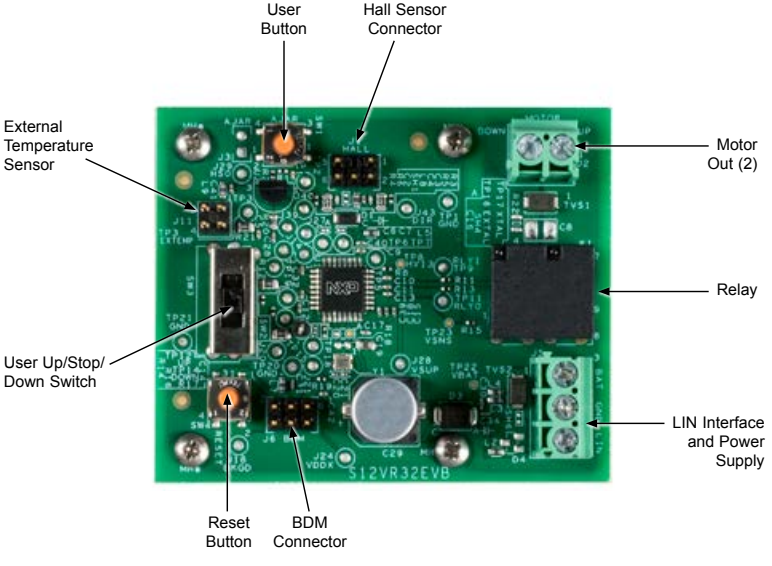
Quick Start Guide

S12VR32EVB

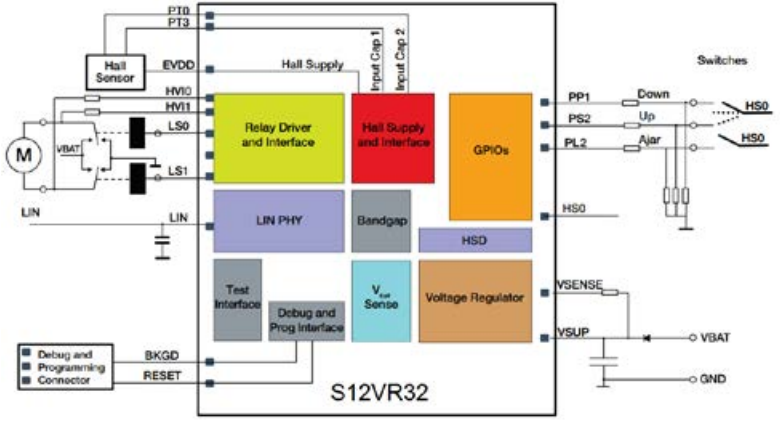
Highly Integrated Microcontroller
Power Window Lift Relay-Based

GET TO KNOW THE S12VR32EVB BOARD



Front side of S12VR32EVB board

SIMPLIFIED BOARD DESCRIPTION



INTRODUCTION

The S12VR32 EVB features the S12VR32 microcontroller, an automotive 16-bit MCU for applications based on motor control relays. The S12VR32 evaluation board integrates an S12 CPU, a LIN physical interface, a 5 V regulator system to supply the microcontroller and low-side drivers to control the relay.

This ultra-low-cost development platform also includes a Hall sensor interface, an external 16 MHz oscillator, a switch button and an onboard OSBDM.

SOFTWARE TOOLS INSTALLATION

1 Install CodeWarrior® 5.1 Development Studio

CodeWarrior is a complete integrated development environment (IDE) that provides a highly visual and automated framework.

Download the CW5.1 from **nxp.com/codewarrior**.

2 Open the Application Software

Download and open the file up-down-no-antipinch.mcpwith CodeWarrior Development Studio for HCS12(X).

3 Connect the Board

Connect a 12 V automotive battery and a brushed DC motor to the board. For details, refer to the section titled, "Step-By-Step Board Connection."

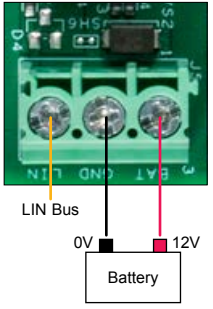
4 Download the Software to the S12VR64 MCU Flash

Connect an HCS12(X) external debugger to the computer and then connect the debugger to J6. Follow the operating system messages to install the debugger drivers. Flash the application by pressing the debug button on CodeWarrior. Follow the debugger instructions to flash the MCU.

STEP-BY-STEP BOARD CONNECTION

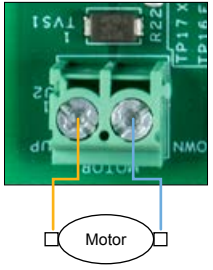
1 Connect the Board

Supply your board with 12 V as is shown in the image.



2 Connect the Motor

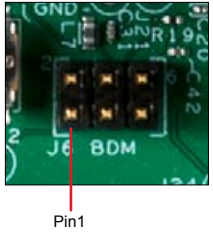
Connect your DC motor as is shown in the image.



V0	V1	DIRECTION
12V	0V	Up
0V	12V	Down
0V	0V	Off
12V	12V	Invalid

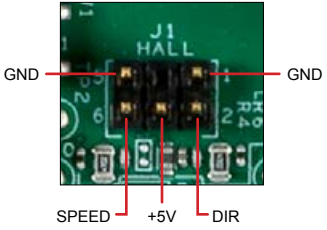
STEP-BY-STEP BOARD CONNECTION (CONT.)

3 Connect an External HCS12(X) Debugger



4 Connect the Hall Sensor Connector

Connect the Hall encoder (Only required for anti pinch applications.)



HEADERS AND CONNECTORS

HEADER/CONNECTOR	DESCRIPTION	
J1	HALL sensor connector	
J2	Pin 1	Motor1_Out
	Pin 2	Motor0_Out
J5	Pin 1	LIN
	Pin 2	GND
	Pin 3	V_{BAT}
J6	BDM Connector	
J11	External temperature sensor connector	

PUSH BUTTONS AND SWITCHES

HEADER/CONNECTOR	DESCRIPTION
SW1	Push button connects to a high voltage input pin
SW3	Switch used to control motor direction
SW4	Push button reset