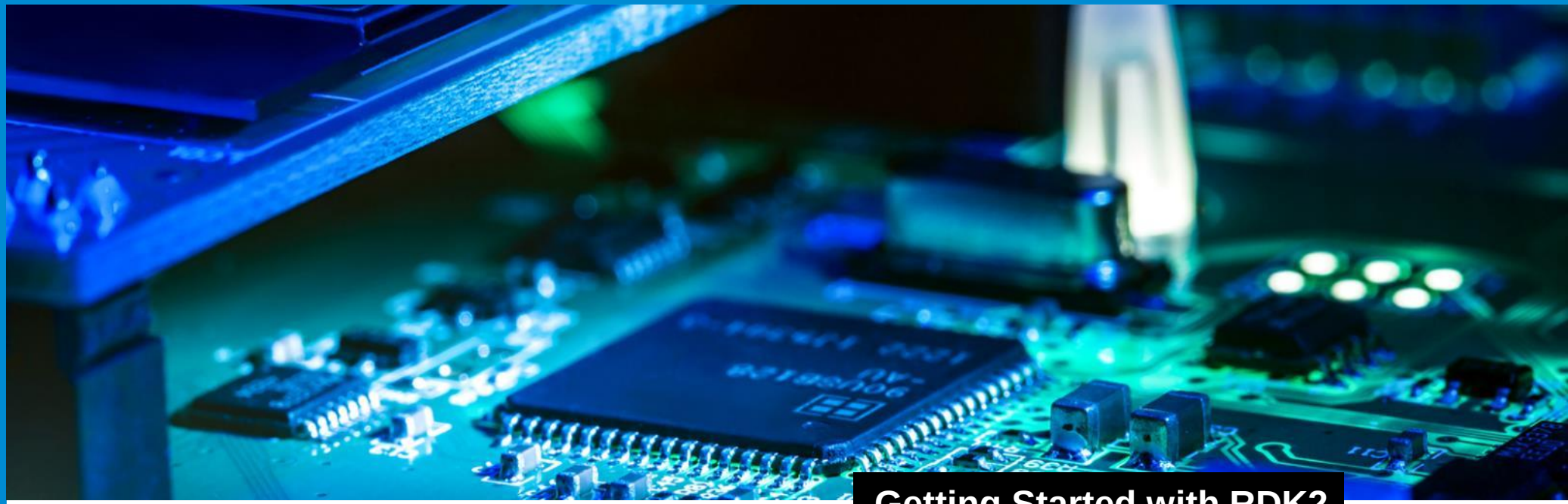

Getting Started with RDK2

Getting Started with CY8C6245AZI-S3D72 development platform – **RDK2**

Registration & Download

1.) Register or/and login to the Infineon website, press on „myInfineon“ tab.
https://www.infineon.com

2.) Download and install the latest ModusToolbox™ software.

3.) [Optional] Download and install yours prefered terminal emulator, for example: PuTTY, Tera Term, etc.

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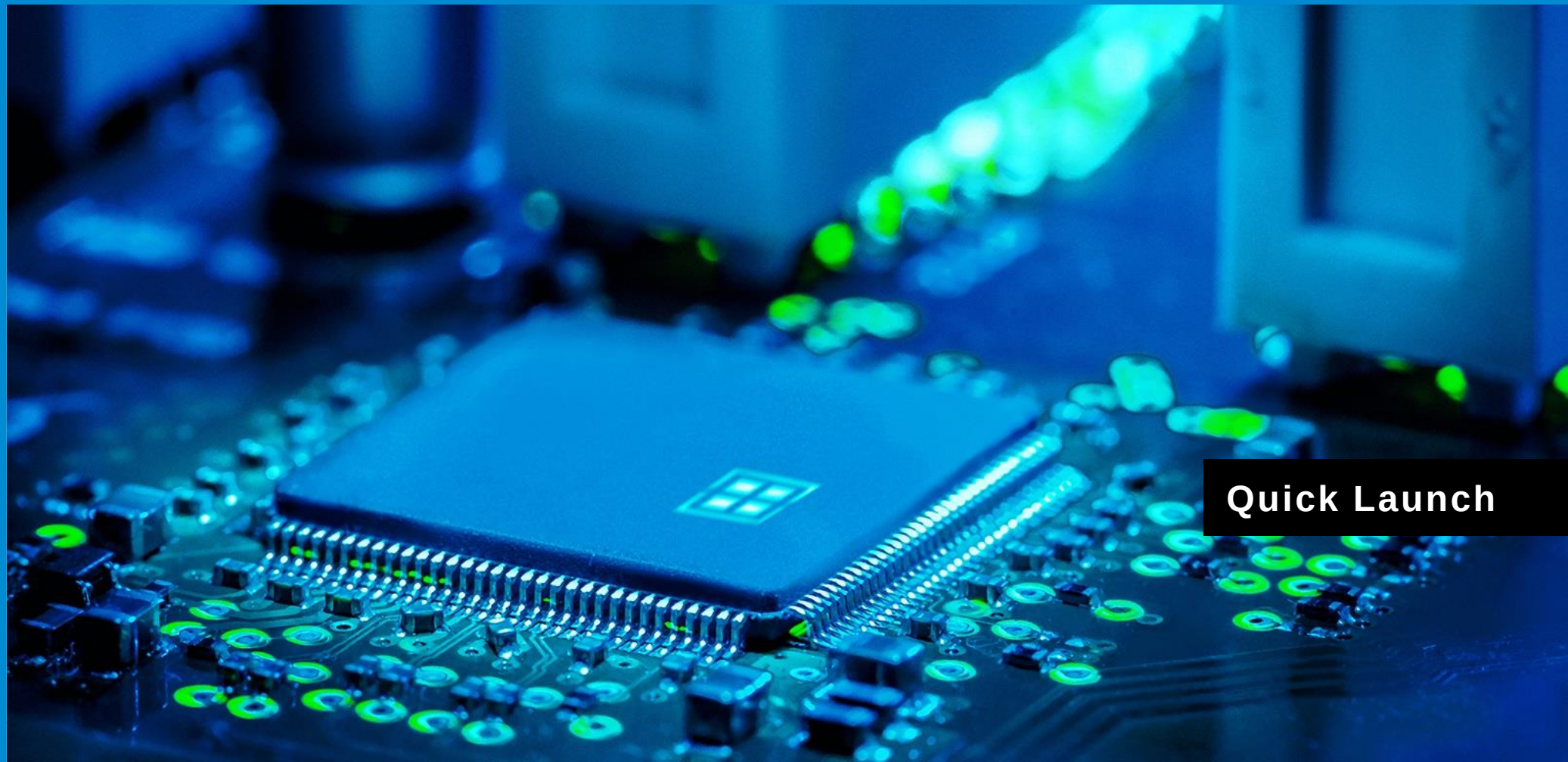
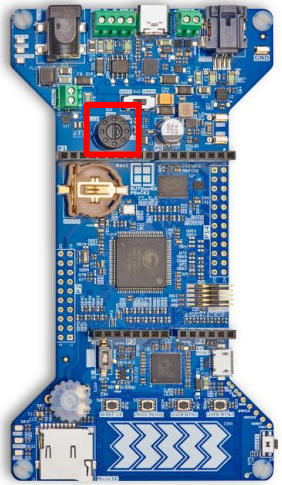


