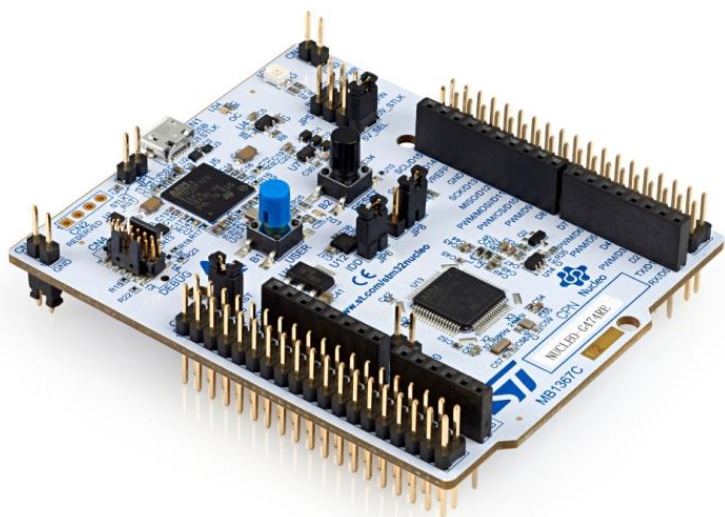
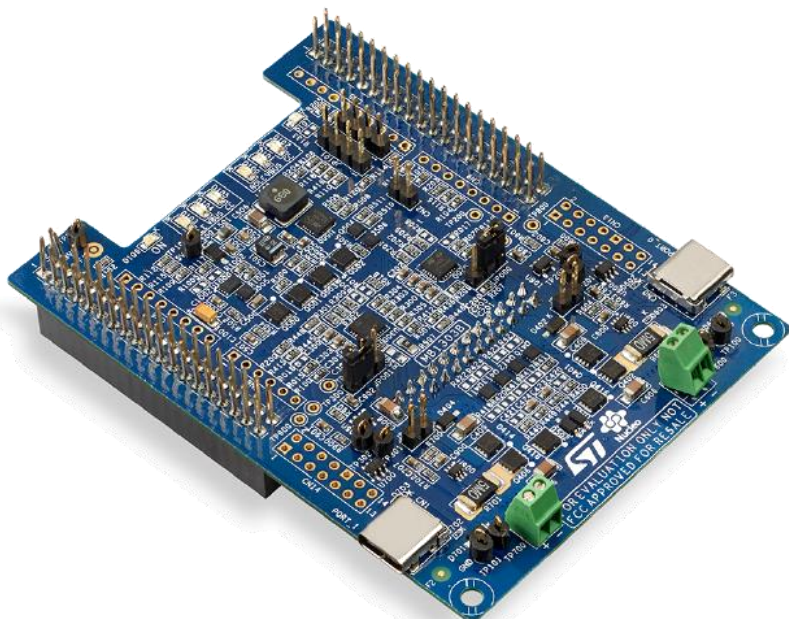




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STSW-STUSB014 Quick Start Guide

