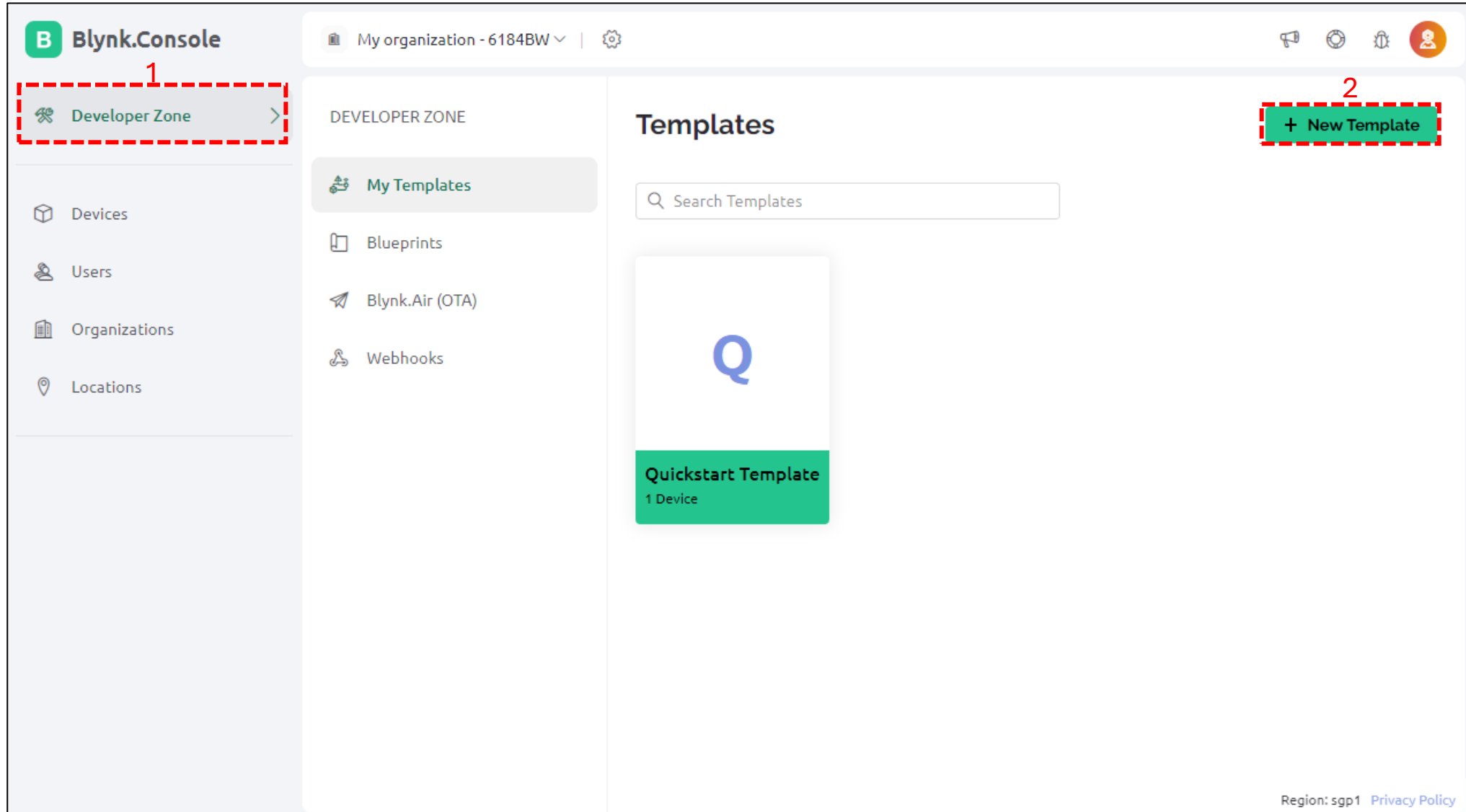


Blynk Setup for KTP

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Login to Blynk at <https://blynk.cloud/dashboard/login> and click the following options



Fill in the required fields as shown and click “Done”

Create New Template

NAME

Smart Farming

HARDWARE

ESP32

CONNECTION TYPE

WiFi

DESCRIPTION

Description

0 / 128

Cancel

Done

Click on “Datastreams”

Blynk.Console My organization - 6184BW

Developer Zone

Devices
Users
Organizations
Locations

Smart Farming

Cancel Save

Home **Datastreams** Web Dashboard Automations Metadata Connection Lifecycle

What's next?