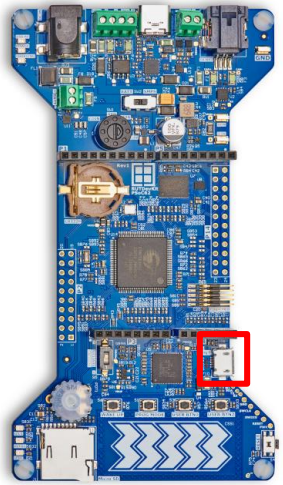
Quick Launch

Connect the RDK2

Connect the RDK2 to your PC.



Ensure the switch SW1 is set to “3.3V” position



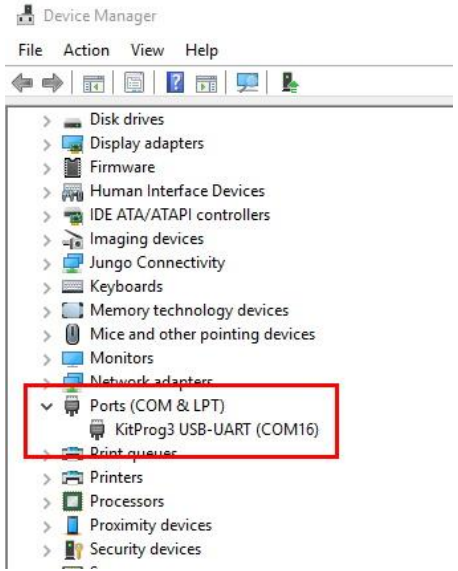
Look for the Micro USB socket with a marking “KitProg3”

Have Micro USB Cable - A to Micro B

Connect it with your PC

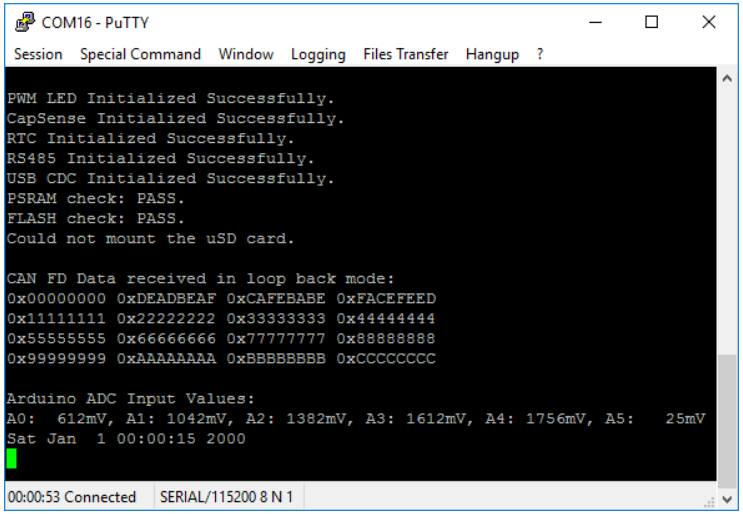
Check if the RDK2 is ready.

“POWER” and “DEBUG” LEDs should shine constantly. The LED1 reacts to the touch on the slider.



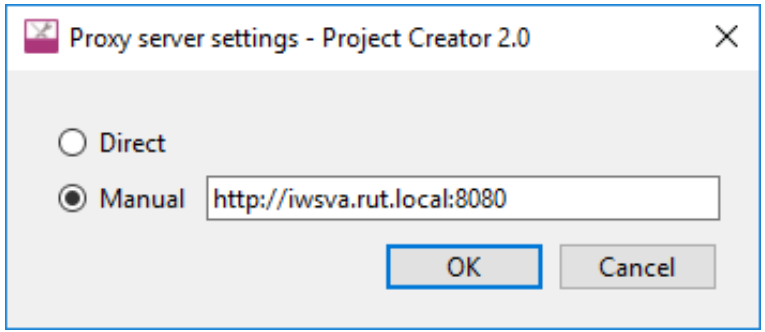
The “KitProg3” must be seen in the “Device Manager” window.

All new RDK2s print out hardware test results to the KitProg3 serial terminal (115200 bit/s).
Press the RESET on the RDK2 if necessary.



If you are working with your personal PC, (not the Rutronik provided Laptop PC) please skip this setup.

Open the File→New→ "ModusToolbox Application" → Settings → Proxy server settings and enter the proxy address: http://iwsva.rut.local:8080



