

Getting started guide

A wearable sensor unit enabling a fast time to market
(STEVAL-WESU1)



1

Getting started: assemble the items

2

Getting started: activate OPEN.MEMS licenses

3

Disclaimer & contact Info

Getting started: open the box

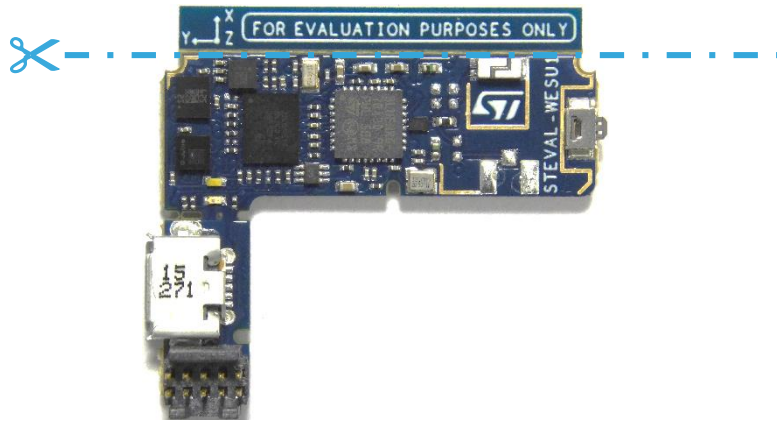
The STEVAL-WESU1 box contains:

- 1 WeSU board
- 1 watch strap*
- 1 plastic case (included in the watch strap)
- 1 Li-Po battery of 100 mAh (in antistatic bag)
- 1 Velcro adhesive strip*
- 1 plastic frame including 2 buttons and 1 buckle
- 1 WeSU1 adapter board and 1 flat cable



Getting started: assemble the items (1/4)

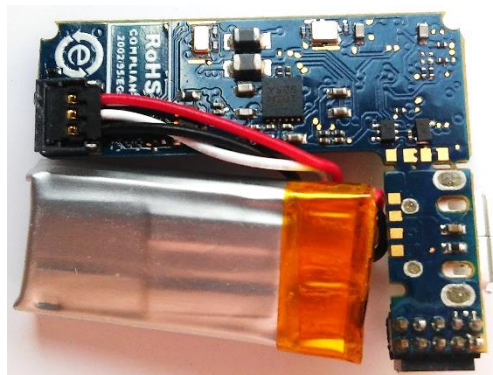
- 1 Remove the legal disclaimer from the side of the board.



Tip: use pliers to break off the disclaimer.



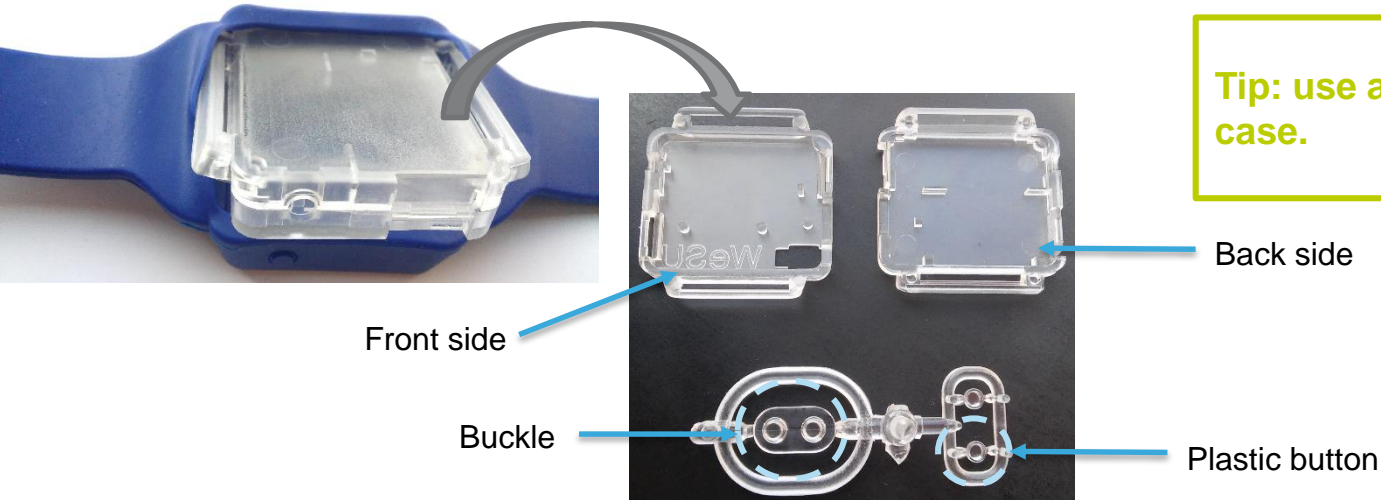
- 2 Remove the battery from its plastic bag and connect it to the board.



