Quick start guide: Position2Go

BGT24MTR12 MMIC + XMC4700 MCU

Abstract

This document provides a quick step-by-step process to get started with the Position2Go board, consisting of Infineon's BGT24MTR12 radar MMIC and the XMC4700 32-bit ARM® Cortex™-M4 based MCU. Some of the steps are optional, for going deeper into the analysis of the board, the firmware and the extracted signals.

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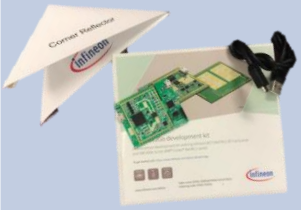
1 Getting started

STEP 1

Box contents

- Programmed Position2Go board
- microUSB cable
- Foldable corner reflector



STEP 2

Infineon Toolbox

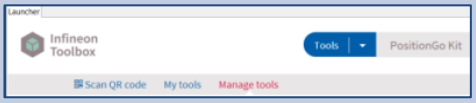
- Go to: https://www.infineon.com/cms/en/product/promopages/Infineon-Toolbox/
- **Click on *"Download and Install Infineon Toolbox"*** (136 MB)
- ***"Accept"*** the license agreement
- Run ***"infineon-toolbox-launcher-setup-win-x86.exe"***

- Finish installation. Create a desktop shortcut

STEP 3

Install Position2Go kit: XMC Flasher + Radar GUI

- Open ***"Infineon Toolbox"***
- Click on ***"Manage tools"*** tab
- Search for ***"Position2Go kit"***



- Click on ***"Install"***

- ***"Accept"*** the license agreement
- Finish installation

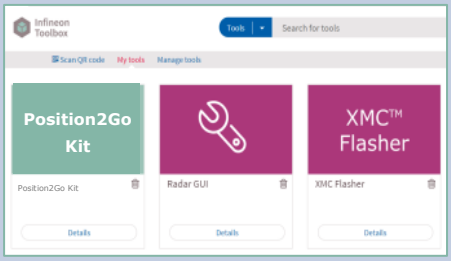
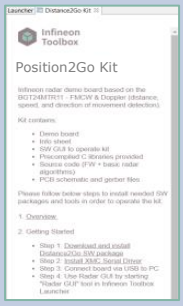


Figure 1 Steps 1 to 3 to get started with the Position2Go demo board

STEP 4 (optional)

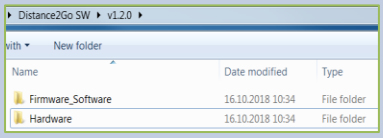
Download SW+HW package

- Open ***"Infineon Toolbox"***
- Click on ***"Position2Go Kit"***
- Follow the instructions mentioned on the left tab (2. Getting Started)
- Save the set-up file and run it



→ p2g_sw_setup_v1.0.exe

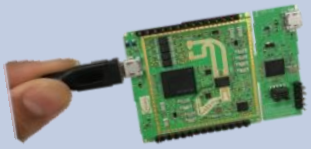
- Browse to the preferred location to store the files



STEP 5

Connect board

- Insert microUSB cable into Position2Go (main board)



- Insert the USB connector into the PC USB port

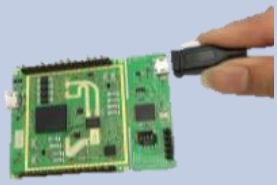
****If the device driver is not recognized***

Right-click on "My Computer" → Manage → Device manager → Other devices → Right-click on "Unknown device" → Update driver software → Browse → Position2Go_FW → Firmware_Software → Driver → XMC4200 serial driver (unzipped folder)

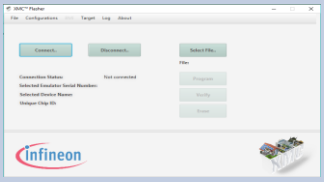
STEP 6 (optional)

Firmware (FW) update

- Download and install Segger JLINK-Lite driver: https://www.segger.com/downloads/jlink/Setup_JLink_V600d.zip
- Connect USB to debugger side



- Open ***InfineonToolbox → XMCFlasher***



- Click on ***Connect → XMC4700-2048***
- Click on ***"Select file"*** → Browse to ***Position2Go_FW → Firmware_Software → Binary → Debug → .hex file → Program***