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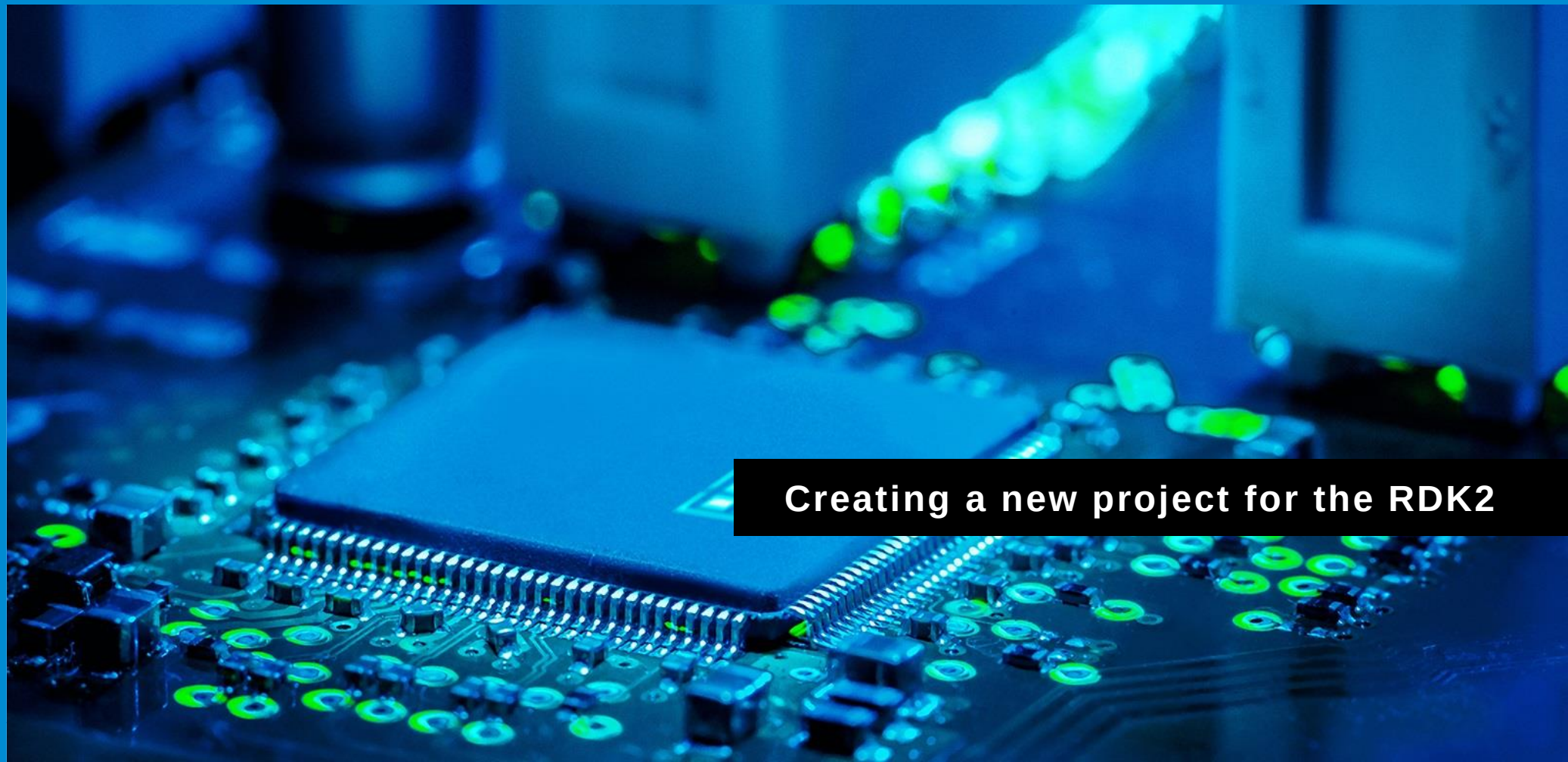


Creating a new project for the RDK2

Creating new projects with “Project Creator” tool

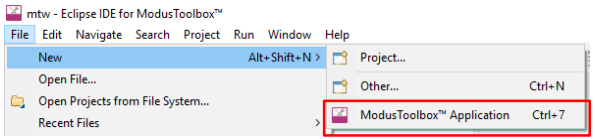
1.) Open the “Project Creator” tool: File → New → ModusToolbox™ Application

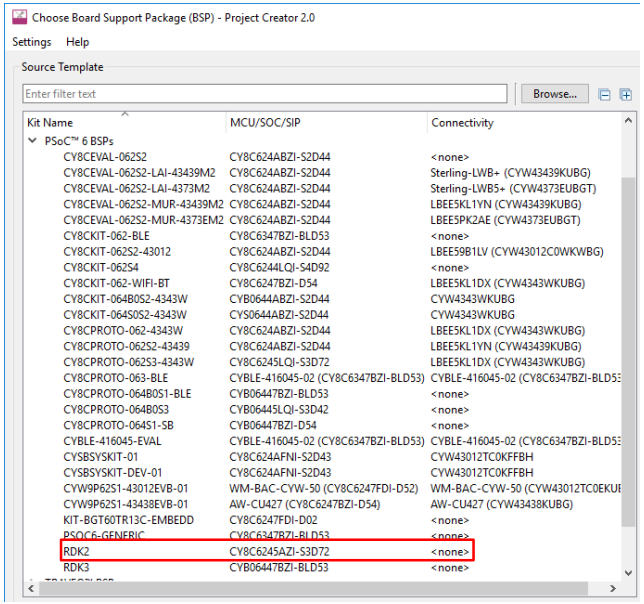
2.) Select the “RDK2” BSP. It is in PSoC™ 6 BSPs list.

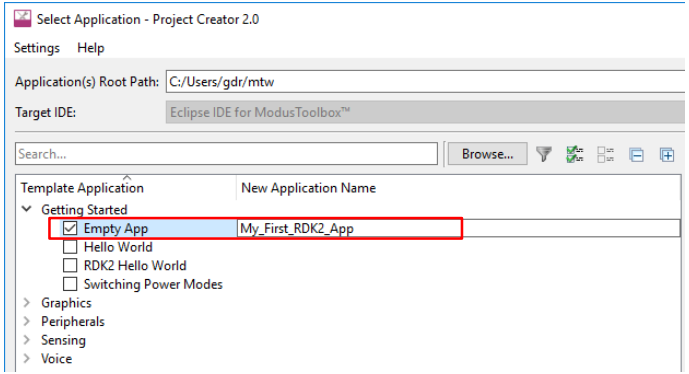
3.) Click on “Next”.

4.) Select a “Empty App” in a “Getting Started” category. Name it “My_First_RDK2_App”.

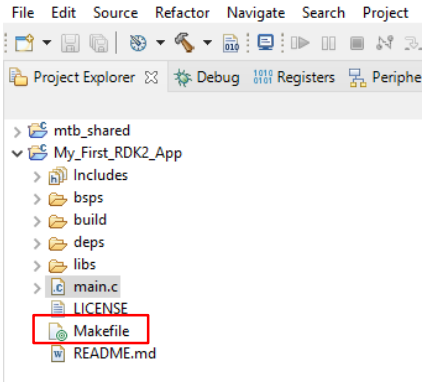
5.) Click on “Create”.