STUSB1602 software
library for STM32G474



STUSB



QUICK START

Introduction

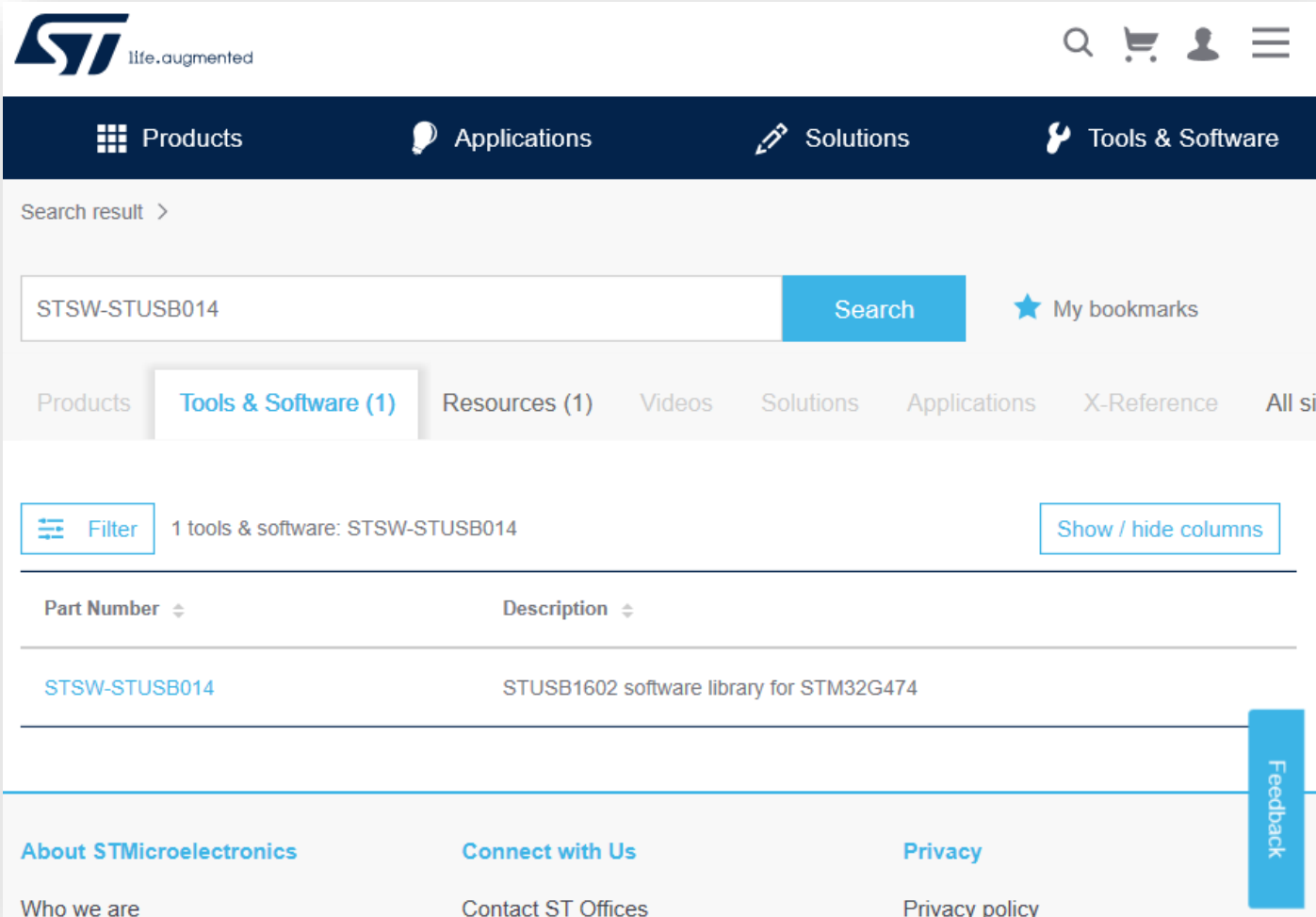
This document provides an overview of the STUSB1602 software package enabling USB PD stack with **NUCLEO-G474RE** and **MB1303 shield**

SOFTWARE	
STSW-STUSB014	STUSB1602 software library for STM32G474
IAR 8.x	C-code compiler
GCC	GNU Arm Embedded Toolchain
STM32CubeIDE	Integrated Development Environment for STM32
HARDWARE	
NUCLEO-G474RE	STM32 Nucleo development board
P-NUCLEO-USB002	STUSB1602 Nucleo Pack containing MB1303 shield (Nucleo expansion board to be plugged on NUCLEO-G474RE)



SW library set-up (1/3)

- 1 Download the STUSB1602 software package by searching [STSW-STUSB014](#) from www.st.com home page:



The screenshot shows the ST website search results for the query "STSW-STUSB014". The search results are displayed under the "Tools & Software" category. The results table shows one entry: "STSW-STUSB014" with the description "STUSB1602 software library for STM32G474".