Figure 2 Steps 4 to 6 to get started with the Position2Go demo board

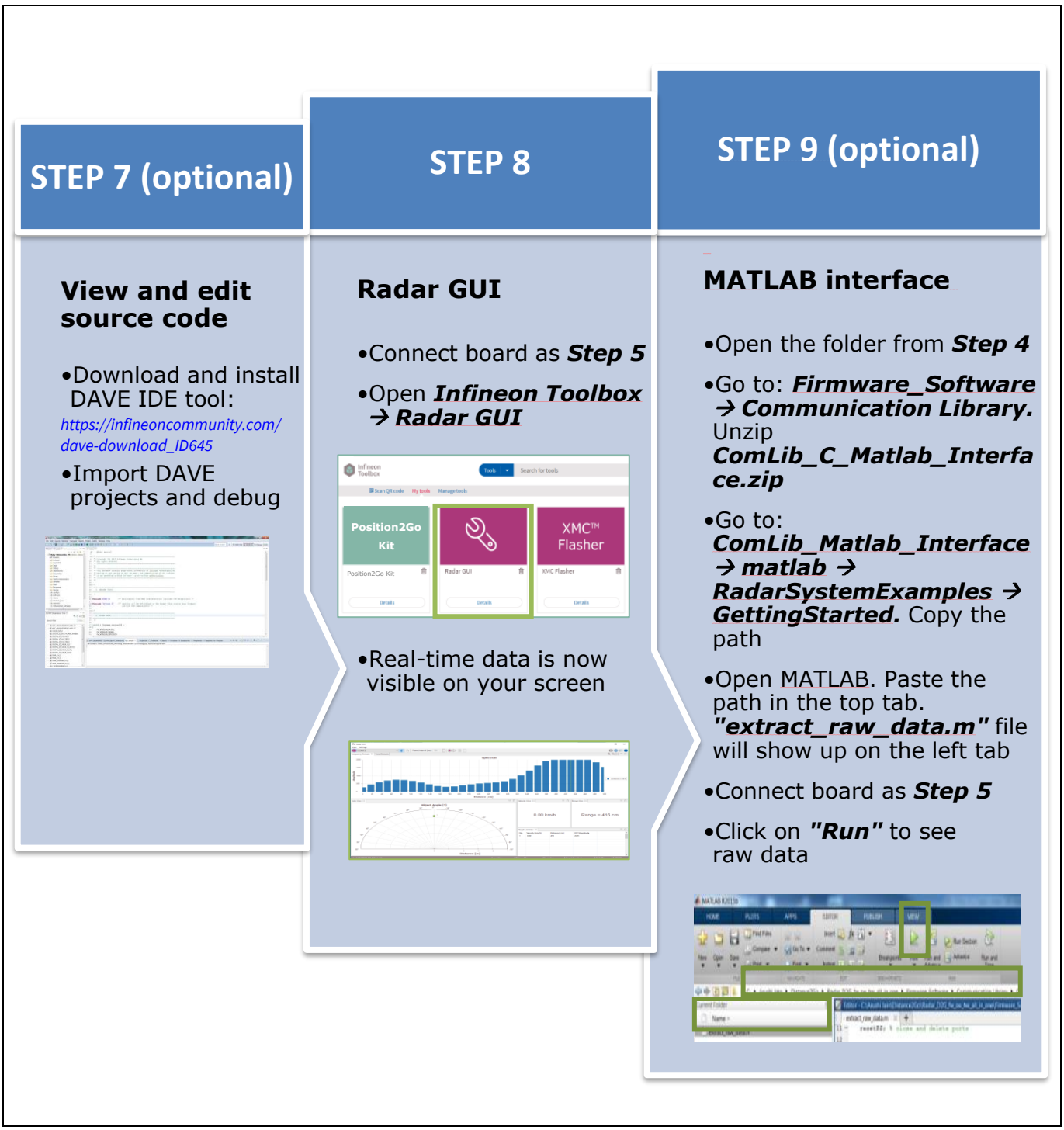


Figure 3 Steps 7 to 9 to get started with the Position2Go demo board

1.1 Additional material

The board comes with additional documentation for customer support. These documents can be found in the folders downloaded through Step 4 in Figure 2. They are:

- DAVE™ project and binary files
- Software user guide
- Comlib documentation
- Bill of Materials (BOM)

- Gerber
- Schematics
- Altium project

More information about other 24 GHz products can be found at:
https://www.infineon.com/cms/en/product/sensor/radar-sensor-ics/24ghz-radar/?redirId=56034

2 References

[1] Infineon BGT24MTR12 – 24 GHz Radar IC – Datasheet
https://www.infineon.com/dgdl/Infineon_DS_BGT24MTR12_en_V3_2.pdf?fileId=db3a304339dcf4b10139df108e75025b

[2] Infineon XMC4700 32-bit ARM® Cortex™-M4 Microcontroller – Datasheet
https://www.infineon.com/dgdl/Infineon-XMC4700_XMC4800_DATA_SHEET-ATI-v00_06-EN.pdf?fileId=5546d4624d6fc3d5014da01e39e361c6

[3] Infineon Application Note – AN305 – "User Guide to 24 GHz Radar Transceiver"

https://www.infineon.com/dgdl/Infineon--AN-v01_00-NA.pdf?fileId=db3a30433afc7e3e013b17e1d0e32f6f

[4] Infineon Application Note – AN341 – "Using BGT24MTR11 in Low Power Applications – 24 GHz Radar"

https://www.infineon.com/dgdl/Infineon--AN-v01_00-NA.pdf?fileId=db3a304343a131180143b4f80a3f259d

[5] FAQs for 24 GHz industrial radar

https://www.infineon.com/dgdl/Infineon-Radar%20FAQ-PI-v02_00-EN.pdf?fileId=5546d46266f85d6301671c76d2a00614

3 Author

Arushi Jain, Application Engineer of Business Line “Radio Frequency and Sensors”

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Published by

Infineon Technologies AG

81726 Munich, Germany

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Document reference
UM_1812_PL32_1812_145651

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