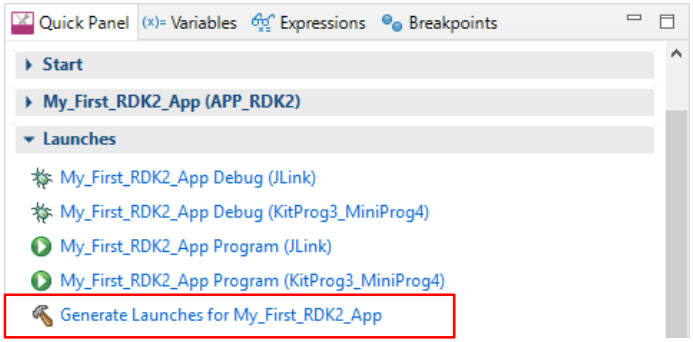


6.) Modify the “Makefile” to disable code optimisation*



APPNAME=my-first-rdk2-app
CONFIG=Costum
CFLAGS =-O0

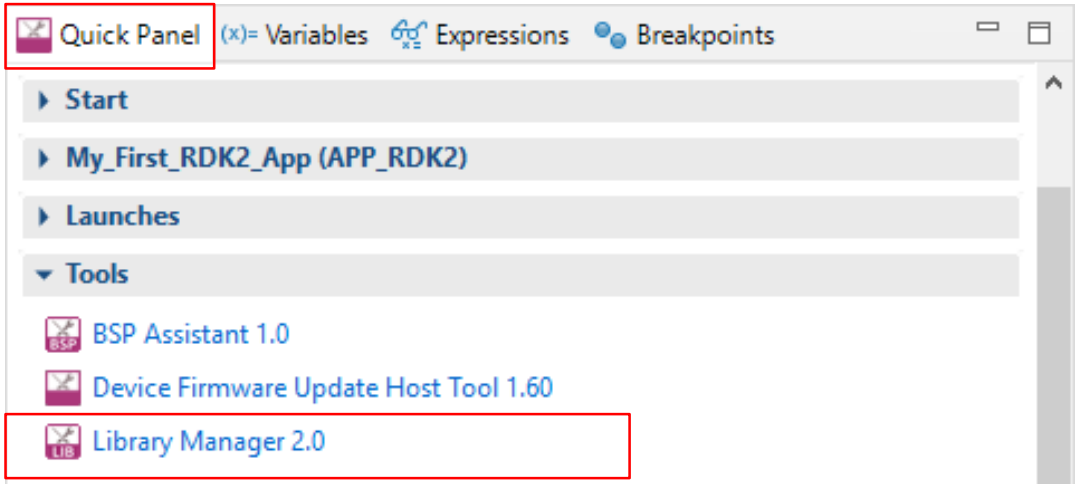
7.) Press “Generate Launches” in Quick Panel

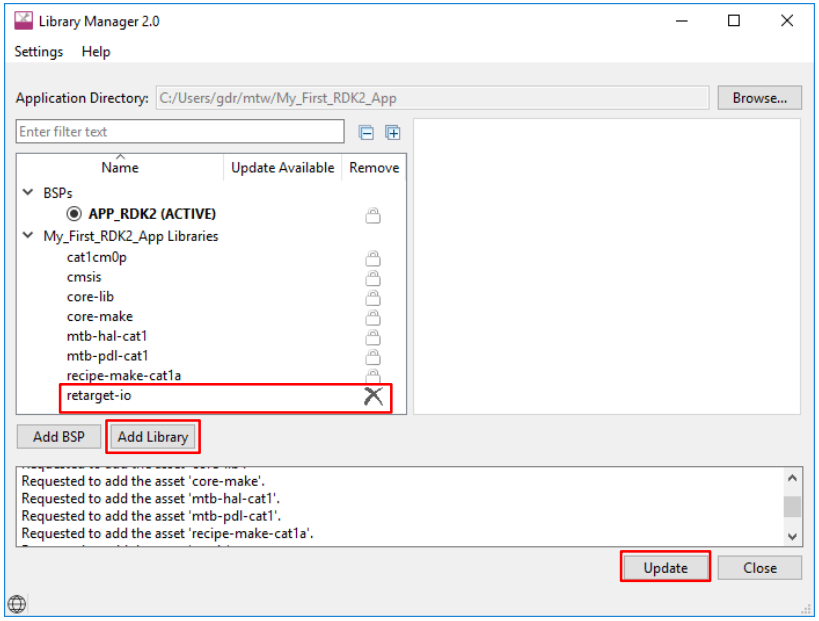


***only for debugging, learning and demo purposes. Normally, code optimisations should never be disabled.**

Creating new projects with “Project Creator” tool

8.) Include the “retarget-io” library in a “Library Manager” tool and press “Update”.