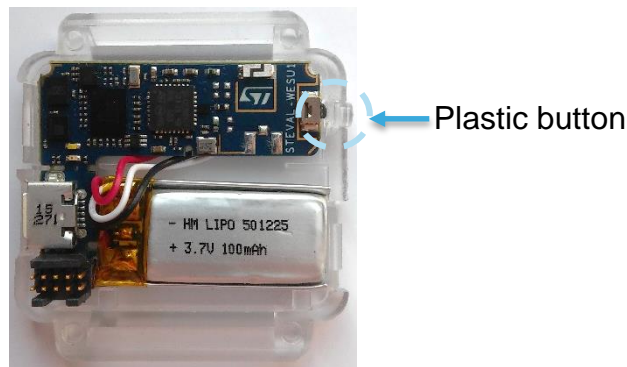
Tip: fold up the cable as shown in the picture to avoid covering the PCB with it.

Getting started: assemble the items (2/4)

- 3 Extract the plastic case from the watch strap and open it.



- 4 Insert the STEVAL-WESU1 board in the back side of the plastic case; take one plastic button from its holder and place it in the case's corresponding slot.



Tips:

- Start by inserting the right side of the board.
- Ensure the button and the board corners are correctly aligned.

Getting started: assemble the items (3/4)

- 5 Close the plastic case and power on the WeSU board by sourcing the USB power supply.

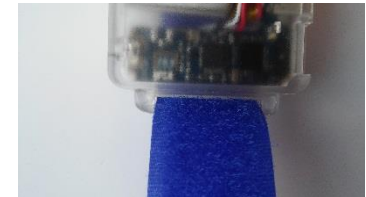


Tip: when the battery is charging, the red LED is turned on.

- 6 Extract the buckle from its holder and place it in the watch strap. Now you can insert the plastic case in the watch strap and wear it.



Tip: adjust the Velcro strip on your wrist for the best fit (as shown in the picture).



Getting started: assemble the items (3/4)

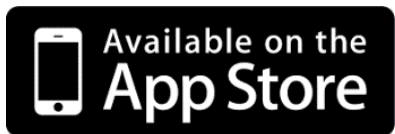
7 Download the app on your smartphone.



ST WeSU



ST BlueDFU



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Getting started: assemble the items

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Getting started: activate OPEN.MEMS licenses

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Disclaimer & contact Info

Getting started: activate licenses (1/6)

Open.MEMS is catalog of free and easy-to-use software libraries for the development of best-in-class MEMS and sensor applications.

Open.MEMS libraries combine data from several sensors achieving the high level of accuracy required by portable and wearable devices and other emerging applications such as the Internet of Things (IoT).

Libraries available on WeSU:

- **Activity Recognition** (osxMotionAR)
www.st.com/osxmotionar_for_wesu1_qrcode

- **Carry Position** (osxMotionCP)
www.st.com/osxmotioncp_for_wesu1_qrcode



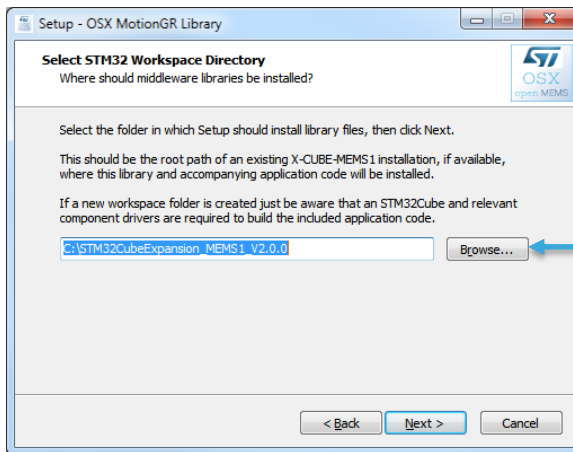
- 1 Download the X-CUBE-MEMS1
(www.st.com/xcubemems1_for_wesu1_qrcode)