Part Number	Description
STSW-STUSB014	STUSB1602 software library for STM32G474



SW library set-up (2/3)

2 Then click on “Get Software” from either the bottom or top of the page

Get Software				
Part Number	Software Version	Marketing Status	Supplier	Download
STSW-STUSB014	1.1.0	Active	ST	Get Software

3 Download will start after accepting the License Agreement, and filling contact information.

License Agreement

ACCEPT

IMPORTANT-READ CAREFULLY:

This Limited License Agreement ("LLA") is made between you (either an individual person or a single legal entity, who will be referred to in this LLA as "You" or "Licensee") and STMicroelectronics International NV, a company incorporated under the laws of the Netherlands acting for the purpose of this LLA through its Swiss branch 39, Chemin du Champ des Filles, 1228 Plan-les-Ouates, Geneva, Switzerland (hereinafter "ST") for the software licensed materials that accompany this LLA, including any associated media, printed materials and electronic documentation (the "Licensed Materials"). The Licensed Materials include any software updates and supplements, that ST may provide You or make available to You after the date You obtain the Licensed Materials to the extent that such items are not accompanied by a separate license agreement or other terms of use.

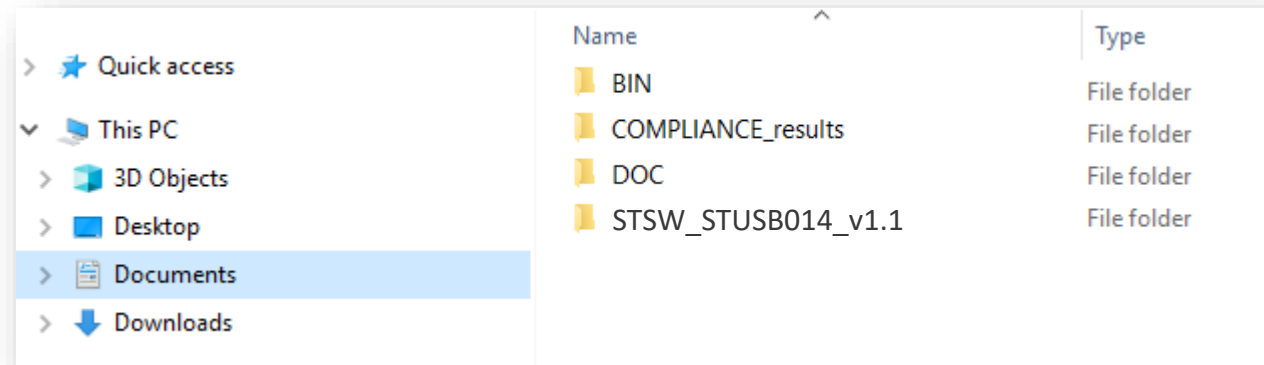


SW library set-up (3/3)

- 4 Save the file [en.STSW-STUSB014v1.1.zip](#) on your laptop



and unzip:



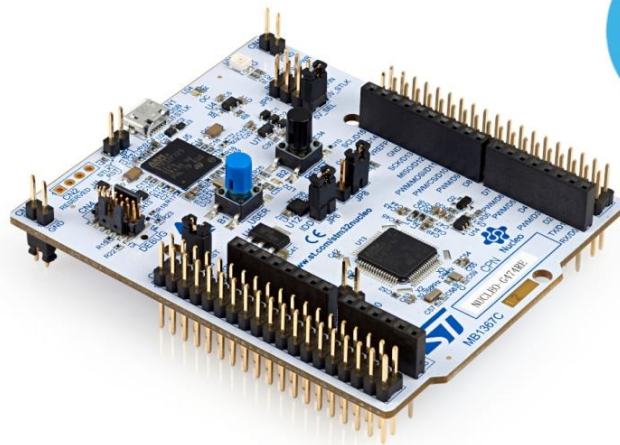
- 5 The package contains a DOC directory, ready-to-use binary files, associated projects and compliance reports



