Wappsto:bit

Making IoT Child’s Play
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What is Wappsto?

**Wappsto:bit** is the ideal DIY IoT tool for students and makers alike. Now a 10 year old can create an IoT device in 10 minutes - but a maker can take it to extreme depths due to its flexibility.

**Wappsto:bit** is an extension board for the popular BBC micro:bit with a pre-configured and out-of-the-box cloud connection directly to Wappsto using either 5G NB-IoT or Wi-Fi connectivity.

**Wappsto Dashboard** powered by Seluxit is a powerful IoT platform featuring an easily customizable Dashboard that makes visualizing live or historical data a breeze.

**Wappsto APP** for iOS and Android, lets you easily setup Wi-Fi on your IoT devices using Bluetooth. And lets you access and control all of your IoT devices on the go.
In the box

Wappsto:bit in an antistatic bag

Wappsto:bit NB-IoT+

Dimensions:
- 100 mm
- 82 mm
- 13 mm
Wappsto Dashboard

Learn to set up a Dashboard: www.seluxit.com/Academy
For more information visit: www.Wappsto.com

Use a standard Dashboard

Or build your own Dashboard from Scratch
The Wappsto Mobile APP lets you access and control all of your connected IoT devices on the go.

It makes it easy as 1-2-3 to onboard new devices either by scanning a QR code or by Bluetooth.
Getting started

For more information visit: www.seluxit.com/Wappstobitsetup

1. Put a micro:bit into the SLX Wappsto:bit extension board

2. In the MakeCode IDE, use the Wappsto by Seluxit blocks to configure your IoT connectivity

# Quick Start Guide

For more information visit: [www.seluxit.com/Wappstobitsetup](http://www.seluxit.com/Wappstobitsetup)

<table>
<thead>
<tr>
<th>Register on Wappsto on your preferred platform:</th>
<th>Register your Wappsto:bit</th>
<th>Coding and using</th>
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| - IOS / Apple App Store | IOS / Android NB-IoT:  
1. Open the Wappsto APP and log in with your Wappsto credentials  
2. Press top right plus button (+)  
3. ADD via QR code (UUID)  
4. Scan the QR code on the backside of your Wappsto:bit and confirm. | Coding on Microsoft MakeCode in browser:  
1. Enter the Microsoft MakeCode Website  
2. Start or open a project and name it  
3. In the top right corner, press the settings cogwheel  
4. Press Extensions  
5. Search for Wappsto  
6. Click and download extension  
7. Get coding! You can always find cool examples on the [Wappsto:bit Academy](http://www.seluxit.com/Wappstobitsetup)  
8. Flash your micro:bit using a USB to Micro USB cable and unplug it from your laptop |
| - Android / Google Play Store | IOS / Android Wi-Fi:  
1. Follow step 1-2 above  
2. Add and configure Wi-Fi  
3. Select your IoT Device  
4. Select your Wi-Fi and input your Password and confirm | Plug your micro:bit into the Wappsto:bit:  
1. Ensure the Wappsto:bit is powered correctly and online  
2. Unplug your Wappsto:bit from it's power source  
3. Plug the micro:bit firmly into the Wappsto:bit facing outwards (LEDS towards you)  
4. Plug your Wappsto:bit into it's power source and let it boot  
5. Congratulations, you can now access your data on Wappsto! |
| - Browser / Wappsto.com | Browser:  
1. Open Wappsto.com and log in with your Wappsto Credentials  
2. Press IoT Devices in the left side of the webpage  
3. Press Add an IoT device in the right side of the webpage  
4. Either use your webcam to scan the QR code on the backside of your Wappsto:bit or insert it manually and confirm  
5. Configure Wi-Fi with the Wappsto ...More block in Microsoft MakeCode | |

**Access your data and control your devices on Wappsto:**

**A - From Dashboard:**
1. In the right side, press the plus button (+) and ADD Dashboard
2. Choose a template e.g. Wappsto:bit or a blank Dashboard to create a new Dashboard
3. Use the buttons in the right side to modify your Dashboard and add widgets

**Or**

**B - From IoT Devices:**
1. Click the name of the Device you wish to access data for and unfold the menu
2. For further details or to show logs / graphs, press the three dots (...) in the right side of any value.
Using the Wappsto:bit

1. Make sure the micro:bit is powered off before plugging in, for best results, power off Wappsto:bit too.
2. Insert the BBC micro:bit firmly, with the LEDs and Buttons facing outwards from the Wappsto:bit.