Getting started: activate licenses (2/6)

2

Extract X-CUBE-MEMS1.zip in a folder in the root (for example, C:\STM32CubeExpansion_MEMS1_V2.0.0)

Start the installation of the **osxMotionYY_Setup_v1xx.exe** you selected; when asked, browse to the folder containing the X-CUBE-MEMS1 package.



Click here to indicate where the package is located.



Install OSX License Wizard on your PC.

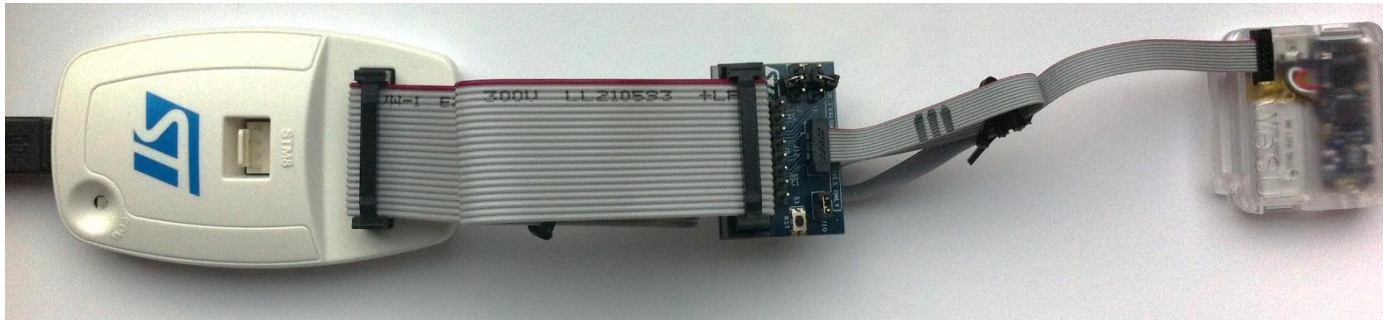
It will ask for the installation of:

- Microsoft VS2013 redistributable (required)
- STM32 ST-Link Utility v3.7 (required)

For further information, refer to user manual UM2012 on www.st.com.

Getting started: activate licenses (3/6)

- 3 Connect the STEVAL-WESU1 to the ST-Link/V2* through the WESU1 adapter board...
...attach the USB cable of ST-Link/V2 to your PC



NOTE:

