter 1


Temperature °C	Set Temp °C	Power %
22,2	25,0	41

Total Time	Step Countdown
9d 23:12:24	05:00

 SET TEMP  SET DURATION

Process parameter settings



Monitor dashboard CH2

Heating 

CH2 Fermenter 2

Temperature °C	Set Temp °C	Power %
22,2	40,0	0

Total Time	Step Countdown
9d 23:12:24	05:00

 SET TEMP  SET DURATION

Events notification

Events **Resume (just now)**

Recipe Management (mashing)

Go in your recipe design page - section Mash Profile

Click on change and select from the template list the **Mash steps template**

Go to edit section and fill all the time/temperature value pairs

NOTE is important you **fill ALL steps** eventually setting time to 0 min to skip one step

Select Mash Profile

High fermentability 65°C ★

High fermentability plus mash out 65°C → 75°C

Mash steps template 35°C → 75°C

Max fermentability with highest yield 63°C → 70°C

Medium fermentability

Mash Profile (Mash steps template)

Strike Temp	73.1 °C	
Phytase	35 °C	0 min
Glucanase	45 °C	0 min
Protease	55 °C	0 min
B-amylase	65 °C	0 min
A-amylase 1	68 °C	60 min
A-amylase 2	70 °C	15 min
Mash out	75 °C	15 min

Estimated Final Gravity: 1.010
Apparent Attenuation: 76.1%
Alcohol By Volume: 4.3%

Recipe Management (boil-hop addition)

Go in you recipe design page - section HOPS

click on ADD button and insert your hops and time referring to boil duration

Hops (75 g)		+ ADD
5 g 0.22 g/l	Summit 17.0% 10.3 IBU	60 min Boil
20 g 0.87 g/l	Saaz 3.8% 5.9 IBU	15 min Boil
5 g 0.22 g/l	Amarillo 9.2% 3.6 IBU	15 min Boil
20 g 0.87 g/l	Saaz 3.8% hopstand 2.7 IBU	20 min Aroma
5 g 0.22 g/l	Amarillo 9.2% hopstand 1.6 IBU	20 min Aroma
20 g 0.87 g/l	Amarillo 9.2%	7 days Dry Hop

Recipe upload and process start

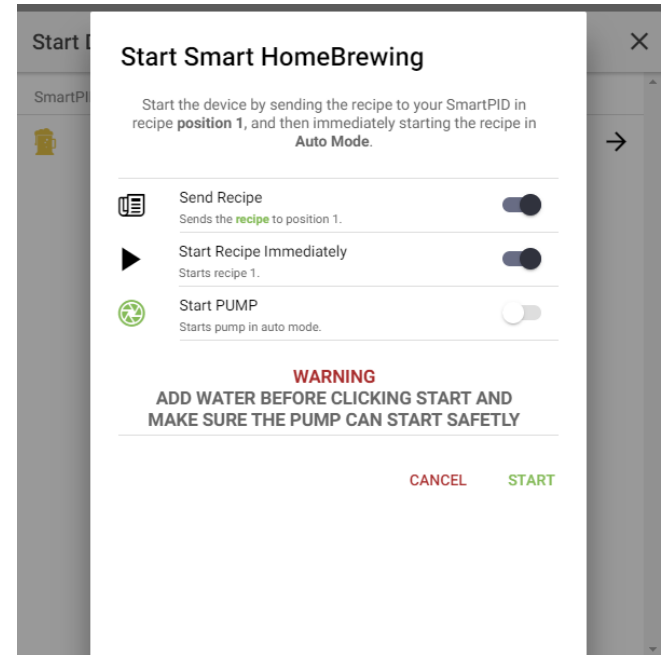
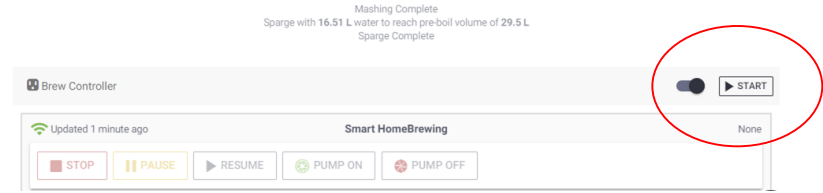
Go to batches page - brewing tab

click on the start button

select your homebrewing controller from the list

Flag the proper options and press start to push the recipe to SmartPID controller and if necessary start the recipe execution

NOTE recipe is saved always in position 1 in the controller and override any recipe entered manually in that position




Fermentation Profile definition

Go to batches page - Fermenting tab

click EDIT button

Enter your fermentation profile in terms of set point temperature and duration and ramp (0 means instant change)

 Fermentation Profile EDIT

Primary – 20 °C – 14 days

Fermentation Start	Bottling Date
Jan 23, 2019	Feb 6, 2019

Edit Fermentation Profile ★ ×

Profile Name
Ale Pressurized

Step 1 ↓ ×

Type
Primary ▼ Temp (°C) 20 Days 2

Ramp (Days)

Step 2 ↑ ×

Type
Primary ▼ Temp (°C) 15 Days 1

Ramp (Days)

+ ADD STEP CHANGE SAVE

Fermentation Profile upload and process start

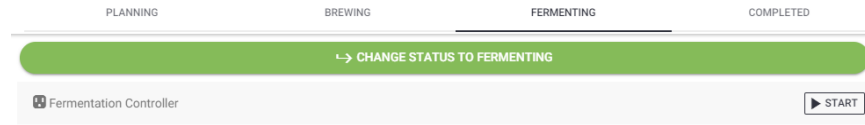
Go to batches page - Fermenting tab

In the “fermenting controller” section click on START

Select mode Advanced for the profile upload or standard for single set point control

Select the profile defined (advanced only) for each control channel and press start

NOTE profile is saved always in position 1 in the controller and override any profile entered manually in that position



Start Smart Thermostat

Mode

Standard



Advanced



CH1 Profile

SELECT CH1 PROFILE

Ale

CH2 Profile

SELECT CH2 PROFILE

Ale

CANCEL

START

Info & contact

Site <http://www.smartpid.com>
facebook <http://www.facebook.com/smartPID>
Twitter [@smart_PID](https://twitter.com/smart_PID)
Instagram <https://www.instagram.com/smartpid>
Pinterest <http://www.pinterest.com/smartPID>
You tube <https://www.youtube.com/c/smartPID>

Site <https://brewfather.app/>
Facebook <https://www.facebook.com/brewfather>
Twitter <https://twitter.com/brewfatherapp>
Instagram <https://www.instagram.com/brewfatherapp>
Youtube
<https://www.youtube.com/channel/UCcu17qgEC20UBj7YrVH3k8g>