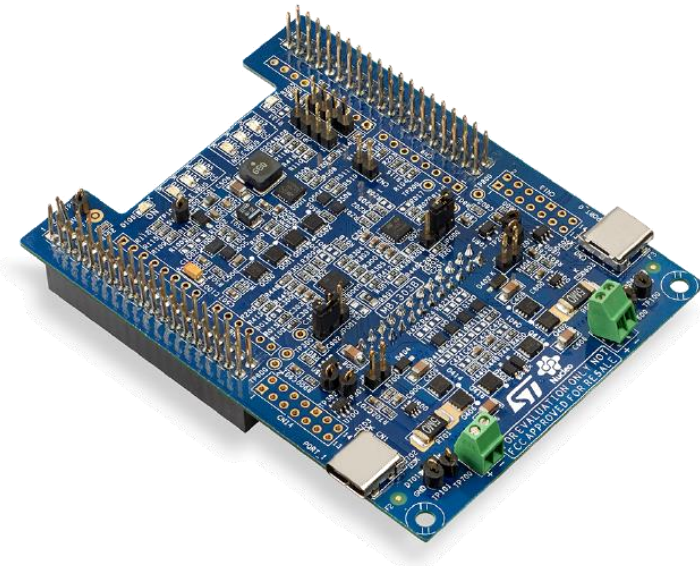
Suggested Hardware requirements

The software library has been optimized to quickly compile on the NUCLEO-G474RE development board stacked with MB1303 expansion board (from P-NUCLEO-USB002 package).

MB1303 is composed of 2 Dual Role Ports (DRP) USB PD capable receptacles (form factor not optimized)



