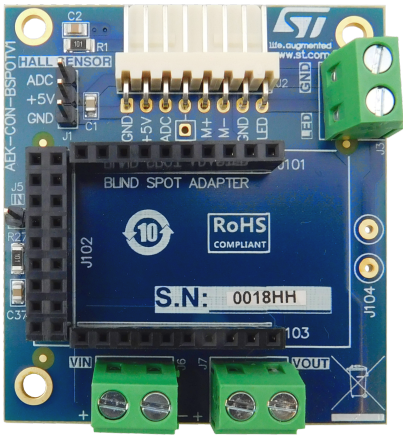
AEK-CON-BSPOTV1

Data brief

Blind-spot educational tool connector board with EV-VN7xxx connector



Features

- Host connector for EV-VN7xxx board type
- 3 pins available for Hall sensor connection
- Side connector for LED string driving
- Two connectors on the under side to supply the system and the AEK-LED-21DISM1 LED driving board
- 8-pin connector for AEKD-BLINDSPOTA1:
  - 2 pins for DC motor driving
  - 2 pins for LED driving
  - 3 pins for Hall sensor connection
- Part of the AutoDevKit initiative
- RoHS compliant

Description

The AEK-CON-BSPOTV1 board is principally a connector board for the Blind-spot Educational Tool actuators and loads. It conveniently arranges all the wire connections from the AEKD-BLINDSPOTA1 into a single 8-pin connector, and has another connector for the EV-VN7050AS board that drives a DC geared motor for the conveyor belt. Finally, the board simplifies power connection between the boards and signal transfer from the LED driving board AEK-LED-21DISM1 and the Hall sensor.

The Blind-spot detection and warning educational tool is designed help developers to become familiar with AutoDevKit based development. The AEKD-BLINDSPOTA1 kit is a hardware assembly set with all required loads for the specific application, and the AEKD-BLINDSPOTB1 set consists of electronic boards to control the entire system.

Blind-spot detection is simulated through magnetic field detection by means of a Hall sensor mounted on a stationary car and magnets mounted inside another car placed on the conveyor belt moved by a 12 V DC gearbox motor with 40 RPM and very high torque.

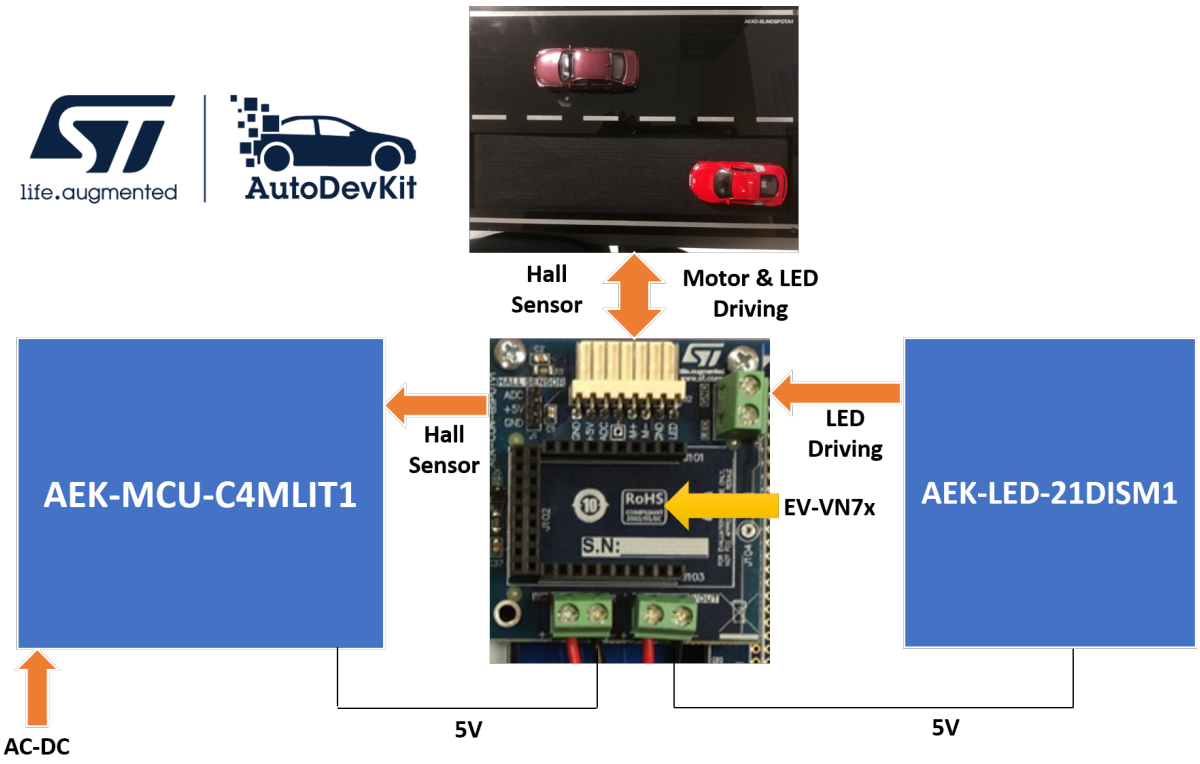
The entire tool will help you develop the skills to build the firmware to control the system triggers using SPC5-Studio extended with AutoDevKit plugin. You can compare your resulting code with source code provided in the AutoDevKit plugin, and system functionality can be tested by downloading the STSW-BLINDSPOT SPC58EC firmware.