***ST-Link/V2 is not included in the STEVAL-WESU1, you have to order separately**

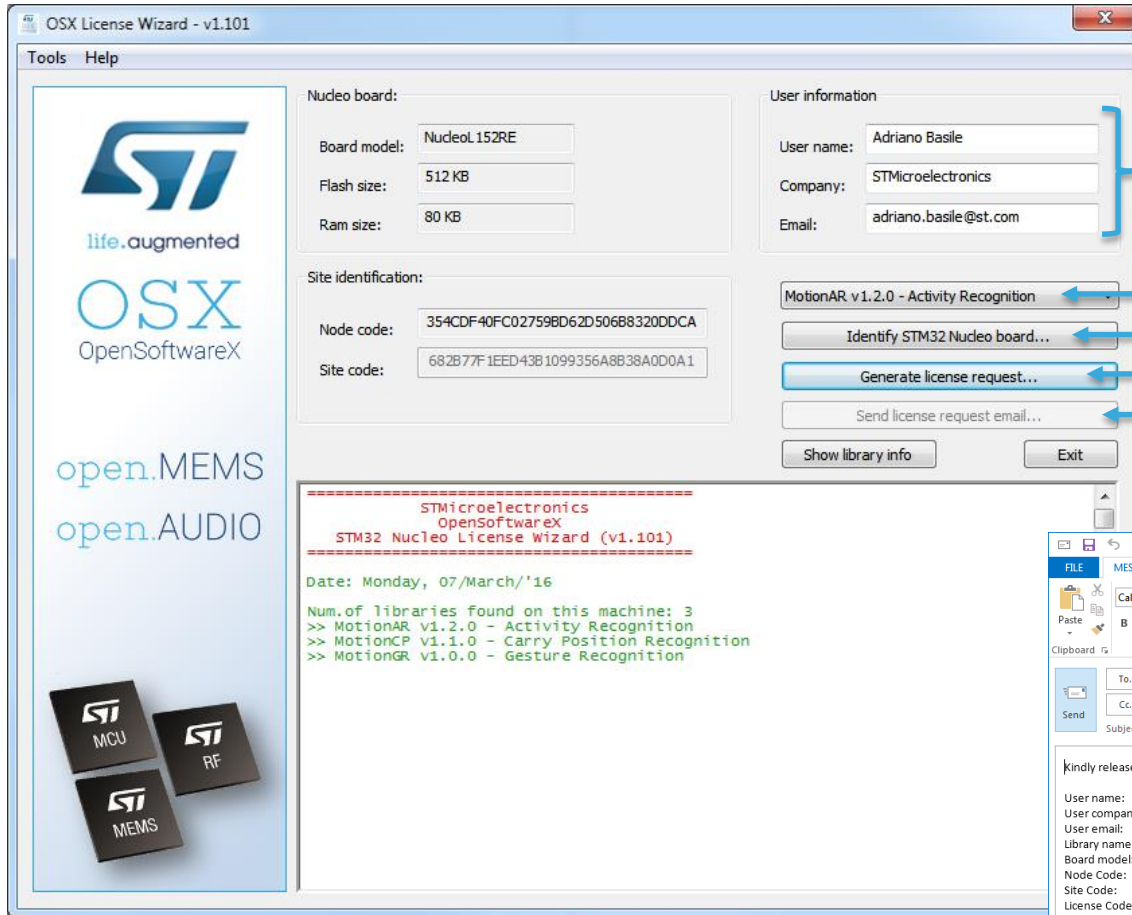
ST-Link/V2 is available at:
www.st.com/stlinkv2_for_wesu1_qrcode

ST-Link/V2 drivers for Windows are available at:
<http://www.st.com/web/en/catalog/tools/PF260219>



Getting started: activate licenses (4/6)

4 Open the OSX License Wizard and ...



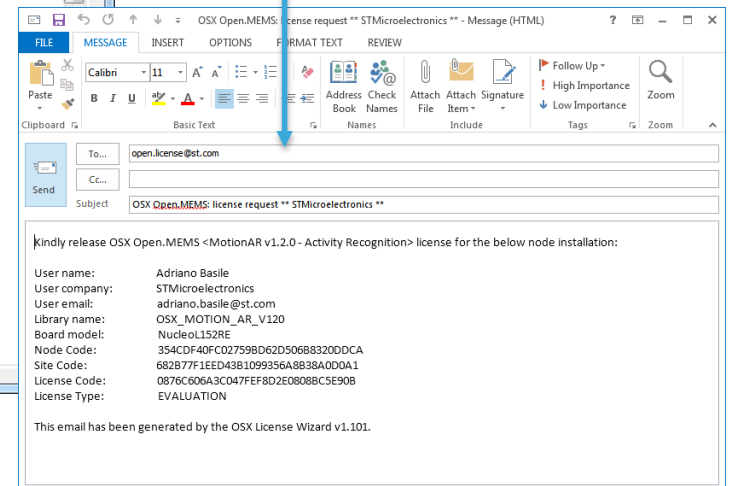
...Enter your contact info...

...Select the library you want to activate...

...Retrieve the board's unique ID...

...Generate the License Request...