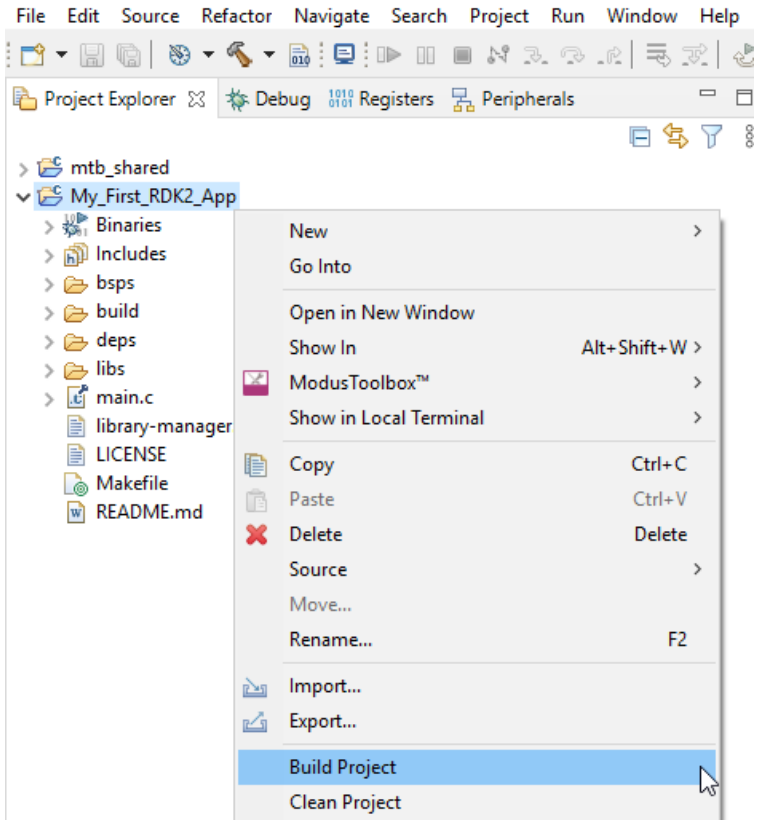


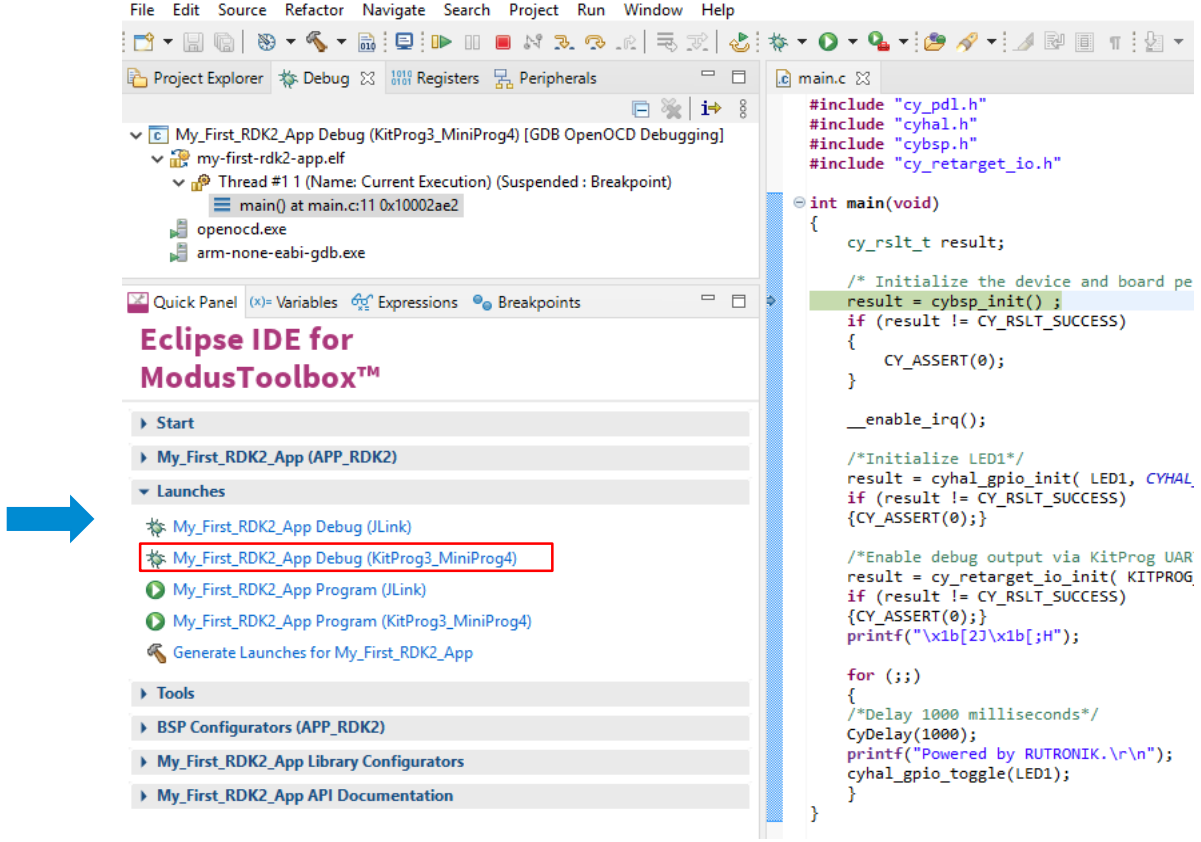


9.) Copy/Paste and save the code example to the “main.c” file.

```
#include "cy_pdl.h"
#include "cyhal.h"
#include "cybsp.h"
#include "cy_retarget_io.h"

int main(void)
{
    cy_rslt_t result;

    /* Initialize the device and board peripherals */
    result = cybsp_init() ;
    if (result != CY_RSLT_SUCCESS)
    {
        CY_ASSERT(0);
    }

    __enable_irq();

    /*Initialize LED1*/
    result = cyhal_gpio_init( LED1, CYHAL_GPIO_DIR_OUTPUT, CYHAL_GPIO_DRIVE_STRONG, CYBSP_LED_STATE_OFF);
    if (result != CY_RSLT_SUCCESS)
    {CY_ASSERT(0);}

    /*Enable debug output via KitProg UART*/
    result = cy_retarget_io_init( KITPROG_TX, KITPROG_RX, CY_RETARGET_IO_BAUDRATE);
    if (result != CY_RSLT_SUCCESS)
    {CY_ASSERT(0);}
    printf("\x1b[2J\x1b[;H");

    for (;;)
    {
    /*Delay 1000 milliseconds*/
    CyDelay(1000);
    printf("Powered by RUTRONIK.\r\n");
    cyhal_gpio_toggle(LED1);
    }
}
```

10.) Build and Debug the active project.

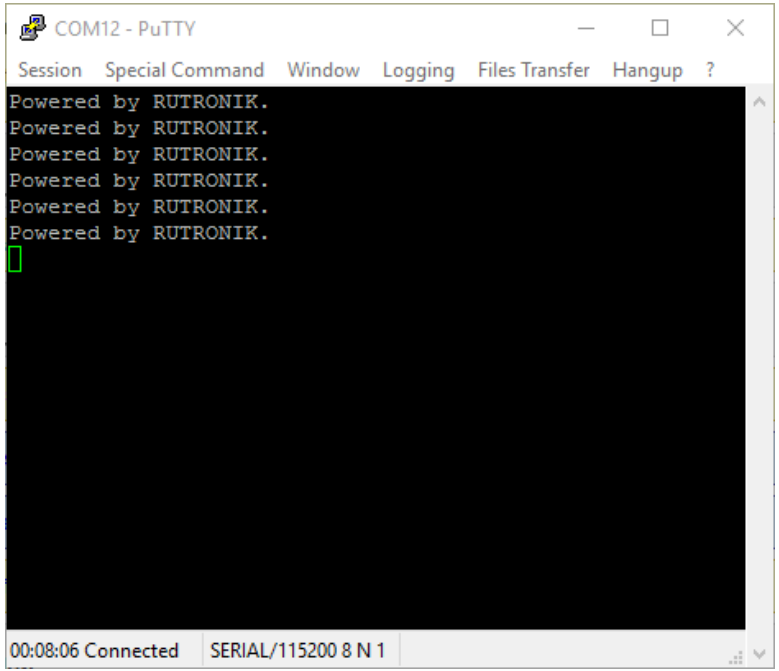




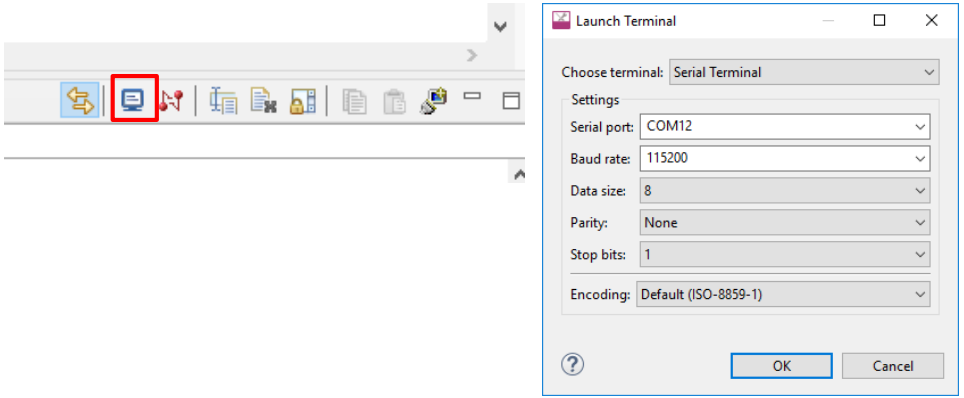
Creating new projects with “Project Creator” tool