Product summary	
Blind-spot educational tool connector board with EV-VN7 connector	AEK-CON-BSPOTV1
Blind-spot board panel	AEK-BLINDSPOTB1
Blind-spot detection simulation kit	AEK-BLINDSPOTA1
Firmware for AEKD-BLINDSPOTB1	STSW-BLINDSPOTB1
VN7050AS evaluation board based on VIPower M0-7 technology	EV-VN7050AS
Digitally controlled LED driver board for automotive lighting applications	AEK-LED-21DISM1

1 Block diagrams and schematic diagrams

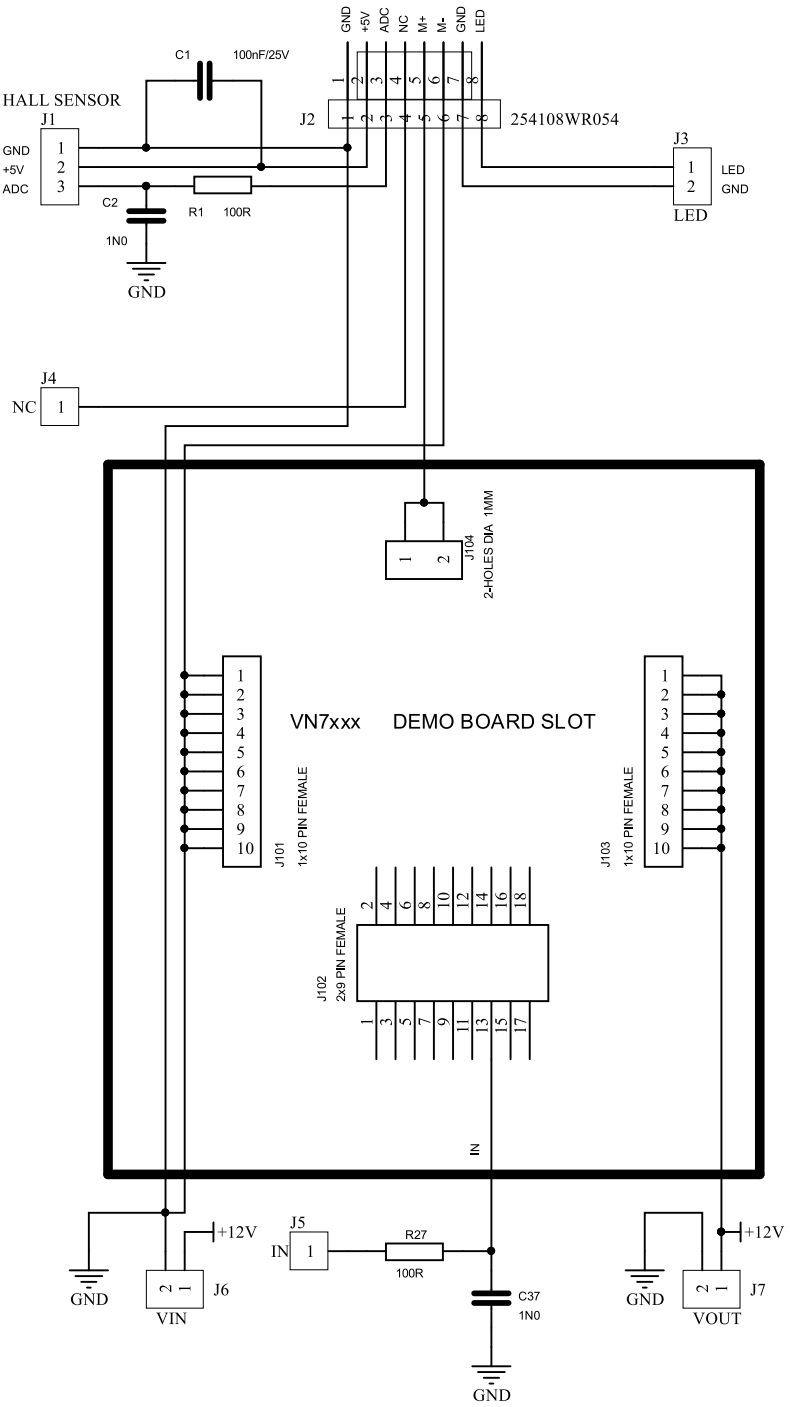
1.1 Block diagram

Figure 1. Block diagram



1.2 Schematic diagram

Figure 2. **AEK-CON-BSPOTV1 schematic**



Revision history

Table 1. **Document revision history**

Date	Version	Changes
17-Jun-2020	1	Initial release.

Contents

List of tables

List of figures