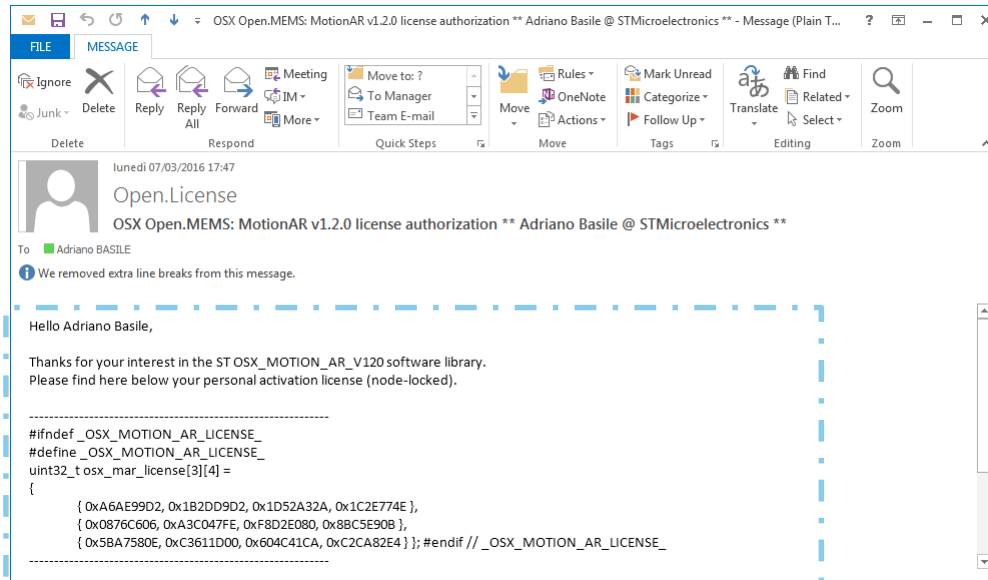
...Send email...



Getting started: activate licenses (5/6)

5

In few minutes you will receive an email with your license authorization.



6

Forward the email to your smartphone and copy its content to the clipboard.

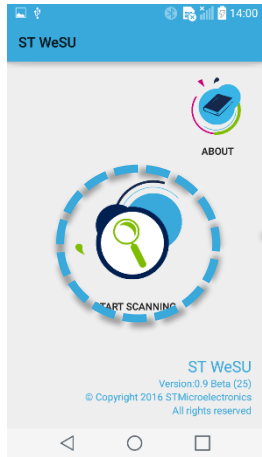
7

Start the ST WeSU app.

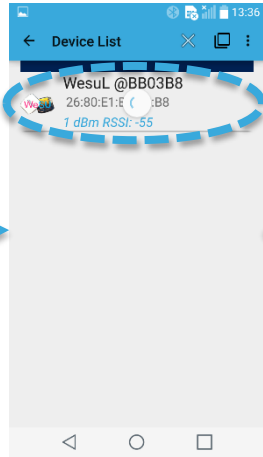


Getting started: activate licenses (6/6)

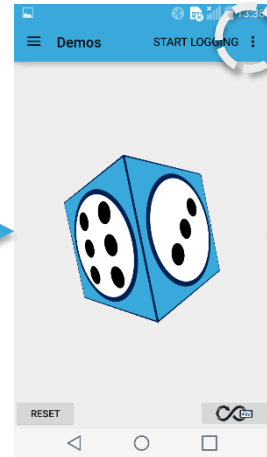
8 Follow these steps...



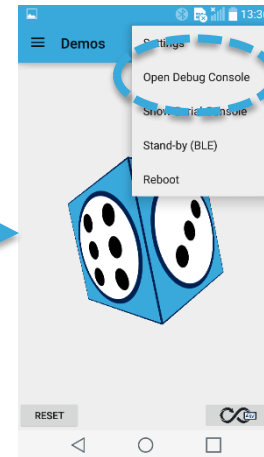
Start scanning...