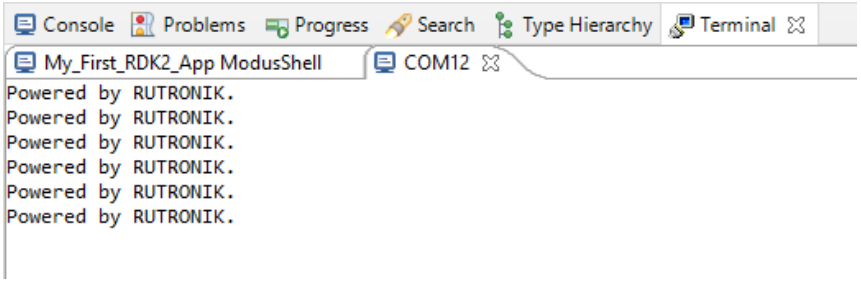
The final result is a blinking LED1 on the RDK2 board and text on the terminal window:

PuTTY Terminal



ModusToolbox Terminal





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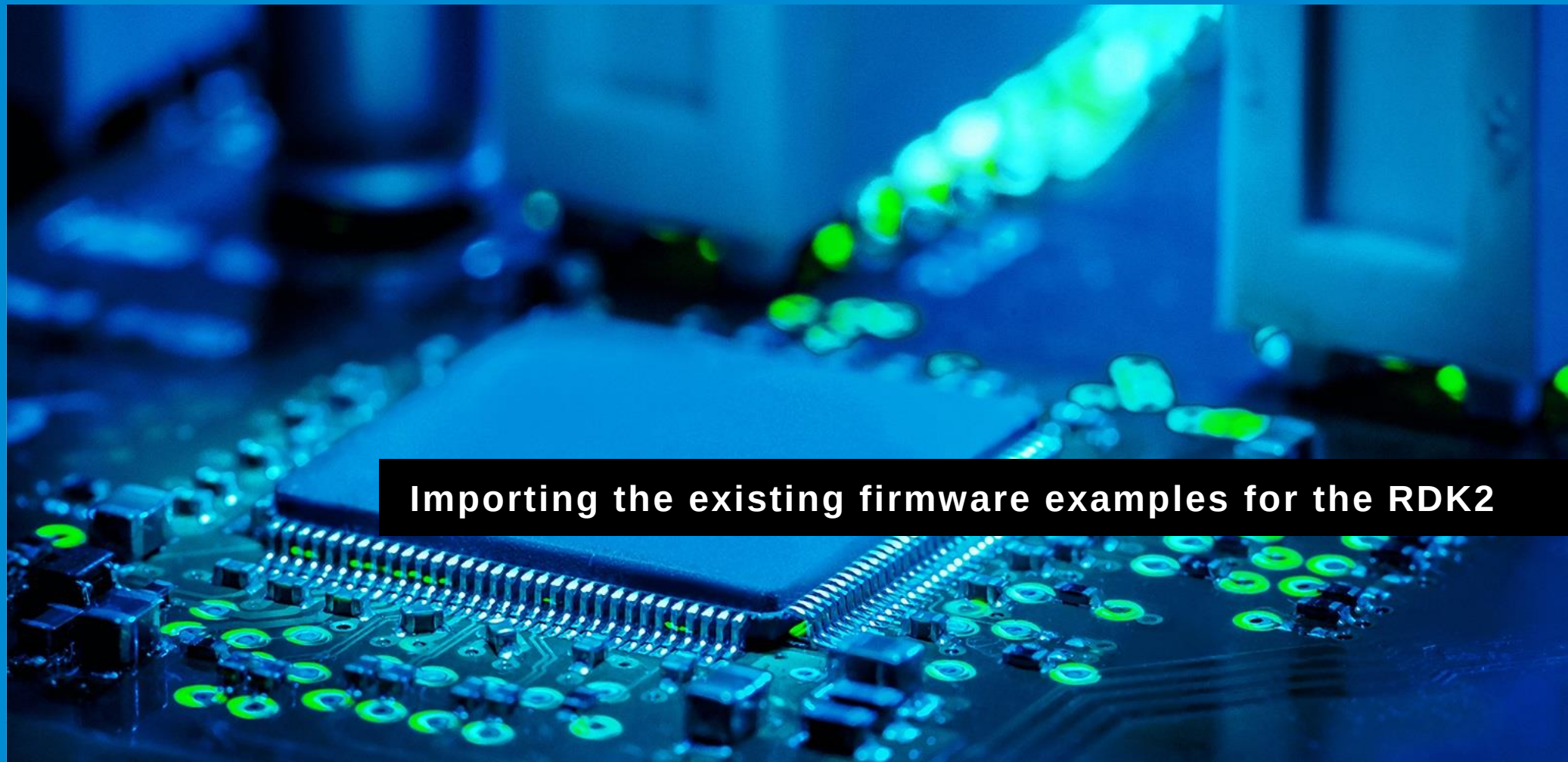
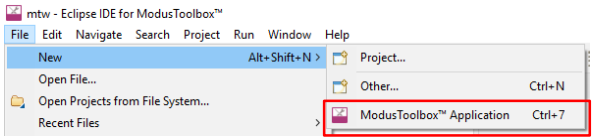
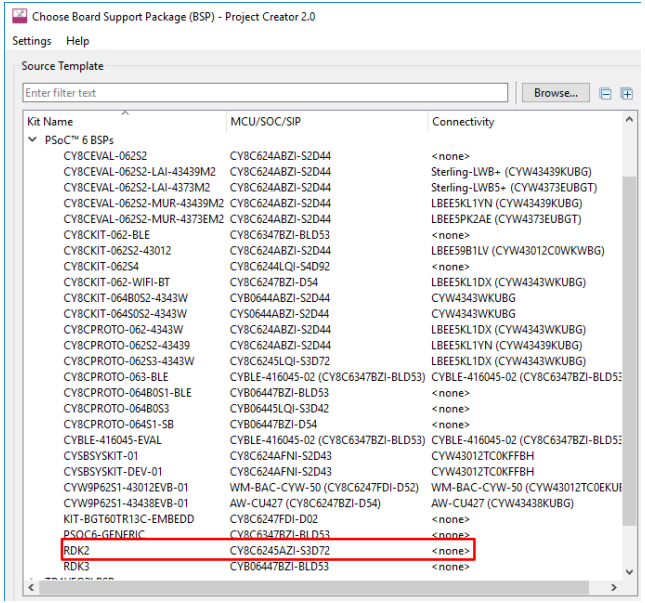