- ☐ Configure template
- ☐ Set Up Datastreams
- ☐ Set up the Web Dashboard
- ☐ Add first Device

Template settings ESP32, WiFi

Firmware configuration

Template ID and Template Name should be declared at the very top of the firmware code.

```
#define BLYNK_TEMPLATE_ID  
"TMPL6kcSShRVH"  
#define BLYNK_TEMPLATE_NAME "Smart  
Farming"
```

Region: sgp1 Privacy Policy

Click on “+ New Datastream”

The screenshot shows the Blynk.Console web interface. The top header includes the Blynk.Console logo, the organization name 'My organization - 6184BW', and several utility icons. A left sidebar contains navigation links for 'Developer Zone', 'Devices', 'Users', 'Organizations', and 'Locations'. The main content area is titled 'Smart Farming' and features a 'Datastreams' tab that is currently selected. Below the tabs, a text block explains that datastreams are used for structuring data from devices. A green button labeled '+ New Datastream' is prominently displayed and highlighted with a red dashed border and a red number '1' below it. At the bottom right, the region 'sgp1' and a 'Privacy Policy' link are visible.

Blynk.Console

My organization - 6184BW

Developer Zone

Devices

Users

Organizations

Locations

Smart Farming

Home Datastreams Web Dashboard Automations Metadata Connection Lifecycle

Datastreams

Datastreams is a way to structure data that regularly flows in and out from device. Use it for sensor data, any telemetry, or actuators.

+ New Datastream

1



Region: sgp1 Privacy Policy



Click on “Virtual Pin”


The screenshot shows the Blynk.Console interface for a project named "Smart Farming". The left sidebar contains navigation links: Developer Zone, Devices, Users, Organizations, and Locations. The top bar shows the organization name "My organization - 6184BW" and various icons. The main content area has tabs for Home, Datastreams (selected), Web Dashboard, Automations, Metadata, and Connection Lifecycle. A dropdown menu is open, displaying options: Virtual Pin (highlighted with a red dashed box and the number 1), Enum, Location (with an orange "UPGRADE" button), Digital Pin, and Analog Pin. Below these options is a green button labeled "+ New Datastream".


Fill in the fields as shown, enable history data and click “Create”

Virtual Pin Datastream


 **NAME** 1 **ALIAS** 2 

PIN 3  **DATA TYPE** 4 

UNITS 5 

MIN 6 **MAX** 7 **DECIMALS**  **DEFAULT VALUE**


8 ☒ **Enable history data**

 **ADVANCED SETTINGS**

9

Add another virtual pin datastream and fill in the fields as shown and click “Create”

Virtual Pin Datastream




NAME1

Humidity

ALIAS2

Humidity



PIN3

V1

▼

DATA TYPE4

Double

▼

UNITS

None

▼

MIN5

0

MAX6

100

DECIMALS

#.##

▼

DEFAULT VALUE

Default Value

7

☒

Enable history data

⊕

ADVANCED SETTINGS



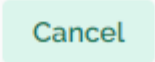
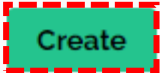
Cancel

8

Create


Add another virtual pin datastream and fill in the fields as shown and click “Create”

Virtual Pin Datastream

NAME	1	Moisture	ALIAS	2	Moisture	
PIN	3	V2	DATA TYPE	4	Integer	
UNITS		None				
MIN	5	0	MAX	6	4095	DEFAULT VALUE
						0
7		<input checked="" type="checkbox"/> Enable history data				
 ADVANCED SETTINGS						
						8
						 

Add another virtual pin datastream and fill in the fields as shown and click “Create”

Virtual Pin Datastream

NAME	1	ALIAS	2	
	Water Pump	Water Pump		
PIN	3	DATA TYPE	4	
	V3	Integer		
UNITS	None			
MIN	5	MAX	6	DEFAULT VALUE
	0	1		0

☐ Enable history data

ADVANCED SETTINGS

Click on “Web Dashboard”

The screenshot displays the Blynk.Console web interface. On the left is a sidebar with navigation links: Developer Zone, Devices, Users, Organizations, and Locations. The main header shows 'My organization - 6184BW' and user icons. The main content area is titled 'Smart Farming' and features a navigation bar with tabs: Home, Datastreams, Web Dashboard (highlighted with a red dashed box and a red number 1), Automations, Metadata, Connection Lifecycle, Events & Notifications, and Mobile Dashboard. Below the tabs is a 'Widget Box' on the left containing a Switch, Slider, Number Input, and Image Button. The main canvas area shows a 'Device name' card with 'Online' status, 'Device Owner', 'Company Name', and a 'Show map' button. Below the card is a 'Dashboard' section with a grid of widgets and a '+ Add new widget' prompt. The bottom right corner indicates 'Region: sgp1' and a 'Privacy Policy' link.

