**Quick Start Guide**
# FRDM-KW38

FREEDOM DEVELOPMENT PLATFORM

# GET TO KNOW THE FRDM-KW38



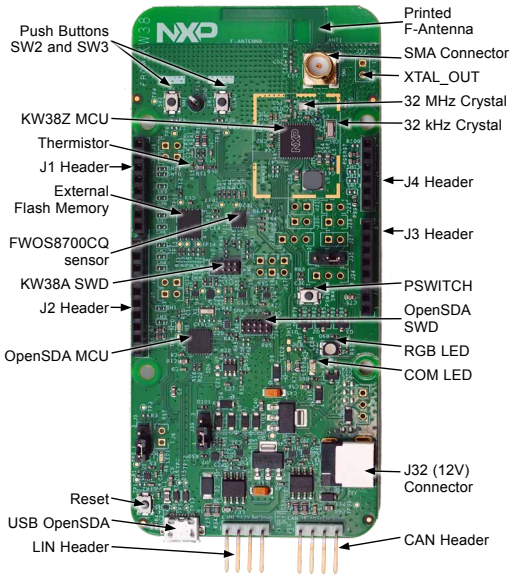Push Buttons SW2 and SW3
KW38Z MCU
Thermistor
J1 Header
External Flash Memory
FWOS8700CQ sensor
KW38A SWD
J2 Header
OpenSDA MCU
Reset
USB OpenSDA
LIN Header

Printed F-Antenna
SMA Connector
XTAL_OUT
32 MHz Crystal
32 kHz Crystal
J4 Header
J3 Header
PSWITCH
OpenSDA SWD
RGB LED
COM LED
J32 (12V) Connector
CAN Header

**Figure 1:** FRDM-KW38 Board Components



1 – PTC6
2 – PTC7
3 – PTC19
4 – PTC3
5 – PTA17
6 – PTC4
7 – PTA18
8 – PTC5
1 – PTA16
2 – PTC1
3 – PTA19
4 – PTC17
5 – PTC18
6 – PTC16
7 – GND
8 – VREFH
9 – PTB1
10 – PTB0

ADC0_DM0 – 6
PTB1 – 5
PTB3 – 4
PTB2 – 3
PTB18 – 2
ADC0_DP0 – 1
P5-9V_IN – 8
GND – 7
GND – 6
P5V_USB – 5
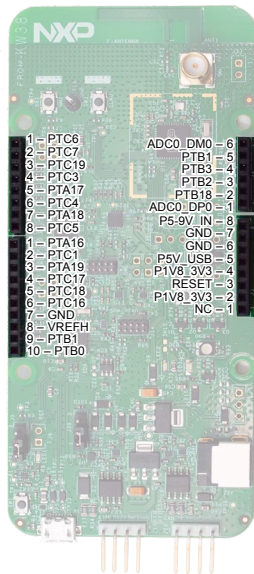P1V8_3V3 – 4
RESET – 3
P1V8_3V3 – 2
NC – 1

**Figure 2:** FRDM-KW38 Board Connections

## HOW TO GET STARTED

**1.** Connect the FRDM-KW38 board
to a PC using the included micro-USB
cable to the USB OpenSDA connector
of the FRDM-KW38.



**2.** Your FRDM-KW38 RGB LED should start
cycling through the colors White, Magenta, Blue, Cyan, Green,
Yellow and Red when you connect the board.

**3.** Using a smartphone supporting
Bluetooth® Low Energy (Bluetooth LE),
install and open the **NXP IoT Toolbox**
mobile application, available in Google
Play or AppStore.  Open the "Beacons"
demo and the FRDM-KW38 Beacon will
be displayed.



**4.** Explore more out-of-box demos and
download software and tools at
**www.nxp.com/FRDM-KW38/startnow**.

**5.** Enjoy your design freedom with the
FRDM-KW38.

## SUPPORT

Visit **www.nxp.com/support** for a list of phone numbers within your region.

## WARRANTY

Visit **www.nxp.com/warranty** for complete warranty information.

## Get Started

Download installation software and documentation under **"Jump Start Your Design"** at **www.nxp.com/FRDM-KW38**.

The following information is provided per Article 10.8 of the Radio Equipment Directive 2014/53/EU:

(a) Frequency bands in which the equipment operates.

(b) The maximum RF power transmitted.

| PN | RF Technology | (a) Freq Ranges (EU) | (b) Max Transmitted Power |
|---|---|---|---|
| FRDM-KW38 | Bluetooth LE | 2360 MHz – 2483 MHz | +5 dBm |

**EUROPEAN DECLARATION OF CONFORMITY**

**(Simplified DoC per Article 10.9 of the Radio Equipment Directive 2014/53/EU)**

This apparatus, namely FRDM-KW38 Freedom Development Platform, conforms to the Radio Equipment Directive 2014/53/EU.

The full EU Declaration of Conformity for this apparatus can be found at this location:
**www.nxp.com/FRDM-KW38**

## www.nxp.com