Avoid wet environments and dropping the Wappsto:bit.

LED Indicator
- Off
- Starting
- Bluetooth on
- NB-IoT: Connecting
- Wi-Fi: Ready for Wi-Fi setup through Wappsto APP
- Connected to Wappsto
- Updating firmware (only in Wi-Fi mode)

The Wappsto:bit requires a 4.5-5.5V power supply. You can use a wall socket, your computer, or a power bank.

It is not possible to power the Wappsto:bit through the micro:bit.

Changing connectivity mode by moving the jumper:
- NB-IoT mode (red & black)
- Wi-Fi mode (yellow & red)

Make sure the micro:bit is powered off before plugging in, for best results, power off Wappsto:bit too.
Using External Sensors

Wappsto:bit will work with virtually all 3,3V sensors compatible with the BBC micro:bit. They will however have to be fitted onto the Wappsto:bit using standard female DuPont jumper Cables.

Pinheaders on the Wappsto:bit correspond 1:1 with the [BBC micro:bit pin layout](https://www.bbc.co.uk/collection/microbit/devices)

- **Sensor attached on P0 + 3,3V & GND**
- **Sensor attached on 19 & P20 (I2C pins) + 3,3V & GND**
Layout and Dimensions
Wappsto:bit NB-IoT+

Note: other models feature fewer components
## Hardware Specification

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<th>Wappsto:bit NB-IoT</th>
<th>Wappsto:bit NB-IoT+</th>
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<tr>
<td>● Fully populated pinheaders from micro:bit GPIO pins</td>
<td>● Quectel BC66-NA NB-IoT Modem with sim slot</td>
<td>● Quectel BC66-NA NB-IoT Modem with SIM and eSIM slot</td>
</tr>
<tr>
<td>● Croc-clip connections, micro:bit IO pins 0, 1 and 2, 1x 3.3V output and 1x GND</td>
<td>● Antenna optimized for: Narrowband IoT (LTE Cat NB1)</td>
<td></td>
</tr>
<tr>
<td>● Status LED, for indication of connection to Wappsto by Seluxit</td>
<td>Band B3: Uplink 1710-1785 Mhz, Downlink 1805-1880 MHz</td>
<td></td>
</tr>
<tr>
<td>● Button, for resetting network settings.</td>
<td>Band B20: Uplink 832-862 Mhz, Downlink 791-821 MHz</td>
<td></td>
</tr>
<tr>
<td>● Micro USB power supply, operating voltage 4.5-5.5V</td>
<td>● Fully populated pinheaders from micro:bit GPIO pins</td>
<td>● Quectel L86 GPS Module</td>
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**Terms and Conditions:**
- Product Delivery Terms & Conditions: [Product Supply Terms and Conditions](#), Cloud Terms & Conditions: [Cloud Solution Terms and Conditions](#), Seluxit IoT Cloud Pricing: [Seluxit IoT Cloud Pricing](#), Seluxit General Privacy Notice: [Seluxit Privacy Notice](#)
Wappsto and Connectivity pricing

For more information visit: www.seluxit.com/Pricing

We’ve got you covered with a great free plan!
As long as you have less than 10 devices on Wappsto

You will get 1.000.000 measurements every month that you decide how to distribute between storage and traffic.

If you wish to send a lot of messages, but store them only shortly or vice versa it’s all up to you!

What if I run out of measurements?
If you run out of measurements, we'll stop the flow for you. Then you can either wait until next month for more free measurements, or purchase additional.

If you need more measurements, then you're probably a professional user and will have to pay a subscription fee, depending on your usage.

Make your Wappsto:bit mobile with NB-IoT!
40.000 measurements a month starting at 2,50 EUR.
One email to rule it all
When you sign up for free Wappsto services, all you need to share is an email address.

If you wish to upgrade your account, our payment partners will of course need to know a bit more about you.

Nothing shared without your consent and it’s all anonymised
If you wish to engage with other users on Wappsto and perhaps share your data, everything is done using unique identifiers (UUID), meaning your identity will be kept anonymous. And you can always withdraw your sharing consent.

At Seluxit we are serious about data security and Data Ethics
- read more about our data ethics principles on https://www.seluxit.com/data
- read more about your data privacy on https://www.seluxit.com/legal/privacy-notice/