Scroll down to look for the “Gauge” widget

The screenshot displays the Blynk Console interface for a 'Smart Farming' project. On the left, the 'Widget Box' contains several widgets: a 'Label' widget showing '112', a 'Gauge' widget showing '42' (highlighted with a red dashed box and a red '2'), a 'Radial Gauge' widget showing '42', and an 'Alarm and Sound' widget. A red '1' points to the 'Widget Box' header. The main dashboard area shows a 'Device name' section with 'Online' status, a 'Show map' button, and a large grid for adding new widgets. The grid contains the text 'Add new widget' and 'Double click the widget on the left or drag it to the canvas'. The top navigation bar includes 'Home', 'Datastreams', 'Web Dashboard' (selected), 'Automations', 'Metadata', 'Connection Lifecycle', 'Events & Notifications', and 'Mobile Dashboard'. The bottom right corner shows 'Region: sgp1' and a 'Privacy Policy' link.

Click and drag the “Gauge” widget to place it on the dashboard

The screenshot displays the Blynk.Console interface for a 'Smart Farming' dashboard. On the left, a 'Widget Box' contains several widgets: a 'Label' widget showing '112', a 'Gauge' widget (highlighted with a red dashed box and labeled '1'), a 'Radial Gauge' widget, and an 'Alarm and Sound' widget. A red arrow labeled '2' points from the 'Gauge' widget in the box to a 'Gauge' widget in the dashboard grid, which is also highlighted with a red dashed box and labeled '3'. The dashboard itself shows a 'Device name' section with 'Online' status, a 'Device Owner' field, a 'Company Name' field, and a 'Show map' button. Below this is a 'Dashboard' section with a '+ ' button and a time range selector (1h, 6h, 1d, 1w, 1mo, 3mo). The dashboard grid is mostly empty, with the 'Gauge' widget placed in the first row. The bottom right corner indicates 'Region: spp1' and a 'Privacy Policy' link.


Click the setup icon

The screenshot displays the Blynk.Console web interface for a project named 'Smart Farming'. The interface includes a left sidebar with navigation options: Developer Zone, Devices, Users, Organizations, and Locations. The main content area shows the 'Web Dashboard' tab selected, with sub-tabs for Home, Datastreams, Automations, Metadata, Connection Lifecycle, Events & Notifications, and Mobile Dashboard. A 'Widget Box' on the left contains various widgets: Label (value 112), Gauge (value 42), Radial Gauge (value 42), and Alarm and Sound. The main dashboard area features a 'Device name' section with 'Online' status, 'Device Owner', and 'Company Name' fields. Below this is a 'Dashboard' section with a time range selector (1h, 6h, 1d, 1w, 1mo, 3mo) and a grid of widgets. A red dashed box highlights the 'Setup' icon (a gear) on a gauge widget in the main dashboard area, with a red number '1' pointing to it. The bottom right corner shows 'Region: spp1' and a 'Privacy Policy' link.

Fill in the fields as shown and click save





Gauge Settings

TITLE (OPTIONAL) 1


Datastream 2
 

☐ Override Datastream's Min/Max fields

LEVEL COLOR 3
☒ Change color based on value

    4

Temperature (V0)



Cancel 5
Save

Click and drag the “Gauge” widget to place it on the dashboard and click the setup icon.

The screenshot shows the Blynk.Console interface for a 'Smart Farming' dashboard. On the left, a 'Widget Box' contains several widgets: a 'Label' with the value '112', a 'Gauge' (labeled 1), a 'Radial Gauge', and an 'Alarm and Sound' widget. A red dashed box (labeled 2) highlights the 'Gauge' widget in the 'Widget Box'. A red arrow points from this widget to a 'Gauge' widget on the dashboard (labeled 3). A red dashed box (labeled 4) highlights the 'Gauge' widget on the dashboard, and a red arrow points to the setup icon (labeled 4) in the top right corner of the widget. The dashboard also displays a 'Device name' section with 'Online' status, a 'Temperature (V0)' gauge showing 53 °C, and a map with a 'Show map' toggle and an 'UPGRADE' button. The bottom right corner shows 'Region: sgp1' and a 'Privacy Policy' link.