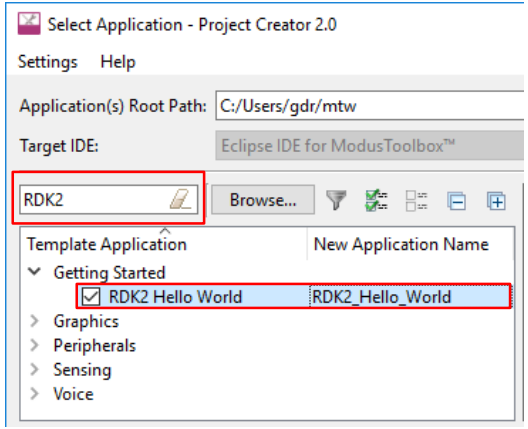
Importing the existing firmware examples for the RDK2

Importing firmware examples with “Project Creator” tool

1.) Open the “Project Creator” tool: File → New → ModusToolbox™ Application
2.) Select the “RDK2” BSP. It is in PSoC™ 6 BSPs list.
3.) Click on “Next”.
4.) Write a “RDK2” in a Search… window. Select the example from given categories list.
5.) Click on “Create”.

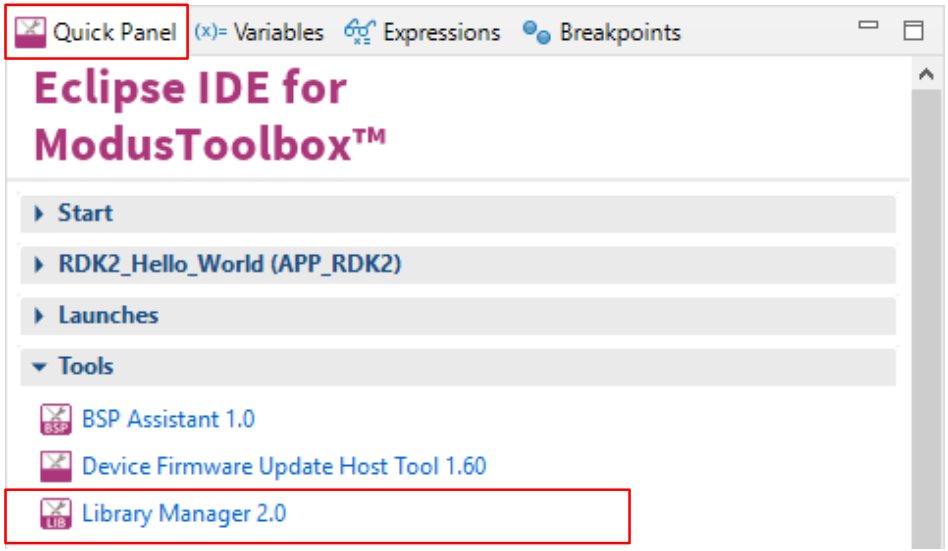


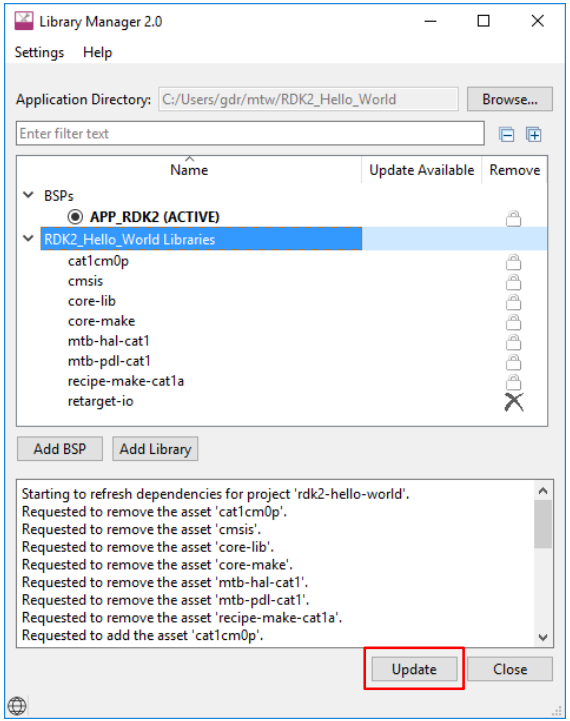




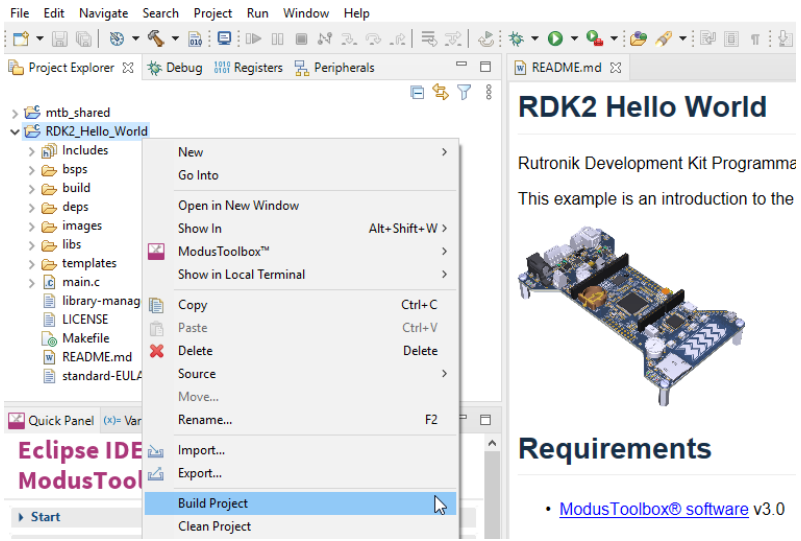
Importing firmware examples with “Project Creator” tool

