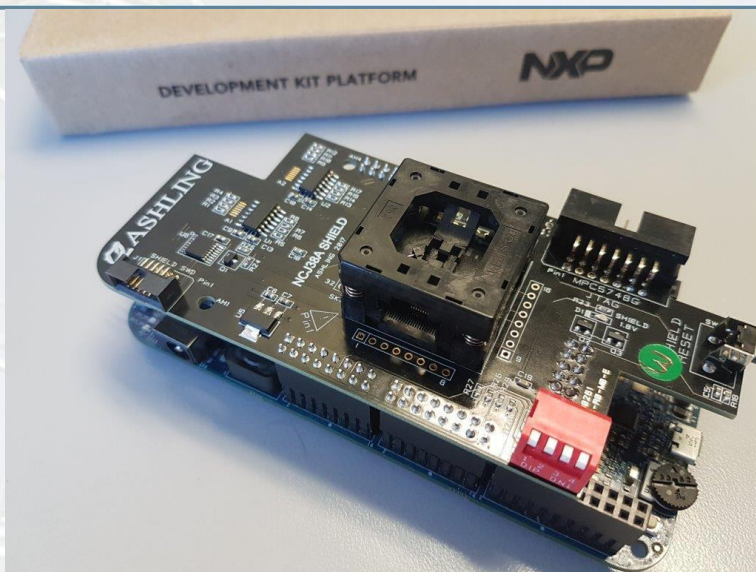


## Overview

The NXP Secure Gateway Demonstrator Platform (SGDP) is a hardware and software platform demonstrating how to design and build a Secure Automotive Gateway using the NXP NCJ38A ("Phantom") series of embedded Secure Element (eSE) Devices.

A gateway is the central control module for in-vehicle network management and provides an interface between all the internal buses running in the vehicle. In addition, the Gateway typically controls the interface to the external world (internet) over a cellular network.

The SGDP acts as a firewall that controls access from external interfaces to the vehicle's inner network. It also controls what internal networks can communicate with each other and can provide domain isolation of specific networks e.g. between infotainment systems and safety-critical systems. The NCJ38A eSE is a dedicated, tamper-resistant device which can securely store and allow access to confidential cryptographic data including digital certificates, symmetric and asymmetric keys and other user data. This built-in security allows the SGDP to provide functionality like secure, authenticated, over-the-air (OTA) firmware update support which are impervious to cyberattacks.



## Secure Gateway Demonstrator Platform Features

The SGDP "Arduino" format hardware consists of:

- NXP DEVKIT-MPC5748G ("Calypso") Arduino format board featuring an MPC5748G 32-bit automotive MCU based on the Power Architecture
- Ashling Arduino NCJ38A Shield board containing the NXP NCJ38A eSE ("Phantom") device
- Powered by USB interface; no external power-supply required
- NXP NCJ38A device socketed in a HVQFN32 Socket to allow easy replacement
- Debug connectors for both NCJ38A and MPC5748G devices

The provided SGDP software includes:

- Direct web interface to the SGDP with built-in demos which can be run in a host-side Browser over a PC to SGDP ethernet connection
- Demos show how to authenticate and securely communicate between the MPC5748G MCU and the NCJ38A eSE over a Serial Protocol Interface (SPI). All the necessary libraries and protocol stacks are included to allow you to use them in your own application
- Full getting started guide/user manual

## Order Codes

Product	Order Code
NXP Secure Gateway Demonstrator Platform. Supplied with ethernet and USB cables	SGDP-NCJ38A