Fill in the fields as shown and click save

Gauge Settings

TITLE (OPTIONAL) 1

Humidity

Datastream 2

Humidity (V1)

☐ Override Datastream's Min/Max fields

LEVEL COLOR 3

☒ Change color based on value

4

5

Cancel Save

Humidity (V1)

90

0 100


Click and drag the “Gauge” widget to place it on the dashboard and click the setup icon.

The screenshot displays the Blynk.Console interface for a "Smart Farming" project. The left sidebar shows navigation options: Developer Zone, Devices, Users, Organizations, and Locations. The main dashboard area has tabs for Home, Datastreams, Web Dashboard (selected), Automations, Metadata, Connection Lifecycle, Events & Notifications, and Mobile Dashboard. A "Widget Box" on the left contains several widgets: LED, Label (112), Gauge (42), and Radial Gauge (42). The main dashboard area shows a "Device name" section with "Online" status, "Device Owner", and "Company Name". Below this are two gauges: "Temperature (V0)" showing 79 °C and "Humidity (V1)" showing 73. A third "Gauge" widget is highlighted with a red dashed box and labeled "4". A red dashed arrow labeled "2" points from the "Gauge" widget in the "Widget Box" (labeled "1") to the "Gauge" widget on the dashboard. A red dashed box labeled "3" encompasses the "Gauge" widget on the dashboard and the "Radial Gauge" widget in the "Widget Box". A red dashed box labeled "4" highlights the setup icon (gear) on the "Gauge" widget on the dashboard. The bottom right corner shows "Region: sgp1" and a "Privacy Policy" link.

Fill in the fields as shown and click save





Gauge Settings

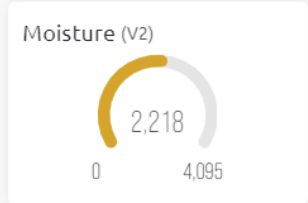
TITLE (OPTIONAL) 1
Moisture



Datastream 2
Moisture (V2) 

☐ Override Datastream's Min/Max fields

LEVEL COLOR 3
☒ Change color based on value

4
   



5
 

Click and drag the “Switch” widget to place it on the dashboard and click the setup icon.

The screenshot displays the Blynk.Console web interface for a "Smart Farming" dashboard. On the left, a "Widget Box" contains various controls. A red dashed box labeled "1" highlights the "Switch" widget. A red dashed arrow labeled "2" points from this widget to a red dashed box labeled "3" on the dashboard grid. Inside box "3", a red dashed box labeled "4" highlights the setup icon (a gear) for the newly placed Switch widget. The dashboard itself shows a "Device name" section with "Online" status, a "Show map" button, and three gauges for Temperature (V0) at 34°C, Humidity (V1) at 69, and Moisture (V2) at 3,280. The bottom right corner indicates the region is "sgp1" and includes a "Privacy Policy" link.

Fill in the fields as shown and click save

Switch Settings ⓘ

TITLE (OPTIONAL) 1
Water pump

Datastream 2
Water Pump (V3) ▼ 🗑️

ON VALUE 1 OFF VALUE 0 🔴

🟢 Show on/off labels 3

ON LABEL 4 OFF LABEL 5
ON OFF

LABEL POSITION
Left Right

🔴 Hide widget name

Water pump (V3)
🔴 OFF

Cancel Save 6

Click and drag the “Chart” widget to place it on the dashboard and click the setup icon.

The screenshot shows the Blynk.Console interface for a "Smart Farming" project. The left sidebar contains navigation links: Developer Zone, Devices, Users, Organizations, and Locations. The main dashboard area has tabs for Home, Datastreams, Web Dashboard (selected), Automations, Metadata, Connection Lifecycle, Events & Notifications, and Mobile Dashboard. A "Widget Box" on the left lists available widgets: Chart (1), Map, and Image Gallery. A red dashed box highlights the "Chart" widget in the box, with a red arrow (2) pointing to a "Chart" widget on the dashboard. The dashboard widget (3) currently shows "No Data" and has a setup icon (4) highlighted by another red dashed box. The dashboard also displays device status (Online), owner information, a map, and various sensors: Temperature (V0) at 88°C, Humidity (V1) at 1, and Moisture (V2) at 1,497. A "Water pump (V3)" control is shown as "OFF".