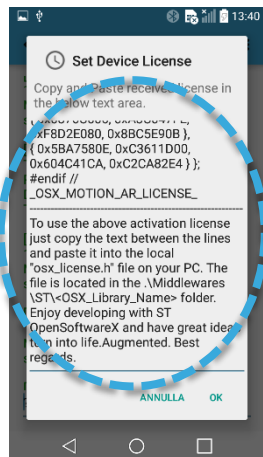
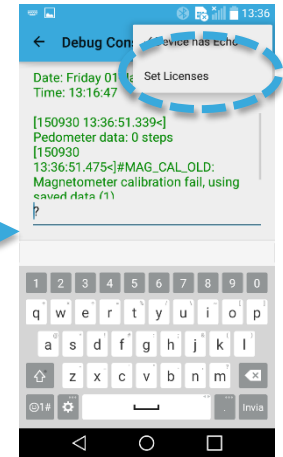
...select the WeSU...



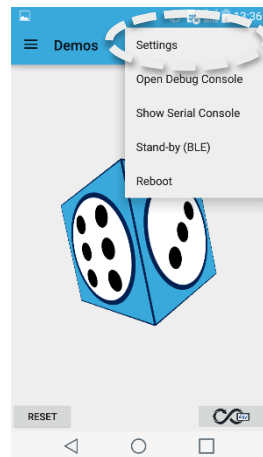
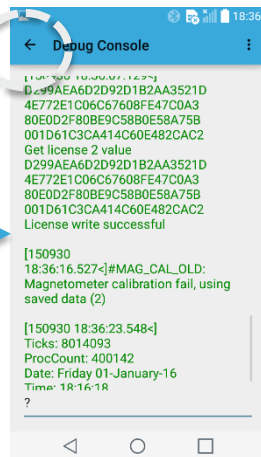
...open the Debug Console...



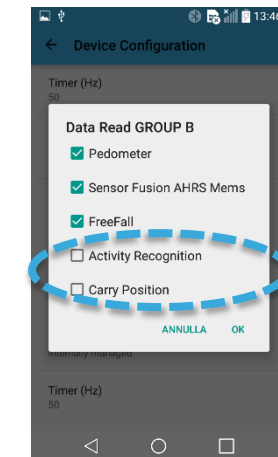
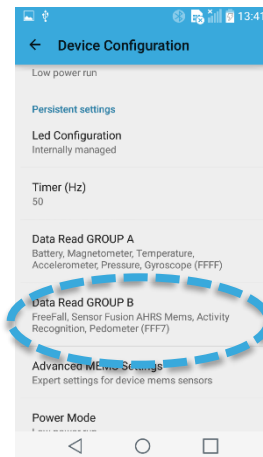
...and the Set Licenses...



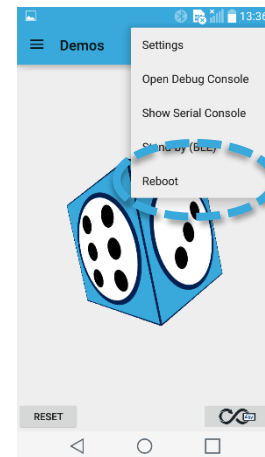
...paste from Clipboard and tap OK, go back...



...and from Settings, select Data Group B...



...finally Select the Activated License and Reboot!



Note: to activate the other algorithms, you have to repeat Steps 4 to 8.

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Disclaimer & contact Info

Disclaimer & contact Info (1/3)

Model: STEVAL-WESU1 FCC ID: S9NWESU1

Formal notices required by the U.S. Federal Communications Commission ("FCC")

Any changes or modifications to this equipment not expressly approved by STMicroelectronics may cause harmful interference and void the user's authority to operate this equipment.

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

For Class A Digital Devices

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

For Class B Digital Devices

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference's by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Disclaimer & contact Info (2/3)

Model: STEVAL-WESU1 IC: 8976C-WESU1

Formal notices required by the Industry Canada ("IC")

English:

This Class A or B digital apparatus complies with Canadian CS-03.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

French:

Cet appareil numérique de la classe A ou B est conforme à la norme CS-03 du Canada.

Les changements ou les modifications pas expressément approuvés par la partie responsable de la conformité ont pu vider l'autorité de l'utilisateur pour actionner l'équipement.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Disclaimer & contact Info (3/3)

For the latest information and/or to receive support, please contact:

systems.lab@st.com

STEVAL-WESU1 webpage



www.st.com/wesu1_for_qrcode