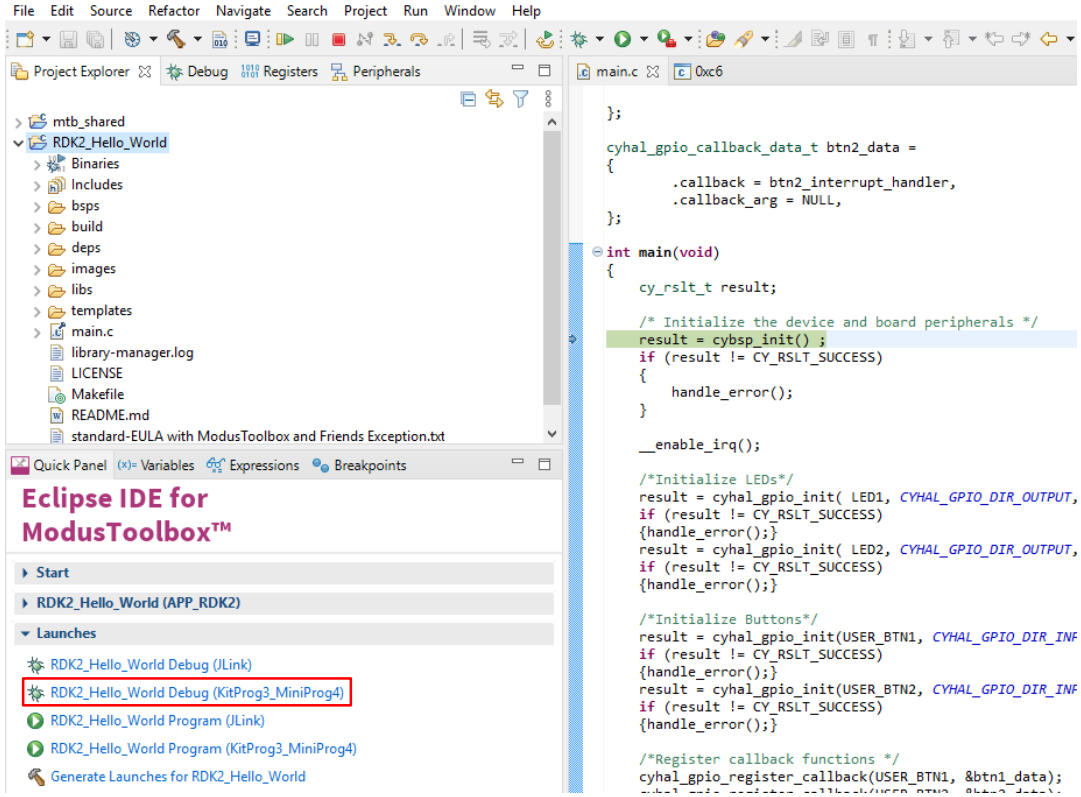
6.) After project creation is finished - update libraries with “Library Manager” tool.



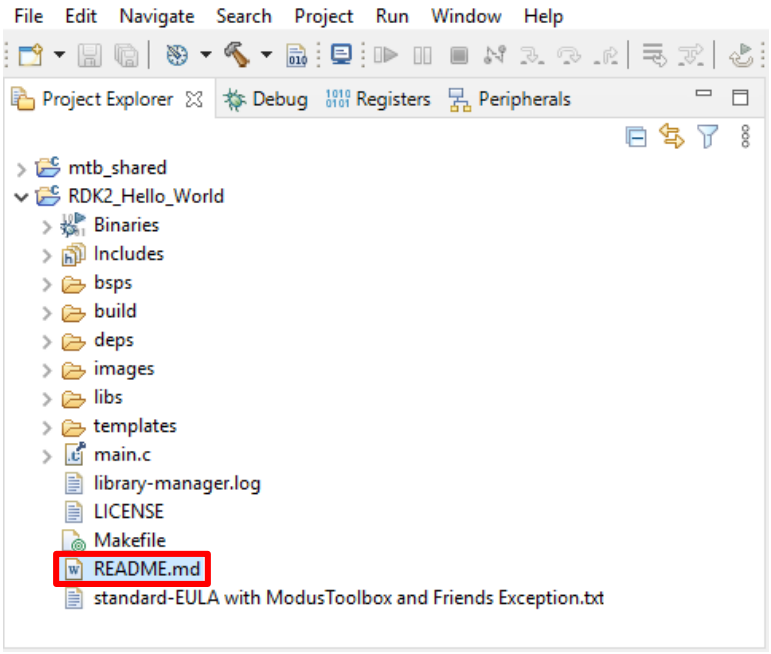


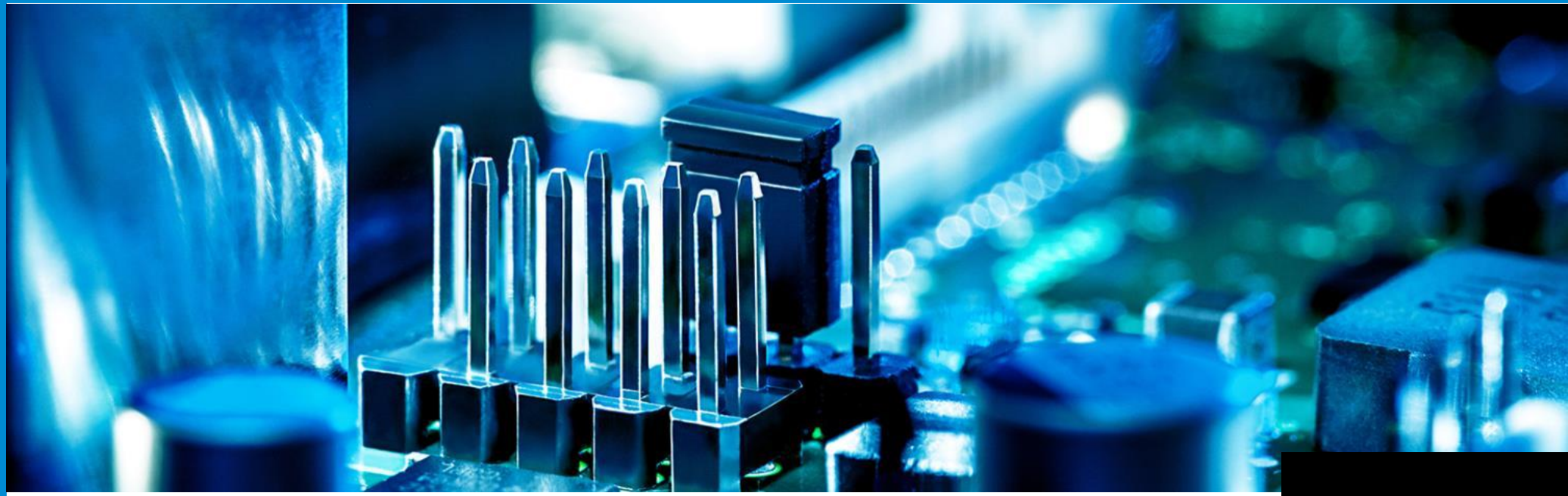
7.) Build and Debug the active project.





Check the README.md file before starting to explore the code example. You may find important hints or what else is needed to have firmware running properly.





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