Fill in the fields as shown and click save

Chart Settings ⓘ

TITLE (OPTIONAL) 1

Moisture History

Datastreams

UPGRADE to add more datastreams

+ Moisture (V2) 2 AVG of 3 + -

CHART TYPE 3

Line Area Bar Line

COLOR

Y-AXIS 4

☒ Show Y-axis

☐ Autoscale

☐ Override Datastream's Min/Max fields

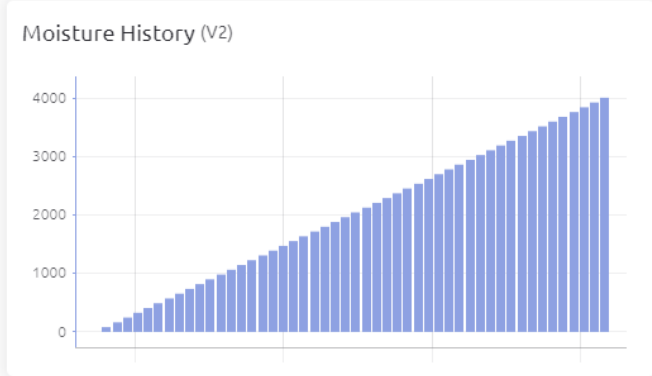
MINIMUM Y AXIS RANGE

Minimum Y axis range

☐ Enable Zoom

☐ Show legend

Moisture History (V2)



Cancel 5 Save

Click on “Save”

The screenshot displays the Blynk.Console web interface for a 'Smart Farming' project. The interface includes a left sidebar with navigation options: Developer Zone, Devices, Users, Organizations, and Locations. The main content area shows a dashboard with various widgets. On the left, a 'Widget Box' contains a 'CONTROL' section with a 'Switch' (currently on), a 'Slider' (set to 8), a 'Number Input' (set to 0), and an 'Image Button'. The main dashboard area features a 'Device name' section with an 'Online' status, a 'Device Owner' field, and a 'Company Name' field. Below this, there are three gauge charts: 'Temperature (V0)' showing 65 °C, 'Humidity (V1)' showing 63, and 'Moisture (V2)' showing 2,112. A 'Water pump (V3)' toggle switch is set to 'OFF'. A 'Moisture History (V2)' chart shows a decreasing trend. The 'Save' button is highlighted with a red dashed box and a red number 1. The interface also includes a 'Cancel' button and a 'Show map' toggle. The bottom right corner shows the region 'sgp1' and a 'Privacy Policy' link.

Click on “Devices” then “+ New Devices”

The screenshot shows the Blynk.Console web interface. The left sidebar contains a menu with 'Developer Zone', 'Devices' (highlighted with a red dashed box and a red '1'), 'Users', 'Organizations', and 'Locations'. The main content area is titled 'Devices' and features a search bar, two tabs ('All 1' and 'My devices 1'), and a table of devices. A red dashed box labeled '2' highlights the '+ New Device' button in the top right corner of the 'Devices' section.

<input type="checkbox"/>	Name	Auth Token	Device Owner	Status	Last Reported At	Organization Name	Actions
<input type="checkbox"/>	Quickstart Device	xMTziOgG165nbSVP3SDo46Ri4kri...	wooihaw@gmail.com (you)	Inactive	2:01 PM Feb 22, 2024	My organization - 6184BW	


Click on “From template”

New Device


Choose a way to create new device

1


From template




Scan QR code



Manual entry



 Point on the cards to see instructions

Cancel

Fill in the required fields as shown and click “Create”

New Device

Create new device by filling in the form below

TEMPLATE

1

Smart Farming

▼

DEVICE NAME

2

ESP32

5 / 50

3

Cancel

Create

Copy “Copy to clipboard” and paste into Arduino IDE

The screenshot shows the Blynk.Console web interface. On the left is a sidebar with navigation links: Developer Zone, Devices, Users, Organizations, and Locations. The main area displays a device named 'ESP32' with status 'Offline'. Below the device name are three gauges for Temperature, Humidity, and Moisture. The Moisture gauge shows a value of 0. To the right of the gauges is a 'Water pump' toggle switch set to 'OFF'. A modal window titled 'New Device Created!' is open on the right, showing the following code:

```
#define BLYNK_TEMPLATE_ID "TMPL6kcSShRVH"
#define BLYNK_TEMPLATE_NAME "Smart Farming"
#define BLYNK_AUTH_TOKEN
"CANxxFPUG32d5yu0uxBXICNGZ1wKE0Ab"
```

Below the code, a note states: 'Template ID, Template Name, and AuthToken should be declared at the very top of the firmware code.' At the bottom of the modal are two buttons: 'Documentation' and 'Copy to clipboard'. The 'Copy to clipboard' button is highlighted with a red dashed box and the number 3.

Region: sgp1 [Privacy Policy](#)