

Quick Start Guide

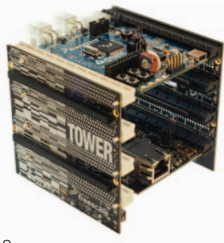
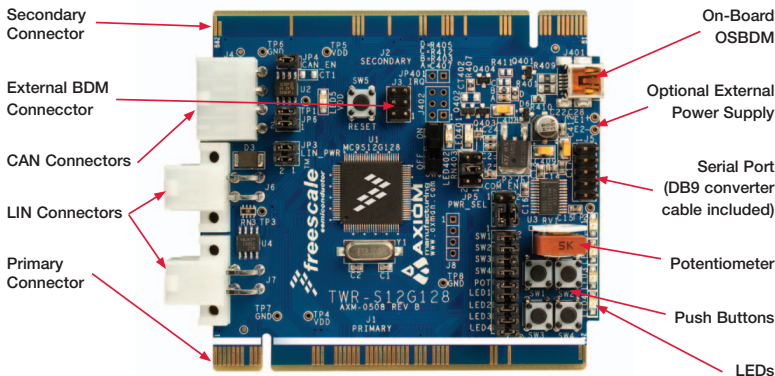
TWR-S12G128

Scalable platform for
automotive applications



TOWER SYSTEM

Get to know the TWR-S12G128 Board



TWR-S12G128 Freescale Tower System

The TWR-S12G128 module is a single board computer as well as part of the Freescale Tower System, a modular development platform that enables rapid prototyping and tool re-use through reconfigurable hardware. Elevate your design to the next level and begin constructing your Tower System today.



TWR-S12G128 Features

- S12G128 series microcontroller (100 pin LQFP)
- On-board JTAG connection via open source OSBDM circuit using the MPC9S08JM microcontroller
 - See pemicro.com/osbdm for source code
- High-speed CAN interface
- LIN interface
- Potentiometer with LP filter
- LED indicators
- RS-232 serial communication interface



Step-by-Step Installation Instructions

In this Quick Start Guide, you will learn how to set up the TWR-S12G128 board and run the default exercise.

1 Install Software and Tools

Install CodeWarrior Development Studio for S12 v5.1 or later.

A 30 evaluation license of CodeWarrior is included on the DVD for your convenience. For updates, please visit freescale.com/TWR-S12G128.

2 Connect the USB Cable

Connect one end of the USB cable to the PC and the other end to the mini-B connector on the TWR-S12G128 board. Allow the PC to automatically configure the USB drivers if needed.

3 Using the Example Project

The pre-loaded example project utilizes the TWR-S12G128's potentiometer, push button switches and LEDs. Once the board is plugged in you can adjust the potentiometer and the bank of four LEDs should illuminate/de-illuminate in response. Each LED will toggle when the corresponding push button is pressed.

4 Learn More About the S12G128

Read the release notes and documentation on the DVD and at freescale.com/S12G.

- The Processor Expert graphical initialization software included in your CodeWarrior installation will help reduce your time to market
- CodeWarrior for S12 with examples

11V-K-512G128 Jumper Options

The following is a list of all jumper options. The default installed jumper settings are shown in white text within the blue boxes and the default function in **bold**.

Jumper	Option	Setting	Description
JP1	Option Header	1-2	Connect PAD4 pin to SW1
		3-4	Connect PAD5 pin to SW2
		5-6	Connect PAD6 pin to SW3
		7-8	Connect PAD7 pin to SW4
		9-10	Connect PAD0 to potentiometer RV1
		11-12	Connect PT4 pin to LED1
		13-14	Connect PT5 pin to LED2
		15-16	Connect PT6 pin to LED3
		17-18	Connect PT7 pin to LED4
JP2	COM_EN	3-1	Connect PS1/TXD0 pin to TX pin of the LIN transceiver
		3-5	Connect PS1/TXD0 pin to TX pin RS232 transceiver
		4-2	Connect PS0/RXD0 pin to RX pin of the LIN transceiver
		4-6	Connect PS0/RXD0 pin to RX pin RS232 transceiver
JP3	LIN_POWER/ MSTR	1-2	Allows other boards to be powered from LIN network
		3-4	Sets the LIN transceiver into Master Mode

Jumper	Option	Setting	Description
JP4	CAN_EN	1-2	Enables the CAN transceiver
JP401	IRQ	1-2	Pulls the USB ODM IRQ pin to GND
JP5	PWR_SEL	1-2	Selects the board to be powered from the 3.3V elevator card rail
		3-4	Selects the board to be powered from the USB 5V
		5-6	Selects the board to be powered from externally provided power source on E1 and E2
JP6	CAN Termination	1-2	Enables CANH termination
		3-4	Enables CANL termination



Visit freescale.com/Tower and freescale.com/TWR-S12G128 for more information.

Support

Visit freescale.com/support for a list of phone numbers within your region.

Warranty

Visit freescale.com/warranty for complete warranty information.

For more information, visit freescale.com/Tower

Join the online Tower community at towergeeks.org

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