

# TWR-S12G128 QUICK START GUIDE

## Introduction and Default Settings

The TWR-S12G128 features the MC9S12G12, a 16-bit MCU focused on low-cost, high-performance, and low pin-count. The MC9S12G Family is intended to bridge the gap between high-end 8-bit MCU's and high-performance 16-bit MCU's. The MC9S12G Family is targeted to generic automotive applications requiring CAN or LIN/J2602 communications. This guide will show how to quickly connect the board to a host PC, and execute a demonstration application preloaded into FLASH memory. Default jumper positions for the TWR-S12G128 are shown in the figure below.

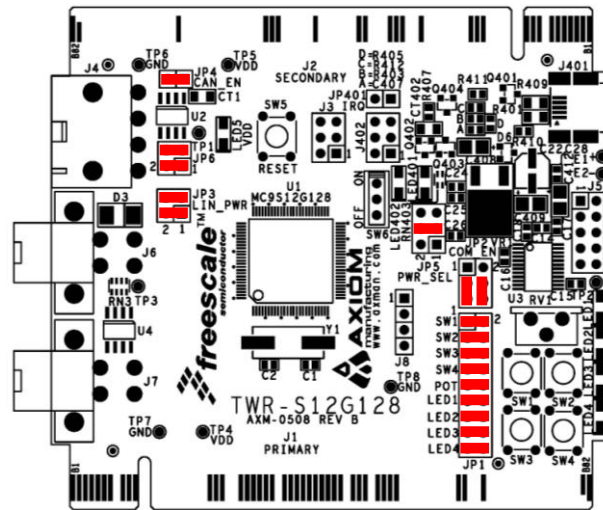


Figure 1: TWR-S12G128 Default Option Settings

## Integrated OSBDM

The TWR-S12G128 board applies the integrated, Open-Source BDM (OSBDM) to provide application development and debug support. The OSBDM-JM60 may also be used apply power to the target module; further simplifying development and debug. The TWR-S12G128 board ships with CodeWarrior Development Studio for the S12(X), Version 5.1 fully supporting the OSBDM.

## Install CodeWarrior Development Studio

The TWR-S12G128 board ships with CodeWarrior Development Studio for the S12(X), Version 5.1. CodeWarrior Development Studio is a complete Integrated Development Environment (IDE) that provides a highly visual and automated framework to accelerate the development of the most complex embedded applications.

To install CodeWarrior, simply insert the CodeWarrior Development Studio DVD into a DVD drive. The installation will start automatically. If the installation fails to start, the installation program may be started manually. Open Windows Explorer and navigate to the DVD drive where the CodeWarrior disk is inserted. Double click on Launch.exe to launch the installer. Follow the on-screen instructions to install the CodeWarrior IDE and inte-



Email: [www.axman.com](http://www.axman.com)

Support: [support@axman.com](mailto:support@axman.com)

grated programmer.

**NOTE:**

Install CodeWarrior Development Studio before connecting the target board to the host PC. Otherwise, the necessary USB drivers will not be available and the host PC will not recognize the board.

## To Launch the Demo Program:

The TWR-S12G128 ships with a demonstration program preloaded into on-chip FLASH memory. The demonstration program uses the POT, Push-Button switches and Serial Port.

1. Verify the option jumpers are set in default positions. Refer to Figure 1 above.
2. Connect the included A/B USB cable between an open USB port on the host PC and the USB, type mini-B, connector on the target board. Follow the on-screen instructions to install the necessary USB drivers.
3. The green LED at LED402 turns ON after the OSBDM successfully enumerates.
4. Move the ON/OFF switch to the ON position. The green VDD LED and yellow LED at LED401 both turn ON.
5. Rotate the POT fully in both directions. As the POT rotates, the 4 User LEDs should respond by turning ON or OFF.
6. Press each push-button switch. The associated LED will turn ON while the push-button switch is pressed.
7. Connect a serial cable between the DB9 adapter cable and the host PC. Open a terminal program, such as AxIDE, and configure the program for 19200, 8, N, 1
8. With the terminal program selected, keystrokes on the keyboard will echo in the terminal window.

The Quick Start CodeWarrior Project may be downloaded from the Axiom Manufacturing web site at [www.axman.com/support](http://www.axman.com/support).

## Troubleshooting

If the demonstration application fails to function as indicated above, please follow the steps below before contacting Freescale Semiconductors. Please refer to the Technical Information Card (TIC) card included in the TWR-S12G128 kit for contact information.

- Ensure the option jumpers are set to default positions. Refer to Figure 1 above. Specifically, ensure the PWR\_SEL option jumper is set correctly.
- Ensure the ON/OFF switch is set to ON.
- Ensure the VDD LED is on.
- Ensure the correct version of CodeWarrior is installed and that the S12G128 Service Pack is installed
- If keystrokes are not echoed in the terminal window, ensure the terminal program is correctly configured. Also, ensure the COM\_SEL jumpers are set properly, refer to Figure 1 above.

If the above Troubleshooting Tips fail to correct the problem, please contact Freescale Semiconductors for further assistance. Refer to the Technical Information Card (TIC) included in the kit for contact information. Assistance may also be found by contacting Axiom Manufacturing at [support@axman.com](mailto:support@axman.com).