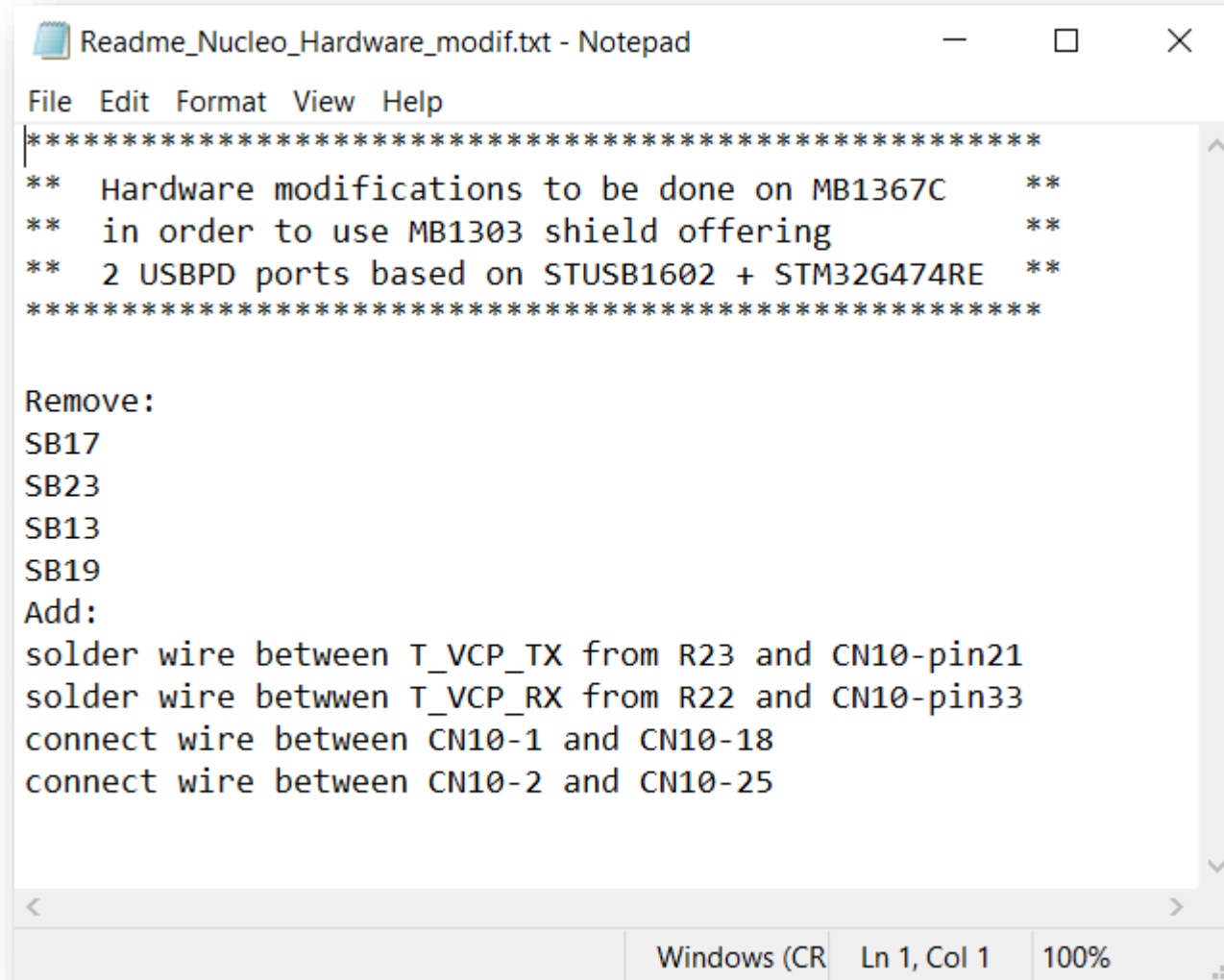
NUCLEO-G474RE



MB1303

(Board contained in
P-NUCLEO-USB002 orderable package)

NUCLEO-G474RE Hardware set-up



```
Readme_Nucleo_Hardware_modif.txt - Notepad
File Edit Format View Help
*****
** Hardware modifications to be done on MB1367C **
** in order to use MB1303 shield offering **
** 2 USBPD ports based on STUSB1602 + STM32G474RE **
*****

Remove:
SB17
SB23
SB13
SB19
Add:
solder wire between T_VCP_TX from R23 and CN10-pin21
solder wire between T_VCP_RX from R22 and CN10-pin33
connect wire between CN10-1 and CN10-18
connect wire between CN10-2 and CN10-25

Windows (CR) Ln 1, Col 1 100%
```



Software package Overview

The software library includes 8 different software frameworks already optimized to address most common application scenario:

	Project	Typical Application
#1	STM32G474_MB1303_SRC_ONLY (*)	Provider / SOURCE (power management)
#2	STM32G474_MB1303_SRC_VDM	Provider / SOURCE (power management) + extended message support + UFP support (Billboard class)
#3	STM32G474_MB1303_SNK_ONLY (*)	Consumer / SINK (power management)
#4	STM32G474_MB1303_SNK_VDM	Consumer / SINK (power management) + extended message support + UFP support (Billboard class)
#5	STM32G474_MB1303_DRP_ONLY (*)	Dual Role Port (power management)
#6	STM32G474_MB1303_DRP_VDM	Dual Role Port (power management) + extended message support + UFP support (Billboard class)
#7	STM32G474_MB1303_DRP_2PORTS	2 x Dual Role Port (power management) + dead battery mode + extended message support + UFP support (HID class)
#8	STM32G474_MB1303_DRP_SRCING_DEV	Dual Role Port requesting PR_swap when attached in Sink or DR_swap when attached in Source + UFP support (HID class)

- by default, all projects are packaged with RTOS support
- project annotated with a (*) are available with and without RTOS support



For more details, please check Firmware Package documentation:

STM32G474RE-Nucleo > Appli > usbpd >

Name
STM32G474_MB1303_SRC_VDM
STM32G474_MB1303_SRC_ONLY_noRTOS
STM32G474_MB1303_SRC_ONLY
STM32G474_MB1303_SNK_VDM
STM32G474_MB1303_SNK_ONLY_noRTOS
STM32G474_MB1303_SNK_ONLY
STM32G474_MB1303_DRP_VDM
STM32G474_MB1303_DRP_SRCING_DEV
STM32G474_MB1303_DRP_ONLY_noRTOS
STM32G474_MB1303_DRP_ONLY
STM32G474_MB1303_DRP_2PORTS

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Firmware package documentation

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